HEALTH PROFESSIONS DIVISION
2020–2021 Catalog

Dr. Kiran C. Patel College of Osteopathic Medicine
College of Pharmacy
College of Optometry
Dr. Pallavi Patel College of Health Care Sciences
College of Dental Medicine
Ron and Kathy Assaf College of Nursing
Dr. Kiran C. Patel College of Allopathic Medicine
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Accreditation
Nova Southeastern University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate’s, baccalaureate, master’s, educational specialist, doctorate, and professional degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Nova Southeastern University.

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09-009-20NOM
Nova Southeastern University
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Nova Southeastern University (NSU) considers the health, safety, and well-being of its students and community to be one of its top priorities. In the midst of these unprecedented pandemic conditions, NSU continues to follow federal, state, and local guidelines to put in place extensive provisions and protocols to mitigate the spread of COVID-19 in NSU facilities and locations.

NSU takes its responsibilities seriously, and the university counts on its students to take their responsibility to comply with safety practices and protocols seriously as well, understanding that some risks lie outside of anyone’s control.

NSU cannot guarantee a completely COVID-19-free environment. However, to address the health and safety of the NSU community and reduce the risk of transmission of the COVID-19 virus, NSU has created policies and protocols for mitigating the spread of COVID-19. Taking steps to mitigate the risk of COVID-19 infections at NSU is a shared responsibility. It is critical that all students adhere to these policies and protocols, as well as national, state, and local guidelines, for their own well-being and the well-being of those around them. Students are expected to comply with the NSU safety policies and protocols related to COVID-19, including the protocols set forth in the Return of the Sharks Student Guide. Residential life students are also required to comply with the Addendum to the 2020–2021 Residential Life and Housing Contract and the Residential Life COVID-19 Preparedness Guide, which include additional health and safety protocols and policies specific to residential life. The NSU policies and protocols for responding to COVID-19 may be updated at any time, as additional information about COVID-19 is obtained, and/or as additional guidance is issued from federal, state, and local governmental bodies and agencies. As such, students are responsible for continuing to monitor their NSU email for any updates to their college handbook, as well as nova.edu/ehs/cv19-resources/index.html for additional updates. Failure to comply with the NSU safety policies and protocols related to COVID-19 may result in immediate removal from campus and a referral to the Office of the Vice President of Student Affairs, or the applicable college/academic program, for disciplinary action in accordance with the university’s Code of Student Conduct and Academic Responsibility.

By returning to any NSU campus, as well as living in NSU housing or sponsored housing, students assume the risk of exposure to certain dangers, including, but not limited to, possible exposure to communicable diseases such as the COVID-19 virus. COVID-19 is a highly infectious, potentially life-threatening disease declared by the World Health Organization to be a global pandemic. There is no current vaccine available to the public for COVID-19. The disease’s highly contagious nature means that contact with others, or contact with surfaces that have been exposed to the virus, can lead to infection. Additionally, individuals who may have been infected with the COVID-19 virus may be asymptomatic for a period of time, or may never become symptomatic at all. Because of its highly contagious and sometimes “hidden” nature, it is currently very difficult to control the spread of COVID-19 or to determine whether, where, or how a specific individual may have been exposed to the disease.

Again, you have NSU’s commitment to continually enhance its efforts to maintain a safer environment. However, by making the decision to return to any NSU campus or reside in NSU housing or sponsored housing, each student is acknowledging that he or she fully understands the risks associated with COVID-19 and is doing so freely and voluntarily.

We are all in this together as we all commit to follow proper, known protocols to better contain COVID-19 here in our shared community.
Resurgence of COVID-19

NSU is committed to both providing the highest quality education, as well as keeping safety at the forefront of every decision that the university makes. The 2020–2021 academic year will require a significant amount of flexibility that will enable the university to be prepared for any change in circumstances. In that regard, NSU is planning to use the BlendFlex model for the majority of its course offerings. This model simultaneously offers face-to-face and online delivery of instruction. NSU BlendFlex courses include a portion of the students attending in a traditional classroom setting, while the remaining students attend from a remote location using videoconferencing type technologies, including Zoom and Canvas. There may be certain programs that do not lend themselves to the BlendFlex model, including courses requiring experiential learning, such as those containing laboratory and clinical components. Students should consult directly with their programs for further information regarding their course delivery model.

In the event of a resurgence of COVID-19, NSU may take certain steps to protect the health and safety of the university community. These may include transitioning back to a fully online platform. In making this transition, NSU will continue to provide the same high-quality education that students receive face-to-face, while striving to limit disruption to student learning during this transition.
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I am honored that you have chosen to be a Shark at Nova Southeastern University (NSU). By choosing NSU and one of the colleges within our Health Professions Division, you have affirmed your high level of commitment to excellence in providing patient-centered care. As an NSU Shark, you will gain a competitive advantage in your career with the help of experienced faculty members, cutting-edge curricula, resources, facilities, and hands-on, experiential learning. NSU will help you unleash your potential to be a leader in any profession you choose.

Now, more than ever, during these challenging times of a global public health crisis, the world is recognizing the need for quality health care professionals. The Association of American Medical Colleges has predicted a serious shortage of doctors by 2033, in both primary and specialty care. Fortunately, we believe we are addressing that need, and many others, through expansion and innovation—leading the state of Florida as the premier provider of multiple disciplines in health care education. For instance, NSU’s College of Dental Medicine leads other schools in educating dentists who provide dental care to children with autism spectrum disorder. Also, NSU has the only optometry college in the state of Florida, and our Dr. Pallavi Patel College of Health Care Sciences is the top educator of physician assistants regionally and nationally, with a 20-year record of graduates surpassing the national average in first-time pass rates on the national certification exam.

NSU’s Tampa Bay Regional Campus in Clearwater officially opened its doors to students in the summer of 2019. The facility was completed in just 17 months and houses programs in the health care sciences, psychology, and education. It offers expanded course locations for NSU’s Dr. Pallavi Patel College of Health Care Sciences and Ron and Kathy Assaf College of Nursing, as well as an additional site for the Dr. Kiran C. Patel College of Osteopathic Medicine. NSU also continues to be one of only three universities in the nation to offer both D.O. and M.D. degrees.

Additionally, a new, teaching, research, and community hospital is under construction on NSU’s Fort Lauderdale/Davie Campus, with a planned opening of September 2021. Through a partnership with HCA East Florida, the hospital will provide our students with integrated academic, research, and clinical opportunities. Students and faculty members will conduct cutting-edge research and clinical trials, with potential for advanced medical breakthroughs.

NSU is recognized and ranked by the Carnegie Foundation for the Advancement of Teaching as among the top 200+ National Doctoral Research Universities in the nation. Our researchers are making advances in fields such as cardiovascular disease, anti-cancer and stem cell therapies, chronic fatigue syndrome, autism, and others.

As a student, you will have access to NSU’s Center for Collaborative Research (CCR). Located on the Fort Lauderdale/Davie Campus, the CCR is home to world-renowned scientists and researchers working in a state-of-the-art facility. Students gain practical experience through simulation labs, clinical rotations, research projects and presentations, medical missions, community service, internships, and more.

Welcome to the NSU family.

Fins Up!

George L. Hanbury II, Ph.D.
NSU President and Chief Executive Officer
Welcome and congratulations on your acceptance to the Health Professions Division (HPD) of Nova Southeastern University. You are joining an innovative learning community replete with the resources and experiences you will need to prepare you for a fulfilling career in health.

NSU’s Health Professions Division is unique. It was developed as an interdisciplinary educational center of academic excellence from inception. The division was founded on the concept that the interdisciplinary approach to education is beneficial to students of all professions. The HPD will prepare you to work effectively with health care providers from different fields and foster mutual understanding of the challenges, rewards, and needs specific to each discipline. By encouraging students from various disciplines to learn together, barriers are broken, and patient care is enhanced.

Your distinguished faculty members are talented, student-centered teachers and respected researchers—all dedicated to helping you attain the skills and knowledge necessary to begin or enhance your professional career. The faculty utilizes a brilliant array of effective experiential learning approaches giving you practical, real-world, clinical experiences. You will also benefit from the Health Professions Division’s technology-enhanced classrooms, labs, clinics, and library resources supporting you on your educational journey.

At the Health Professions Division, you will become part of a vibrant, diverse student body. Like the university as a whole, our HPD is a minority-majority community, giving you the opportunity to learn in a culture-rich environment. You will find tremendous diversity with the patients you will see in the HPD clinics, practicums, rotations, and community service as well, because the HPD has a longstanding commitment to promoting service to underserved communities.

We look forward to working with you as you pursue your academic studies and prepare to become health care professionals who serve and lead with integrity.

Ronald J. Chenail, Ph.D.
Provost and Executive Vice President for Academic Affairs
Nova Southeastern University’s Health Professions Division is playing a vital role in educating the next generation of health care leaders. The division currently comprises colleges in seven distinct fields—osteopathic medicine, pharmacy, optometry, dental medicine, health care sciences, nursing, and allopathic medicine—that offer more than 70 diverse degree and certificate programs.

In terms of our academic structure, we are always looking to enhance our student’s educational experience at NSU’s campuses in Fort Lauderdale/Davie, Fort Myers, Jacksonville, Miami, Miramar, Orlando, Palm Beach, Tampa Bay, and Puerto Rico. This is accomplished by implementing the most cutting-edge technology and through our continually evolving curricula, which is overseen by a caring cadre of faculty and staff members.

In August 2019, the university celebrated a milestone in its history with the launch of the more than 300,000-square-foot Tampa Bay Regional Campus in Clearwater, Florida, which is one of the most highly advanced instructive sites in the United States. This campus, which offers the most progressive pedagogy and technology possible, also features distinctive design aspects to provide students with the optimal educational experience.

The Tampa Bay Regional Campus houses an additional site for NSU’s Dr. Kiran C. Patel College of Osteopathic Medicine. However, the Dr. Pallavi Patel College of Health Care Sciences and the Ron and Kathy Assaf College of Nursing are also represented there. These colleges stand alongside each other, not as separate programs or separate schools, but as collaborative and collegial health education entities.

The NSU Health Professions Division is committed to ensuring that our current and future students receive a comprehensive education at an academic institution that has established a reputation for being dynamic, innovative, and interprofessional in its academic approach.

Frederick Lippman, R.Ph., Ed.D.
Chancellor, Health Professions Division
Special Projects
Health Professions Division Administration

George L. Hanbury II, Ph.D.
NSU President and Chief Executive Officer

Frederick Lippman, R.Ph., Ed.D.
Chancellor, Health Professions Division
Special Projects

Irving Rosenbaum, D.P.A., Ed.D., M.P.A.
Vice President for Operations
Health Professions Division

Patrick C. Hardigan, Ph.D.
Associate Dean for Academic Affairs
Health Professions Division

Jay M. Tischenkel, B.Sc., R.Ph.
Director of Institutional Advancement
Health Professions Division

Steve Weinstein, CPA
Director of Finance
Health Professions Division

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**Vision 2020 Statement**

By 2020, through excellence and innovations in teaching, research, service, and learning, Nova Southeastern University will be recognized by accrediting agencies, the academic community, and the general public as a premier, private, not-for-profit university of quality and distinction that engages all students and produces alumni who serve with integrity in their lives, fields of study, and resulting careers.

**Nova Southeastern University Mission Statement**

The mission of Nova Southeastern University, a private, not-for-profit institution, is to offer a diverse array of innovative academic programs that complement on-campus educational opportunities and resources with accessible, distance-learning programs to foster academic excellence, intellectual inquiry, leadership, research, and commitment to community through engagement of students and faculty members in a dynamic, lifelong learning environment.

**Core Values**

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<th>Academic Excellence</th>
<th>Opportunity</th>
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<td>Student Centered</td>
<td>Scholarship/Research</td>
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<td>Integrity</td>
<td>Diversity</td>
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<td>Innovation</td>
<td>Community</td>
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The Vision 2020 Statement, Mission Statement, and Core Values were adopted by the NSU Board of Trustees on March 28, 2011.
Health Professions Division Mission Statement

The mission of the Nova Southeastern University Health Professions Division is to train health practitioners in a multidisciplinary setting, with an emphasis on medically underserved areas.

The institutional premise is that health professionals should be trained in a multidisciplinary setting and, whenever possible, with integrated education. The university trains students in concert with other health profession students so that the various disciplines will learn to work together as a team for the good of the public’s health. During their didactic work, students share campus facilities and, in some cases, have combined classes. In their clinical experiences, they work together in facilities affiliated with the university.

The division aims to educate health care practitioners who will eventually increase the availability of health care to alleviate health care shortages. The division aims to mitigate some of these shortages by exposing the entire student body to the needs and challenges of rural, underserved, and geriatric populations. Existing curricula require all students to attend ambulatory care rotations in rural or urban areas, or both, making Nova Southeastern University oriented toward a pattern of training its students in areas geographically removed from the health center itself, and to the care of indigent and multicultural population groups. In doing this, it developed training programs that address the health care needs of the region’s most medically underserved populations.

All students are encouraged to participate in community service. The Health Professions Division supports the mentoring and collaboration of interdisciplinary research with faculty members.

Health Professions Division Board of Governors

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Jay M. Tischenkel, B.Sc., R.Ph.
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George L. Hanbury II, Ph.D.
NSU President and Chief Executive Officer
Frederick Lippman, R.Ph., Ed.D.
Chancellor, Health Professions Division
Special Projects
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Chair, NSU Board of Trustees

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Beny Rub, M.D.
Joel Rush, D.O.
Sandra L. Schwemmer, D.O.
Phillip L. Shettle, D.O.
J. Kenneth Tate
Joel Wilentz, M.D.

Invited Guest
Harry K. Moon, M.D.

Emeritus Member
Sidney J. Stern, O.D.
University History

Sustained growth and unity has made Nova Southeastern University (NSU) the largest independent university in the state of Florida. This growth culminated in January 1994, when Nova University and Southeastern University of the Health Sciences merged to become Nova Southeastern University.

Nova University was chartered in 1964 as a graduate institution in the physical and social sciences. Over time, Nova added programs in law, education, business, psychology, computer science, oceanography, social and systemic studies, and hospitality, and, in 1972, introduced its first off-campus course of study, in education. Soon, Nova became nationally recognized for its innovative distance learning programs. Today, field-based programs are located in 32 other Florida cities, in nearly 30 other states, and at selected international sites.

While Nova continued to expand its educational reach, Southeastern University of the Health Sciences also was on an expansion course. Southeastern was created by osteopathic physicians committed to establishing a College of Osteopathic Medicine in the Southeast. As a result, Southeastern College of Osteopathic Medicine, as it was first known, opened in 1981.

From 1987 to 1997, Southeastern added Colleges of Pharmacy, Optometry, Allied Health, Medical Sciences, and the College of Dental Medicine, which admitted 88 students in 1997. This growth was unprecedented, but not unsurpassed. There was still more to come.

The merger brought on new possibilities. Prior to 1994, Nova had evolved with innovative technology and Southeastern expanded to provide much needed health care education. With the merger, Nova Southeastern University’s resources make possible a more transdisciplinary education. Students have an opportunity to integrate across the disciplines and understand how their professions relate to society as a whole.

The growth of the Health Professions Division (HPD) is continuous. In 2003, an R.N. to B.S.N. (Bachelor of Science in Nursing) program was added to the College of Allied Health, which then became the College of Allied Health and Nursing. Numerous other nursing programs were added over the next nine years. This resulted in the creation of a separate College of Nursing in 2012. At the same time, the College of Allied Health was renamed the College of Health Care Sciences.

In 2015, an eighth college was added to the HPD academic mix—the College of Allopathic Medicine—which received preliminary accreditation in October 2017 and welcomed its inaugural class of 50+ students in the summer of 2018.

In September of 2017, NSU received the largest philanthropic gift in its history from Dr. Kiran C. Patel, M.D., and his wife, Dr. Pallavi Patel, M.D. The commitment from the Patel Family Foundation included a $50-million gift and an additional $150-million real estate and facility investment in a 325,000-square-foot medical-education complex. This real estate has become the NSU Tampa Bay Regional Campus in Clearwater, Florida, opening in 2019. The NSU Tampa Bay Regional Campus houses an additional site for NSU’s osteopathic medical school, as well as all the other HPD programs previously located at NSU’s Tampa Campus.

In honor of the financial gift, the Health Professions Division renamed two of its colleges. NSU’s osteopathic medical college became the Dr. Kiran C. Patel College of Osteopathic Medicine and NSU’s health care sciences college became the Dr. Pallavi Patel College of Health Care Sciences.

In January 2018, the HPD attained other significant financial gifts. To honor these gifts, two more HPD colleges were renamed. The College of Allopathic Medicine became the Dr. Kiran C. Patel College of Allopathic Medicine, while the College of Nursing was renamed the Ron and Kathy Assaf College of Nursing.

From the HPD’s newest college—the Dr. Kiran C. Patel College of Allopathic Medicine—to its oldest—the Dr. Kiran C. Patel College of Osteopathic Medicine—all the HPD colleges enhance NSU’s esteem by providing high levels of innovation and distinctiveness.

Campuses

Nova Southeastern University’s Health Professions Division—now composed of the colleges of osteopathic medicine, pharmacy, optometry, health care sciences, medical sciences, dental medicine, nursing, and allopathic medicine—offers a rare blend of tropical South Florida weather, plentiful sunny beaches, an easily accessible campus, a dedicated and professional faculty, well established affiliations with many hospitals, clinics, and health care systems in the area, and a mission to educate professionals capable of providing the highest-quality health care service.

The university’s Fort Lauderdale/Davie Campus is located on a lush, 314-acre site in the Greater Fort Lauderdale area, 10 miles inland of the Atlantic Ocean and readily accessible via several highways and Florida’s Turnpike.

The Health Professions Division complex, dedicated in June 1996, is located on the northwest corner of this campus and encompasses more than 540,000 square feet of space for administrative offices, classrooms, laboratories, the Martin and Gail Press Health Professions Division Library, and a patient-services clinic. There is also a 600,000-square-foot parking structure with space for 2,000 vehicles.

The division elicited input from students and faculty members and incorporated innovations in architecture, ergonomics, and computer-aided technology to provide facilities that enhance the learning experience.
The complex is an arrangement of eight buildings, four of which are connected by air conditioned lobbies. The Sanford L. Ziff Health Care Center, physical plant, and parking garage are connected to the central buildings by covered walkways. Administration and faculty offices are on the upper levels of the five-story Terry Administration Building, with the departments of admissions and student services, and a cafeteria located on the first floor.

Located in the lobby of the Terry Building, the Health Museum exhibits artifacts and antiques representing each of the colleges of the Health Professions Division. The collection houses an informative and historical display of medical memorabilia for students, faculty members, and visitors to explore.

Private tours of the museum can be arranged with the curator, Cynthia Magalian Tupler, B.F.A. Contact Helen Caidin in the Pharmacy Department to schedule an appointment, (954) 262-1380.

Adjacent to the administration building is the Assembly Building, which consists of a 500-seat auditorium, a 250-seat auditorium, and eight 126-seat amphitheater-classrooms, all equipped with computerized audio/video systems.

Connected to this is the three-story Library/Laboratory Building. On the first floor is the library and a 100-seat cardiac laboratory utilizing “Harvey,” a computerized mannequin that duplicates the sounds and symptoms of most heart conditions. Also on the first floor are patient simulation training rooms and a 50-station computer laboratory for student use. The second and third floors house laboratories, a student lounge, and a research area. Laboratories are equipped for viewing pretaped medical procedures, and each laboratory has a video system and hookups to equipment such as an electron microscope, so that illustrations can be amplified for laboratory-wide viewing.

Just north of the Library/Laboratory Building is the Health Care Center, with facilities for primary health care, rehabilitative services, eye care, pharmacy, and a simulation nursing laboratory.

The College of Dental Medicine’s 70,500-square-foot building advances the state-of-the-art in dental education facilities. The first floor contains a 100-operatory predoctoral clinic facility and clinics and support laboratories for oral medicine, radiology, and oral surgery. The second floor houses a faculty practice; clinics for postgraduate programs in advanced education in general dentistry, endodontics, operative dentistry, oral and maxillofacial surgery, orthodontics, pediatric dentistry, periodontology, and prosthetics; a 120-position simulation technique laboratory; and support laboratories. Faculty and administration offices are on the third floor.

The Health Professions Division added a building to foster opportunities for interdisciplinary education and to meet the need for additional classroom, computer, and research facilities. This modern, spacious facility, known as the Assembly II Building, contains more than 31,000 square feet of instructional and research facilities, including a 312-seat auditorium, ultrasound training center, a 50-station computer science laboratory, and 37 seminar and study rooms.

NSU’s Health Professions Division also has programs at our campuses located throughout the state and in Puerto Rico. These campuses are located in Fort Myers, Jacksonville, Miami, Miramar, Orlando, Palm Beach, and Tampa Bay, Florida, and in San Juan, Puerto Rico. They provide an optimal solution for students who want a high-caliber education closer to home.

Image Use Statement
As part of the Student Enrollment Agreement (SEA), which students are required to read and accept with their first registration each academic year, students are required to agree with the following Image Use Statement:

I permit and authorize Nova Southeastern University (NSU) and its employees, agents, representatives, contractors, and personnel who are acting on behalf of NSU to take and/or obtain my photograph, name, alias, video and/or audio recording, or other likeness of myself, or any combination thereof, at any public NSU-related events or at any public areas on NSU’s property (hereinafter “my likeness”). I further grant NSU permission to utilize my likeness for commercial purposes including publicity, marketing, and promotion for NSU and its programs, without compensation to me, to the extent permissible under the Family Educational Rights and Privacy Act (FERPA). I understand and consent to NSU copying, reproducing, and distributing my likeness in any media format. I further understand that my likeness may be subject to reasonable modification and/or editing and waive any right to inspect or approve the finished product or material in which NSU may eventually use my likeness. I acknowledge that NSU owns all rights to my likeness and understand that, although NSU will endeavor to use my likeness in accordance with standards of good judgment, NSU cannot warrant or guarantee that any further dissemination of my likeness will be subject to NSU’s supervision or control. Accordingly, I release NSU from any and all liability related to the use, dissemination, reproduction, distribution, and/or display of my likeness in any media format, and any alteration, distortion, or illusionary effect of my likeness, whether intentional or otherwise, in connection with said use. I also understand that I may not withdraw my permission for use of my likeness which was granted.
Indebtedness to the University

NSU offers to all students—on campus, online, clinical, or hybrid—the same quality education and many opportunities for student benefits depending on the student’s choice of educational modality. Therefore, the university sets the overall student fees on an aggregate, student-centric basis for the entire student body. The overall costs exceed the amount collected from student fees charged to all students.

These student fees are blended together to create NSU with high-tech systems, student activities, and many other essential student services that make a complete, integrated university. This mission transcends the development and ultimate determination of the amount of student fees for all students, irrespective of their choice of learning modality.

By registering for courses at Nova Southeastern University, the student accepts financial responsibility for payment of all institutional costs including, but not limited to, tuition, fees, housing, health insurance, and meal plan (if applicable), and any additional costs when those charges become due. Payment is due in full at the time of registration. NSU ebills are sent the middle of each month to the student’s NSU email address. However, to avoid late charges, students should not wait for their billing statement to pay their tuition and fees. A student will not be able to register for future semesters until all outstanding balances from previous semesters have been paid in full. If a student has a balance 30 days after the start of the semester, a hold and a $100 late fee will be placed on his or her account. This hold stops all student services, including, but not limited to, access to the NSU RecPlex, academic credentials, grades, and future registrations. It will remain on the student’s account until the balance has been paid in full. Delinquent student account balances may be reported to a credit bureau and referred to collection agencies or litigated. Students with delinquent accounts will be liable for any costs associated with the collection of unpaid charges, including attorney fees and court costs. All registration agreements shall be construed in accordance with Florida law, and any lawsuit to collect unpaid fees may be brought in the appropriate court sitting in Broward County, Florida, regardless of the student’s domicile.

Force Majeure

NSU’s duties and obligations to the student shall be suspended immediately, without notice, during all periods that the university is closed or ceases or curtails operations because of force majeure events including, but not limited to, any fire or any casualty, flood, earthquake, lightning, explosion, strikes, lockouts, prolonged shortage of energy supplies, riots or civil commotion, act(s) of God, hurricane, war, governmental action, act(s) of terrorism, epidemic, pandemic, or any other event beyond the university’s control. If such an event occurs, NSU’s duties and obligations to the student will be postponed until such time as the school, in its sole discretion, may safely reopen or resume operations. Under no circumstances, except as otherwise required by Federal or State statute, will NSU be obligated to refund any portion of tuition, housing, meal plans, fees, or any other cost or charge attributable to any location or service affected by any such force majeure event.

Admissions Policy

Students provisionally are admitted to a degree-seeking program based on a review of unofficial transcripts or other specific program admission requirements. However, this admission includes a condition that final and official transcripts, documents, and requirements must be received within 90 calendar days from matriculation for the graduate and professional programs and by the end of the drop/add period for undergraduate programs. If these final and official transcripts, documents, and/or requirements are not received by that time, the student will not be allowed to continue class attendance. Financial aid will not be disbursed to a provisional/conditional student until he or she has been fully admitted as a regular student (all admissions requirements have been approved by the college/program admissions office). Students who have an unpaid balance 30 days from the start of the term will be assessed a $100 fee.

Foreign Coursework

Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.

- World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, New York 10274-5087
  (212) 966-6311 • wes.org

- Josef Silny & Associates, Inc.
  International Education Consultants
  7101 SW 102 Avenue
  Miami, Florida 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org

- Educational Credential Evaluators, Inc.
  101 West Pleasant Street, Suite 200
  Milwaukee, WI 53212-3963
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the
charges. A failure to timely disclose any arrests or pending criminal charges, within 10 days of any arrest or charges filed. Students, other than those enrolled in programs within the Health Professions Division, must notify the assistant dean for Student Affairs or designee of any arrests or pending criminal charges. A failure to timely disclose any arrests or pending criminal charges may result in disciplinary action, up to and including dismissal from NSU.

Background Checks

Certain programs at the NSU Health Professions Division require students to submit to background checks. Accepted applicants and students in such programs are required to authorize the NSU Health Professions Division to obtain background check(s) as per the policy adopted on March 2011. If the background check(s) reveal information of concern, which the NSU Health Professions Division may deem unfavorable, HPD will request that the individual provide a detailed written explanation of the information contained in this report, along with appropriate documentation (e.g., police reports). Students may also be required to authorize clinical training facilities that they are assigned to by the Health Professions Division to obtain a background check with the results reported to the clinical training facility. Students with questions concerning the background checks should contact their respective college and/or academic program for more information.

For programs that require students to submit background checks, offers of admission will not be considered final until the completion of the background check(s), with results deemed favorable by the NSU Health Professions Division, and where appropriate, by the clinical training facilities. If information received in connection with a background check indicates that the student has provided false or misleading statements, has omitted required information, or in any way is unable to meet the requirements for completion of the program, then the student’s admission may be denied or rescinded, or his or her enrollment may be terminated. Acceptance to an NSU Health Professions Division program does not guarantee that a student with information of concern will be accepted by clinical training facilities to which they may be assigned.

Students enrolled in NSU’s Health Professions Division have a continuing duty to disclose any arrest, conviction, guilty or no contest plea, or participation in a pretrial diversion program or its equivalent for any criminal offense. Students are required to notify their dean’s office within 10 days of any arrest or subsequent conviction, guilty or no contest plea, or participation in a pretrial diversion program or its equivalent for any criminal offense.

While enrolled at NSU, students have a continuing duty to disclose all of the above, along with any arrests or pending charges, within 10 days of any arrest or charges filed. Students, other than those enrolled in programs within the Health Professions Division, must notify the assistant dean for Student Affairs or designee of any arrests or pending charges. Students enrolled in programs that have a drop/add period, will have until 11:59 p.m. the first Sunday of the semester, which is the end of the drop/add period, in order to make any changes in their schedule without incurring any financial expenses. Students who drop during the second week of classes will receive a reversal of 75 percent of their charged tuition. Students who drop after the second week of the semester will not be entitled to receive a refund.

The withdrawal period starts in the second week of the semester and ends three weeks prior to the end of the semester. Students enrolled in programs that have a drop/add period, will have until 11:59 p.m. the first Sunday of the semester, which is the end of the drop/add period, in order to make any changes in their schedule without incurring any financial expenses. Students who drop during the second week of classes will receive a reversal of 75 percent of their charged tuition. Students who drop after the second week of the semester will not be entitled to receive a refund.

Students enrolled in bachelor’s degree programs are required to follow policy procedures for drops and withdrawals as noted at nova.edu/undergraduatesstudies/academic-catalog.html in the undergraduate catalog.

Failure to comply with these requirements could jeopardize future receipt of Title IV student assistance funds at any institution of higher education the student may attend. If a student is due a refund, it will be mailed to the student’s address or deposited directly into the student’s checking account after the dean—or designee—of the respective college has approved the withdrawal and the drop request has been processed. The tuition refund policy is subject to change at the discretion of the university’s board of trustees/the NSU administration.
Changes to a semester’s registration will not be accepted 20 days after the semester ends.

Policy for Florida In-State Tuition
Eligible students must request in-state tuition upon application. For tuition purposes, students' Florida residency status (in-state or out-of-state) will be determined at initial matriculation and will remain the same throughout the entire enrollment of the student at NSU. Accordingly, tuition will not be adjusted as a result of any change in residency status after initial enrollment registration. For more information, visit nova.edu/hpd-florida-in-state-tuition.

Enrollment and Student Services
Enrollment and Student Services (ESS) is composed of the Office of Student Financial Assistance, Office of the University Registrar, Office of the University Bursar, NSU Student Health Insurance, the One-Stop Shops in the Horvitz and Terry Administration buildings, Enrollment Processing Services/Admissions Management Services, Transfer Evaluation Services, Health Professions Division (HPD) Office of Admissions, and SharkCard Services. Collectively, the ultimate goal of ESS is to exceed the information and service needs of all NSU students.

Means of Communication with Students
Enrollment and Student Services’ official means of communicating with students is via SharkLink and NSU email. Students are encouraged to use NSU’s SharkLink to

- check email
- access their financial aid information
- request official transcripts and view unofficial transcripts
- view their student accounts
- make payments
- access their grades
- register for and drop courses
- view their course schedule
- access their online degree evaluation (Degree Works)
- obtain enrollment verification
- change their primary and mailing addresses and phone numbers
- apply for student employment
- sign the Student Enrollment Agreement

The Office of Student Financial Assistance
The Office of Student Financial Assistance (OSFA) is dedicated to assisting students in making well-informed decisions regarding the funding of their education at NSU. The OSFA administers grants, scholarships, student employment, and loans and prepares student financial aid award offers based on federal and state regulations and institutional guidelines. It provides information on the application processes for financial aid, student employment, and veterans educational benefits and counsels students on proactive debt management strategies and financial literacy. The office also monitors student Satisfactory Academic Progress (SAP) for financial aid eligibility and awards scholarships from internal and external sources. Students may receive financial aid guidance in person, by email, or by telephone. For more details, including contact information, visit nova.edu/financialaid.

Financial Aid Checklist
1. Complete the FAFSA.
   Students should complete the Free Application for Federal Student Aid (FAFSA) at studentaid.gov annually. It becomes available each October 1 for aid in the following award year. The earlier students apply, the better chance they have of being considered for maximum available funds. To apply for Florida grants and scholarships, undergraduate students must complete the NSU State Aid Application available on the financial aid website at nova.edu/financialaid/forms.

2. Identify and Apply for Scholarships.
   Institutional and external scholarship opportunities are available to assist students in meeting their educational goals. The best resource for up-to-date information is the NSU scholarship website located at nova.edu/financialaid/scholarships. Students will find information on how to apply, as well as resources to help them identify scholarships. Students should commit to continually identifying and applying for scholarships. This type of financial aid does not have to be repaid.

3. Plan for Housing and Meal Expenses.
   The budget includes a housing and meal component. Students must ensure that they budget for these expenses if they intend to live on campus.

   Students are expected to log in to SharkLink at sharklink.nova.edu and regularly check their financial aid status to ensure that there are no outstanding requirements. Students should confirm their admissions status, as they must have completed all admissions requirements in order for financial aid funds to be disbursed.
5. Submit Additional Documents and Complete a Master Promissory Note and Entrance Counseling.

Some students may be required to submit additional documents prior to being awarded. Students will be notified of outstanding requirements via NSU (SharkLink) email. Requirements (outstanding and completed) can also be viewed in SharkLink. Students interested in receiving Federal Direct Loans, will be required to complete a Direct Loan Master Promissory Note (MPN) and entrance counseling at studentaid.gov.

6. Accept, Decline, or Modify Your Loan and Federal Work-Study Award(s).

The financial aid award notice provides students with detailed instructions on how to accept, decline, or modify a financial aid award. Loan awards are not disbursed, and students are not able to apply for student employment jobs in JobX, until this step has been completed.

7. Check Your NSU (SharkLink) Email Daily.

NSU email and SharkLink are the official means that the OSFA will use to communicate with students. Students should keep up-to-date by checking their NSU email daily.

8. Register for Classes (early).

In order for students to receive any federal Title IV or state financial aid (grants, scholarships, Federal Work-Study, and loans), they must register for the minimum number of credits that are required for degree/certificate completion (degree-applicable), as published in the catalog from the year the student matriculated. Enrollment requirements for federal and state grants vary. Students awarded federal direct loans must be enrolled at least half time in degree-applicable courses. Half-time enrollment is defined as 6 degree-applicable credits per semester for undergraduate students. For graduate and professional students, half-time status varies by program. Students should register as early as possible to ensure timely disbursement of their financial aid funds.

Student Employment

There are four student employment programs: Federal Work-Study (FWS), Florida Work Experience (FWEP), Nova Student Employment (NSE), and Job Location and Development (JLD). The NSE and JLD programs provide jobs to students regardless of financial need. The FWS and FWEP programs are need-based and require the completion of the FAFSA. Students awarded FWS may participate in the America Reads/America Counts Programs through which students serve as reading or math tutors to elementary school children. For more information on NSU student employment, including information on how to apply for jobs and the Student Employment Manual, visit nova.edu/financialaid/employment. New and exciting on- and off-campus jobs are available throughout the year.

Satisfactory Academic Progress (SAP)

To receive financial assistance, a student must continually meet Satisfactory Academic Progress (SAP) requirements established by the Department of Education. These progress requirements include the following four criteria: quantitative (annual credits), qualitative (grade point average), maximum time frame (total allowable credits), and pace (overall credits completed).

Students who fail to meet SAP during the 2020–2021 academic year will not be eligible for Title IV federal and Florida state financial aid during the 2021–2022 academic year.

Comprehensive information is available on the financial aid website at nova.edu/sap.

Veterans Educational Benefits

The U.S. Department of Veterans Affairs (VA) educational benefits are designated to provide eligible individuals with an opportunity for educational and career growth. Detailed information regarding veteran benefits at NSU is available online at nova.edu/financialaid/veterans. Students may also contact the NSU Veterans Benefits Office at (954) 262-7236 or toll free at 800-541-6682, ext., 27236 Monday through Friday, between 8:30 a.m. and 5:00 p.m. or visit the veteran benefits office in the Horvitz Administration Building on the Fort Lauderdale/Davie Campus. Students may also learn about their education benefits by visiting the Department of Veterans Affairs online at va.gov or by contacting the VA at 888-442-4551.

Pending Veterans Affairs (VA) Payment Policy

Effective August 1, 2019

BACKGROUND: Section 103 of PL 115-407, ‘Veterans Benefits and Transition Act of 2018,’ amends Title 38 US Code 3679 by adding a new subsection (e) that requires disapproval
of courses of education, beginning August 1, 2019, at any educational institution that does not have a policy in place that will allow an individual to attend or participate in a course of education, pending VA payment, providing the individual submits a certificate of eligibility for entitlement to educational assistance under Chapter 31 or 33. **POLICY:** In accordance with Title 38 US Code 3679 subsection (e) of the Veterans Benefits and Transition Act of 2018, Nova Southeastern University (NSU) will not impose a penalty on any student using veterans education benefits under Chapter 31 (Vocational Rehabilitation & Employment) or Chapter 33 (Post 9/11 GI Bill”) because of the individual’s inability to meet his or her financial obligations to the institution due to the delayed disbursement of funding from the Department of Veterans Affairs (VA). NSU will not:

- prevent the student from attending or participating in the course of education during periods in which there is a delayed disbursement
- assess late payment fees if the financial obligation is fully funded by the Department of Veterans Affairs (VA)
- require the student to secure alternative or additional funding for delayed disbursements
- deny the student access to institutional facilities and services (e.g., access to the Don Taft University Center RecPlex, grades, transcripts, and registration) available to other students who have satisfied their tuition and fee bills

**Grade/Progress Reports for Students Receiving Veterans Benefits**

Nova Southeastern University furnishes each student with a Notification of Posting of Grade with instructions on how to view an unofficial transcript that shows current status of grades and earned semester hours for all courses completed and/or attempted, and grades for courses in which the student is currently enrolled. At the end of every evaluation period (e.g., term, semester) each veteran can request an official transcript that shows the current status of grades and earned semester hours for all courses completed and/or attempted. This transcript can be obtained from the One-Stop Shop at the William and Norma Horvitz Administration Building or Terry Administration Building or online at sharklink.nova.edu for a $10 fee.

**The Office of the University Bursar**

The Office of the University Bursar is responsible for billing students, collecting and depositing payments, sending invoices and receipts, distributing student educational tax forms, issuing refunds from excess financial aid funds, and verifying students’ eligibility for financial aid funds. The office also assists borrowers of Federal Perkins and Health and Human Services Loans with repayment options. NSU Student Health Insurance is also housed within this office. For more information, visit nova.edu/bursar.

**Office of the University Bursar Policies**

- By registering for courses at Nova Southeastern University, the student accepts financial responsibility for payment of all institutional costs including, but not limited to, tuition, fees, housing and meal plan (if applicable), health insurance (if applicable), and any additional costs when those charges become due.
- Payment is due in full at the time of registration. NSU ebills are sent the middle of each month to the student’s NSU email address. However, to avoid late charges, students should not wait for their billing statement to pay their tuition and fees.
- A student will not be able to register for future semesters until all outstanding balances from previous semesters have been paid in full. If a student has a balance 30 days after the start of the semester, a hold and a $100 late fee will be placed on his or her account. This hold stops all student services, including, but not limited to, access to the University RecPlex, academic credentials, grades, and future registrations. It will remain on the student’s account until the balance has been paid in full.
- Delinquent student account balances may be reported to a credit bureau and referred to collection agencies or litigated. Students with delinquent accounts will be liable for any costs associated with the collection of unpaid charges, including attorney fees and court costs. All registration agreements shall be construed in accordance with Florida law, and any lawsuit to collect unpaid fees may be brought in the appropriate court sitting in Broward County, Florida, regardless of the student’s domicile.

**Methods of Payment**

NSU accepts Visa, MasterCard, and American Express. Check payments include traveler’s checks, cashier’s checks, personal checks, and money orders. International checks must be in U.S. funds only and drawn on a U.S. bank. Wire transfers are accepted. Electronic check and credit card payments can also be made through NSU eBill, SharkLink, or Self-Service Banner. Students can access NSU eBill using their SharkLink ID and password to authorize other individuals (e.g. parent, spouse, or grandparent) to view their bill and make payments to their account. Students may also mail a payment to the Office of the University Bursar or make payments in person at either of the One-Stop Shops on the Fort Lauderdale/Davie Campus. For more details, visit nova.edu/bursar/payment/pay_my_bill.html.
Declined Payment Policy
NSU assesses a $25 declined payment fee for each declined payment, including installment payments that are part of a payment plan and payments made by check or credit card. A declined payment hold (1F) is placed on the account until the declined payment and assessed fee have been paid. The bursar's office reserves the right to refuse personal checks from students whose previous check payments have been declined more than once. These students will be required to submit payment by money order, credit card, or certified check.

Payment and Tuition Assistance Plans

NSU Payment Plans
NSU Payment Plans allow students (with the exception of international students) and their families to pay university charges in installments. For more information, visit nova.edu/bursar/payment/payment_plans.

Tuition Assistance Plans

• Tuition Direct Billing
A student whose employer, sponsor, or guarantor has agreed to be direct billed by NSU must notify the Office of the University Bursar accordingly. Upon registration, the student must
  - provide a voucher, financial guarantee, letter of credit or authorization from the respective payer with the amount and enrollment period for which funds are to be applied when charges are due at the time of registration
  - where applicable, pay any amount due not covered in the billed party documentation no later than the start of the semester to avoid the assessment of late fees

• Tuition Reimbursement
Some employers/sponsors/guarantors make payments directly to the student under tuition reimbursement programs. These programs are between the student and the employer only. To avoid holds on the account, students must do the following upon registration:
  - pay charges in full for the semester/term
  - send an email to bursar@nova.edu from their SharkLink (NSU) email account to request a receipt of paid charges

Please note that students under employer tuition reimbursement programs are not exempt from the university’s payment policy. Students must ensure that their accounts remain free from holds, so that they may access their transcripts at the end of each semester for tuition reimbursement purposes.

Florida Prepaid College Plan
NSU accepts and bills the Florida Prepaid College Plan (FLPP) for tuition, fees, and on-campus housing costs. The plans are based on the tuition rates of the tax-assisted Florida public colleges and universities. The difference between NSU tuition, fees, and on-campus housing costs and the allocations through the Florida Prepaid College Plan is the sole responsibility of the student. If a student is on the unrestricted plan, the student must designate a dollar amount for up to the cost of tuition and fees. Students new to NSU must contact Florida Prepaid at 800-552-GRAD to authorize NSU for payment. For those students who have notified the Florida Prepaid College Plan that they are attending NSU, the plan will automatically be billed based on the hours of enrollment after the drop/add period. A student may request changes to their FLPP by submitting a completed and signed Florida Prepaid College Plan Billing Request Form available on the bursar website at nova.edu/bursar/forms. To learn more about the Florida Prepaid College Plan, visit myfloridaprepaid.com.

NSU Student Health Insurance
NSU requires all students to carry adequate health insurance coverage. Therefore, students will automatically be enrolled in the NSU Student Health Insurance Plan, and their student accounts will be charged when they register for classes. Students who reside and take classes outside of the United States are exempt from this requirement. Students insured under another insurance plan must opt out of the NSU Student Health Insurance Plan each academic year by the given waiver deadline for their program. For detailed information, including waiver deadlines; access to the online waiver; and NSU Student Health Insurance Plan features, costs, and more, students should visit the Bursar’s website at nova.edu/studentinsurance.

The Office of the University Registrar
The Office of the University Registrar offers a variety of services to the university community. These services include, but are not limited to, course registration, transcript processing, name and address change, loan deferment, enrollment and degree verification, grade processing, commencement, degree conferral, and diploma printing. The essential responsibility of the registrar’s office is to create, maintain, and protect students’ academic records, as well as interpret and uphold university policy. Additional information is available at nova.edu/registrar.

Transcript Requests
Students may view a complete academic history, print out an unofficial transcript, and request an official transcript in SharkLink. In addition, a Transcript Request Form—available online at nova.edu/registrar/forms/transreq.pdf—can be
completed and submitted in person to the One-Stop Shop, via fax to (954) 262-4862, or via regular mail to Nova Southeastern University Enrollment and Student Services Office of the University Registrar 3301 College Avenue Fort Lauderdale, FL 33314-7784

There is a $10 fee for each official transcript.

Grades
Once grade(s) have been posted to the student’s academic record, a notification email directing students to SharkLink to view their grades is sent. An official grade report may also be printed from SharkLink.

Class Registration and Changes
All students must complete an online Student Enrollment Agreement (SEA) form each year in order to register for classes. The SEA outlines the university’s standards and policies regarding course registration and withdrawal, financial responsibility, and more. A copy of the SEA is available on the registrar’s website at nova.edu/registrar/forms/catch-the-sea-wave. Students must be officially registered prior to the start of the semester/term in order to participate in and receive academic credit for those courses. All holds must be cleared at the time of registration. Late registration will not be accepted if due to a financial hold that was not cleared prior to the close of the registration period. Students are responsible for reviewing their registration and academic records each semester/term for accuracy and for promptly notifying their program office/adviser of any discrepancies. Students have no more than 20 days after the end of a semester/term to resolve any discrepancies. Petitions for retroactive drops, withdrawals, or refunds for a course will only be considered based on documented extenuating circumstances. Appropriate documentation may include doctor’s notes and death certificates.

Roster Reconciliation
Students are required to attend the first class of each course to start academic work for the semester, unless they have obtained prior approval for an absence from the instructor. Without such approval, a student will be reported as not in attendance, which may result in the student being dropped from the class through the university’s roster reconciliation process. However, it remains the student’s responsibility to monitor class registration status in accordance with the Student Enrollment Agreement (SEA), regardless of the instructor’s roster reconciliation submission.

Students who believe they were reported in error as non-attendee must communicate with the instructor, who is the only one able to correct the record. Faculty members must email rostrec@nova.edu to request a student be left on the class roster who was originally reported as not in attendance.

Name, Social Security Number, or Gender Changes
NSU requires official documentation to make any change to the name, Social Security number, or gender students have on record. Students must submit a completed Data Change Form, available at nova.edu/registrar/forms/data_change.pdf, along with supporting legal documentation. For details on acceptable documentation for each change, visit the registrar’s website at nova.edu/registrar/services.html.

Address Changes
Students may change their address via SharkLink by clicking “View my profile.”

Loan Deferment/Enrollment and Degree Verification
Students may obtain a free, official Loan Deferment/Enrollment Verification Form via SharkLink. This Enrollment Verification Form is an official document from the National Student Clearinghouse (NSC) that can be presented to health insurance agencies, housing authorities, consumer product companies, banks, and other agencies requiring documentation of your current enrollment status.

Commencement
The Office of the University Registrar coordinates all NSU commencement exercises, processes degree applications, and prints and distributes diplomas. Complete information is available online at nova.edu/commencement.

Transfer Evaluation Services
Graduate and First-Professional Students
Graduate and first-professional students may refer to the institutional polices on transferring credits to NSU listed on the TES website at nova.edu/tes. Questions regarding the transfer of graduate/first-professional-level courses should be addressed to the student’s program admissions office.

Degree Works Online Degree Evaluations
The university’s online degree evaluation system, Degree Works, is a useful reference tool to help students track their progress toward degree requirements published in the college catalog. Students may access Degree Works in SharkLink. Degree Works evaluations are not official and do not replace a student’s academic advisor or college catalog information. Students should consult their specific academic advisor/program office for detailed program requirements and course options. Final approval for the completion of graduation requirements is granted by the program office. For more information, visit the registrar’s office at nova.edu/registrar/degreeworks.html.

The One-Stop Shop
(Horvitz and Terry Administration Buildings)
The One-Stop Shops are the central point of contact for information and service for walk-in prospective, new, and continuing students. Staff members are cross-trained to
answer inquiries about financial aid, registrar, and bursar functions. Students can also obtain their SharkCards and parking permits at the One-Stop Shops, which are located in the Horvitz Administration Building, and on the first floor of the Terry Administration Building, both on the Fort Lauderdale/Davie Campus.

**Hours of Operation**
Monday–Thursday: 8:30 a.m. to 7:00 p.m.
Friday: 8:30 a.m. to 6:00 p.m.
Saturday: 9:00 a.m. to noon (Horvitz only)
The One-Stop Shops are closed on holidays observed by NSU.

**Regional Campuses**
The Office of Student Financial Assistance hours of operation at the regional campuses are as follows:

**Fort Myers**
Monday–Thursday: 9:00 a.m.–5:30 p.m.
Friday: 8:30 a.m. to 5:00 p.m.
(No Saturday or Sunday hours)

**Jacksonville**
Monday–Friday: 9:30 a.m.–6:00 p.m.
(No Saturday or Sunday hours)

**Miami**
Monday–Friday: 9:30 a.m.–6:00 p.m.
(No Saturday or Sunday hours)

**Orlando**
Monday–Friday: 9:00 a.m.–5:30 p.m.
(No Saturday or Sunday hours)

**Palm Beach**
Monday–Friday: 8:30 a.m.–5:00 p.m.
(No Saturday or Sunday hours)

**Puerto Rico**
Tuesday–Friday: 8:30 a.m.–6:00 p.m.
Saturday 9:00 a.m.–12:30 p.m.

**Tampa Bay**
Monday–Friday: 8:30 a.m.–5:00 p.m.
(No Saturday or Sunday hours)

**Veterans Resource Center**
The Veterans Resource Center (VRC) is the centralized location for resources and services for veterans and military-affiliated students. The VRC’s mission includes facilitating academic success and supporting university and community engagement, professional development, and, ultimately, graduation and career attainment.

Located in the Carl DeSantis Building, room 1045, the VRC is a home away from home that offers the following:

- assistance with educational benefits
- a lounge, meeting, and study area with a computer lab and free printing
- veteran-specific programming with university and community engagement opportunities
- academic drop-ins from the Career Development office, Tutoring and Testing Center, The Writing Center, and success coaches
- a biweekly speaker series with topics such as VA benefits, pro-bono veteran legal assistance, and financial planning
- a home for the Student Veteran Association Group, Freedom Sharks

For more information about NSU’s Veterans Resource Center, find us at nova.edu/veterans, email us at vrc@nova.edu, or call (954) 262-FLAG (3524).

**Certificate of Physical Examination**
Most programs require students to have a certificate of physical examination completed by their physician. Forms will be provided to each matriculant as part of the admissions package or can be downloaded from nova.edu/smc/immunization-forms.

Students may request that the University Health Service perform these examinations. The University Health Service will make appointments in as timely a manner as possible. The appointments, once made, become an obligation of the student, and must be kept.

These certificates (whether done privately or by the university) will be placed in an appropriate facility.

**Immunization Requirements**
Students must complete a mandatory immunization form, which must be signed by a licensed health care provider. The form can be found at nova.edu/smc.

Students in the Health Professions Division may be required to upload proof of immunizations to multiple online portals to satisfy the requirements of their programs and training facilities where they are assigned.
The following immunizations/vaccinations are required of students at the Health Professions Division based on the current Centers for Disease Control (CDC) recommendations for Health Care Personnel:

**Basic Immunizations**

Every student is required to have had an immunization for, or show evidence of immunity to, the following diseases before matriculating at Nova Southeastern University (with the exception of the influenza vaccination, which is administered yearly):

**Varicella (Chicken Pox)**
One of the following is required—Proof of two vaccinations or positive antibody titer. (Lab report is required.)

**Measles, Mumps, and Rubella (MMR)**
One of the following is required—Proof of two vaccinations or positive antibody titer for measles (rubeola), mumps, and rubella. (Lab report is required.)

**Tetanus Toxoid, Diphtheria Toxoid, and Acellular Pertussis Vaccine (Tdap)**
All students are required to have had a Tetanus Toxoid, Diphtheria Toxoid, and Acellular Pertussis Vaccine (Tdap) booster prior to matriculation and must maintain immunity by continuing to remain current according to the CDC recommendations for health care personnel during their program. Due to the increased risk of pertussis in a health care setting, the Advisory Committee on Immunization Practices highly recommends health care workers receive a one-time Tdap (ask your health care provider). Tdap is required, without regard to interval of previous dose of Tetanus Toxoid (Td).

**Influenza**
Vaccinations are administered annually. One dose of the influenza vaccine is required each fall.

**Hepatitis B**
- Both of the following are required—Three vaccinations and positive surface antibody titer. (Lab report is required.)
- If the series is in progress, evidence of at least one shot must be provided, and the renewal date will be set accordingly.
- If the titer is negative or equivocal, the student must repeat the series and provide a repeat titer report.

**PPD Skin Test (Two Step)**
One of the following is required—negative two-step test or negative blood test (such as QuantiFERON Gold Blood Test or T-Spot Test) or, if positive PPD results, provide a chest X-ray and/or prophylactic treatment information within the past 12 months. Please note that some rotation sites may not accept the QuantiFERON Gold Blood Test.

**Arrangements**

Students may request that the Student Medical Center administer these immunizations. The Student Medical Center will make appointments in as timely a manner as possible. Students may call (954) 262-4100 to make an appointment. Once made, the appointment becomes the student’s obligation and must be kept. For students at other NSU campuses, appointments may be scheduled with the NSU-designated physician for their area. Students may also request that the NSU Clinic Pharmacy administer the influenza vaccination.

Students are financially responsible for all required immunizations.

**Failure to Comply**
The university is not required to provide alternative sites for clinical practicum or rotations should immunization be a requirement for placement. Therefore, failure to comply with this policy may result in a student’s inability to satisfy the graduation requirements in his or her program.

Relative to clinical rotation site requirements, students are expected to consult their specific college/program handbooks for compliance with any college/program-specific requirements.

**Dress Code**
Students in the Health Professions Division must maintain a neat and clean appearance befitting students attending professional school. Therefore, attire should convey a professional appearance whenever the student is on the division campus and in classes or laboratory or on an experiential rotation or program. The dress code is to be observed at all times, including during midterms and examination periods. Students are expected to consult their specific program handbooks for compliance with any program-specific and clinical rotation site-supplemental dress code policies.

**Identification Requirements and Fieldwork Prerequisites**

An affiliated clinical/fieldwork teaching facility may also require a student to pass a state of Florida Department of Health screening before rotation. Other requirements that may be held by the affiliated facility include, but are not limited to, physical examination, fingerprinting, a criminal background check, urinalysis for drugs and alcohol, and proof of immunization. If a student does not meet all requirements held by the affiliated facility before the first day of the scheduled placement, the student’s placement will be canceled. If the placement has already begun, the student will be asked to leave.
Martin and Gail Press Health Professions Division (HPD) Library

The Martin and Gail Press Health Professions Division Library (Press HPD Library) is located on the first floor at the north end of the Terry Building Complex in the Library/Lab Building. The Press HPD Library consists of a large collaboration area for group study, a designated quiet study area, and 50 study rooms. There are a variety of seating options available, from large tables to individual carrels and informal seating. Study rooms, located in the library as well as the adjacent Assembly I and Assembly II buildings, may be checked out for three hours and renewed based on availability. A paging system is offered for students waiting for an available study room. Additionally, one study room is equipped with a Mediascape collaboration unit with double monitor displays for collaborative group work, and a small teaching lab may be reserved for group instruction.

Hours of operation for the Martin and Gail Press HPD Library and study rooms in Assembly I and Assembly II buildings:

Monday–Thursday: 7:00 a.m.–midnight
Friday: 7:00 a.m.–9:00 p.m.
Saturday and Sunday: 10:00 a.m.–midnight

*From September through May, the study rooms in the Assembly II building are open 24/5 (Sunday–Thursday).

The Press HPD Library print collection consists of 11,500 monograph titles, 715 archived print journal titles, and 88 active print journal subscriptions. The Press HPD Library provides all HPD students with remote access to online resources, including over 17,000 health-related full-text eJournals, 2,000 biomedical eBooks, and over 200 health and medicine-specific databases. These resources may be accessed 24/7 through the Press HPD Library website (nova.edu/hpdlibrary).

Professional reference services are available to students in person as well as by phone, email, and online via screen sharing software. Eight professional librarians are available to assist students with library resources and research-specific assignments. Each HPD college/program is assigned a subject specialist liaison librarian who works closely with faculty and provides instructional sessions for specific class assignments.

The Press HPD Library also provides these free services to enhance student learning and study:

• Interlibrary Loan/Document Delivery service obtains journal articles, books, and items not available in the NSU collection
• Notary service
• Binding, faxing, and scanning services
• Wireless printing stations
• On-site technology assistance

• I.D.E.A. Labs:
  – 3-D printing and scanning: 3-D scanning and printing services for students involved in curricular and faculty projects.
  – Virtual reality: Students can experience virtual anatomy, simulation and medical-related apps via immersive virtual reality headsets.
  – The studio: Digital production room/studio for video recording and editing, along with cameras and other production equipment which can be checked out of the library.

Additional resources at the circulation desk (limited checkout times):

• Laptop computers
• iPads loaded with medical and production apps
• Medical/anatomy apps for checkout on personal Apple devices
• Print editions of required textbooks on reserve (for in-library use)
• Anatomy models and skeletons (for in-library use)
• Individual, small whiteboards and markers
• Chargers and extension cords
• Earplugs and school supplies (for purchase)
• Self-service Keurig coffee machine

For more information, please call (954) 262-3106.

See the University Libraries section of the NSU Student Handbook for information about NSU’s Alvin Sherman Library, Research, and Information Technology Center. Visit nova.edu/student-handbook for more information.

University Health Care Centers

The Health Professions Division Health Care Centers serve an important function and are an integral part of the training programs. They provide a vital community function by bringing health care service to areas whose medical needs traditionally have gone unmet.

The Division of Clinical Operations oversees the administration and oversight of the university’s health care centers in Miami-Dade and Broward counties. The centers offer health care services to the community, some not available elsewhere, and community outreach programs in the form of free health care education and assessment for vision, medical, speech, behavioral health, physical and occupational therapy, and dental services. Specific information about the clinics and services available to enrolled students are included on the Health Care Centers website at clinics.nova.edu.
Center for Student Counseling and Well-Being

The NSU Center for Student Counseling and Well-Being (CSCW) offers student counseling services to the student body of Nova Southeastern University (NSU) to help students maximize their best self academically, personally, and professionally. NSU’s clinical partner is Henderson Behavioral Health, a leader in behavioral health care that provides comprehensive, recovery-focused services and is accredited at the highest level for student counseling services by the Commission on the Accreditation of Rehabilitation Facilities (CARF).

Services provided at the CSCW range from stress management and coping strategies to psychiatric assessment and crisis intervention. The center provides the student with an assessment, counseling, consultation, psychiatric services, wellness and recovery education, and, when needed, case management services and linkage or referral. In addition, the Center for Student Counseling and Well-Being provides various outreach programs and support groups on such topics as stress management, transitions to college and grad school, and coping with oneself and others.

Individual, couples, family, and group counseling that utilizes a brief therapy model is provided in a welcoming office environment. The option for telehealth services is also available when appropriate. Services are scheduled based upon the identified needs and service options chosen by the student. The counselor’s goal is to build upon the student’s current skill sets for positive behavioral change. Services are provided by licensed counselors, a licensed psychologist, and a licensed psychiatrist. Students enrolled full- or part-time are eligible for 10 counseling sessions per academic year at no cost. Psychiatric services are available and are covered by many commercial insurance plans, or for a nominal fee. Daily appointments are available for new students. Students can register at: nova.edu/studentcounseling.
Dr. Kiran C. Patel College of Osteopathic Medicine

Dr. Kiran C. Patel College of Osteopathic Medicine Mission Statement

The mission of the Dr. Kiran C. Patel College of Osteopathic Medicine is to provide learner-centered education, both nationally and internationally, for osteopathic medical students, postgraduate trainees, physicians, and other professionals. Through its interprofessional programs, the college prepares competent and compassionate lifelong learners; supports research, scholarly activity, and community service; and advocates for the health and welfare of diverse populations, including the medically underserved.

Administration

Elaine Wallace, D.O., M.S.4
Dean

Guy M. Nehrenz, Ed.D., M.A., RRT
Senior Associate Dean of Administration and Collegiate Advancement

Kenneth Johnson, D.O.
Executive Associate Dean, Tampa Bay Regional Campus

Phyllis J. Fikler, D.M.D., M.P.H.
Associate Dean of Bachelor’s, Graduate, and Community Education

Mark Sandhouse, D.O., M.S.
Associate Dean of Osteopathic Medical Education

Margaret Wilkinson, Ph.D.
Associate Dean of Preclinical Education

Steven B. Zucker, D.M.D., M.Ed.
Associate Dean of Community Affairs and Area Health Education Center

Hilda M. De Gaetano, D.O., M.S., FAAP, FACOP
Senior Assistant Dean of Preclinical Education

Paula Anderson-Worts, D.O., M.P.H.
Assistant Dean of Faculty

Cyril Blavo, D.O., M.S., M.P.H., TM, FACOP
Assistant Dean of Preclinical Education, Tampa Bay Regional Campus

Eric Goldsmith, D.O.
Assistant Dean of Clinical Affairs

Janet Hamstra, Ed.D.
Assistant Dean of Graduate Medical Education

Delia Harper-Celestine, Ed.D., M.P.H.
Assistant Dean of Student Affairs

James Howell, M.D., M.P.H.
Assistant Dean of Professional Relations

Jennifer Jordan, Ed.D.
Assistant Dean of Medical Education

Nancy Klimas, M.D.
Assistant Dean of Research

Jill Wallace-Ross, D.O.
Assistant Dean of Osteopathic Clinical Education

Core Performance Standards for Admission and Progress

The Dr. Kiran C. Patel College of Osteopathic Medicine (KPCOM) is pledged to the admission and matriculation of qualified students and wishes to acknowledge awareness of laws that prohibit discrimination against anyone on the basis of race, color, religion or creed, sex, pregnancy status, national or ethnic origin, nondisqualifying disability, age, ancestry, marital status, sexual orientation, gender, gender identity, military service, veteran status, or political beliefs or affiliations. Regarding those students with verifiable disabilities, the university and KPCOM will not discriminate against such individuals who are otherwise qualified, but will expect applicants and students to meet certain minimal technical standards (core performance standards) as set forth herein, with or without reasonable accommodation.

In adopting these standards, the university and KPCOM believe it must keep in mind the efficacy and safety in the learning environment, as well as the ultimate safety of the patients who some of its graduates will eventually serve. Specifically, the standards reflect what the university and KPCOM believe are reasonable expectations required of future osteopathic physicians in performing common functions. Any exceptions
to such standards must be approved by the dean of KPCOM based upon appropriate circumstances.

Honor and integrity are essential and depend on the exemplary behavior of the individual in his or her relations with classmates, patients, faculty members, and colleagues. This includes accountability to oneself and to relationships with fellow students, future colleagues, faculty members, and patients who come under the student’s care or contribute to his or her training and growth, as well as members of the general public. This applies to personal conduct that reflects on the student’s honesty and integrity in both academic and nonacademic settings, whether or not involving an NSU-sponsored activity. All students must have the capacity to manage their lives and anticipate their own needs. Upon accepting admission to NSU-KPCOM, each student subscribes to, and pledges complete observance to, NSU’s Student Code of Conduct Policies. A violation of these standards is an abuse of the trust placed in every student and could lead to suspension or dismissal.

Students in the Doctor of Osteopathic Medicine degree program must have, with or without reasonable accommodation, multiple abilities and skills including intellectual, conceptual, integrative, and quantitative abilities; interpersonal communication; mobility and strength; motor skills; and hearing, visual, tactile, behavioral, and social attributes. Students must be able to perform these abilities and skills in a reasonably independent manner. Osteopathic physicians must have the knowledge and skills to function in a broad variety of clinical situations and to render a wide spectrum of patient care. In order to carry out the activities described below, students in the Doctor of Osteopathic Medicine Program at KPCOM must be able to integrate consistently, quickly, and accurately all information received. They must also have the ability to learn, integrate, analyze, and synthesize data.

Intellectual, Conceptual, Integrative, and Qualitative Abilities

Students must have critical thinking ability sufficient for problem solving and good clinical judgment. This is necessary to identify cause/effect relationships and to develop plans of action or plans of care. In addition, students should be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures. Students are expected to be able to perform multiple tasks in a diverse, dynamic, highly competitive, and challenging learning environment. They must be able to think quickly and accurately in an organized manner, despite environmental distractions. Examples include, but are not limited to, identification of cause/effect relationships in clinical situations, development of treatment plans, transferring knowledge from one situation to another, evaluating outcomes, problem solving, prioritizing, and using short- and long-term memory.

Interpersonal Communication

Students must be able to interact and communicate effectively with respect to policies, protocols, and process—with faculty and staff members, students, patients, patient surrogates, and administration—during the student’s educational program. They must be able to communicate effectively and sensitively with patients. Communication includes not only speech, but also reading and writing. Students must also be able to communicate effectively and efficiently in all written forms with all members of the health care team. They must have interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds.

Students must have sufficient proficiency with English to retrieve information from texts and lectures and communicate concepts on written exams and patient charts; elicit patient backgrounds; describe patient changes in moods, activity, and posture; and coordinate patient care with all members of the health care team. Students must be able to communicate or provide communication in lay language so that patients and their families can understand the patient’s conditions, treatment options, and instructions. Students must be able to accurately enter information in the patient’s electronic health record, according to his or her program’s requirements.

Motor Skills

Osteopathic medicine students must have sufficient motor function to execute movements reasonably required to provide general care and emergency treatment to patients. Examples of emergency treatment reasonably required of some health care professionals are cardiopulmonary resuscitation (CPR), administration of intravenous medication, the application of pressure to stop bleeding, the opening of obstructed airways, and the ability to calibrate and use various pieces of equipment. Such actions require coordination of both gross and fine muscular movements, equilibrium, and functional use of the senses of touch and vision.

Strength and Mobility

Students must have sufficient mobility to attend emergency codes and to perform such maneuvers as CPR when required. They must have the physical ability to move sufficiently from room to room and to maneuver in small places.

Osteopathic medicine students must have the ability to position patients for the administration and delivery of osteopathic manipulative treatment in a variety of settings and to position and move patients when required.

Hearing

Students must have sufficient auditory ability to monitor and assess auditory communication, when necessary. Osteopathic medicine students must be able to hear information given by the patient in answer to inquires; to hear cries for help; to hear
features in an examination, such as the auscultatory sounds; and to monitor equipment.

**Visual**
Osteopathic medicine students must have visual ability sufficient for observation, assessment, and rendering of treatment necessary in patient care. It must be consistent in many cases with being able to assess asymmetry, range of motion, and tissue texture changes. Osteopathic medicine students must have sufficient visual ability to use ophthalmologic instruments. It is necessary to have adequate visual capabilities for proper evaluation and treatment integration. Students must be able to observe the patient and the patient’s responses, including body language and features of the examination and treatment.

**Tactile**
Osteopathic medicine students must have sufficient tactile ability for physical assessment. They must be able to perform palpation and functions of physical examination and/or those related to therapeutic intervention.

Osteopathic medicine students must be able to use tactile senses to diagnose directly by palpation and indirectly by sensations transmitted through instruments.

**Sensory**
Osteopathic medicine students are required to have an enhanced ability to use their sensory skills. These enhanced tactile and proprioceptive sensory skills are essential for appropriate osteopathic evaluation and treatment of patients.

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### Doctor of Osteopathic Medicine Program

#### Mission Statement

The Doctor of Osteopathic Medicine Program in the Dr. Kiran C. Patel College of Osteopathic Medicine is dedicated to student-centered osteopathic medical education to produce exemplary osteopathic physicians known for competent and compassionate care.

#### Accreditation

Nova Southeastern University Dr. Kiran C. Patel College of Osteopathic Medicine’s Doctor of Osteopathic Medicine Program has been granted accreditation by the Commission on Osteopathic College Accreditation of the American Osteopathic Association. This body is recognized by the U.S. Department of Education and the Council of Post-Secondary Accreditation as the accrediting agency for colleges educating osteopathic physicians and surgeons.

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### An Osteopathic Physician

Two types of complete physicians may practice medicine in all 50 states: the Doctor of Osteopathic Medicine (D.O.) and the Doctor of Medicine (M.D.). While both types of physicians are trained in all aspects of patient care, D.O.s offer a distinct, holistic approach to medicine.

Osteopathic medicine is distinguished by an emphasis on primary care, by using osteopathic manipulative medicine when necessary, and by a tradition of caring for patients in underserved rural and urban areas.

Osteopathic physicians recognize the relationship between physical structure and organic function and view the human body as an interdependent unit rather than an assortment of separate parts and systems.

While all medical and surgical specialties are represented within the osteopathic medical profession, the training of vitally needed family physicians and the drive to reach rural, minority, geriatric, and indigent populations, make the osteopathic medical profession unique.

We are proud of our success in producing vitally needed primary care physicians—nearly 55 percent of our graduates practice in the primary care disciplines of family medicine, general internal medicine, or general pediatrics—and we remain committed to training physicians capable of delivering the highest standards of total-patient care in all practice settings.

#### Admissions Requirements

Applicants for the first-year class must meet the following requirements prior to matriculation:

1. have a bachelor’s degree from a regionally accredited college or university (A minimum of 90 semester hours of coursework from a regionally accredited college or university may be considered for admission.)
2. have successfully completed (with a grade of 2.0 or higher)
   - 8 semester hours of biological science (biology, embryology, genetics, microbiology, physiology, etc.)
   - 8 semester hours of general chemistry with laboratory
   - 8 semester hours of organic chemistry with laboratory
   - 3 semester hours of biochemistry
   - 8 semester hours of physics
   - 6 semester hours of English/humanities (must include 3 semester hours of English)

Note: These are minimum academic requirements for admission. Students are encouraged to take additional upper-level science, behavioral science, and humanities courses. It is recommended that applicants complete at least one course in physiology.
3. A minimum cumulative and science GPA of 3.0 is required. However, the dean is empowered to evaluate the total qualifications of every student and to modify requirements in unusual circumstances.

4. All applicants are required to take the Medical College Admission Test (MCAT). Applications for the MCAT may be obtained online at aamc.org, from your college’s preprofessional adviser’s office, by calling (319) 337-1357, or by writing directly to

   Medical College Admission Test Program Office  
   2255 North Dubuque Road  
   P.O. Box 4056  
   Iowa City, IA 52243-4056

MCAT scores must be no more than three years old prior to the date the AACOMAS application is submitted.

The discipline and intensive study required by the osteopathic medicine curriculum make the attainment of a superior GPA in undergraduate studies essential.

The college receives more than 7,000 applications a year, from which only 380 students are chosen. These students have varied backgrounds, and while some may enter the college directly from an undergraduate program, other students come from successful careers.

The Committee on Admissions recommends applicants to the dean on the basis of demonstrated academic excellence, leadership, compassion, and commitment to the osteopathic medical profession.

**Application Procedures**

The college participates in the American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS) for the receipt and processing of all applications. AACOMAS takes no part in the selection of students.

Applicants should submit applications electronically through AACOMAS Online, an interactive, web-based application at aacom.org. For questions, applicants may call (301) 968-4190.

The following steps are necessary to the primary application process.

1. The applicant must submit the following materials to AACOMAS by January 15:
   - completed AACOMAS application
   - official transcripts from the registrars of all colleges or universities attended, mailed directly to AACOMAS by the college or university
   - a letter of recommendation from the preprofessional committee, or, if such a committee does not exist, then three letters of evaluation—two from science professors and one from a nonscience professor
   - a letter of recommendation from a physician
   - MCAT scores (must be no more than three years old prior to the date the application is submitted)

2. The applicant must submit the following to the college by March 1:
   - a secondary application, which will be sent to the applicant by the college upon receipt of the AACOMAS application
   - a nonrefundable application fee of $50

A personal interview is a part of the admission process; however, being interviewed is not a guarantee of admission. Not all applicants will be granted an interview. Those selected for an interview will be notified of the date and time of such interview by the Office of Admissions.

Notice of acceptance will be on a rolling or periodic schedule; therefore, early completion of the application is in the best interest of the applicant because of the limited number of spaces available in each class.

After acceptance, final and official documents and requirements must be received by the Office of Admissions within 90 days following the start of the first term. If these final and official documents are not received, or other requirements are not met by that time, the student will not be able to continue his or her enrollment. Financial aid will not be disbursed to anyone until he or she has been fully admitted as a regular student (all admissions requirements have been approved by the program office).

**Tuition and Fees**

1. The tuition for 2020–2021 will be posted on our website (osteopathic.nova.edu). It is subject to change by the board of trustees without notice.

   For tuition purposes, a student’s Florida residency status (in-state or out-of-state) will be determined at matriculation and will remain the same throughout the entire enrollment of the student at NSU. Eligible students must request in-state tuition on their application. Accordingly, tuition will not be adjusted as a result of any change in residency status after initial enrollment registration.

2. For first-year students, a microscope/laboratory fee of $100 is required. In addition, a Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.

   Additional COM program fees apply as follows:

   **Year 1**  
   - Mandated Review Course and Clinical Laboratory Fee: $563.25  
   - Clinical Rotation Fee: $1,000
Year 2  Mandated Review Course and Clinical Laboratory Fee: $839 ($275 discount for total charge to student of $564)
         Clinical Rotation Fee: $1,000
Year 3  Mandated Review Course Fee: $797 ($275 discount for total charge to student of $522)
         Clinical Rotation Fee: $1,000
Year 4  Clinical Rotation Fee: $1,000

3. Acceptance fee is $1,250. This fee is required to reserve the accepted applicant’s place in the entering first-year class. This advance payment will be deducted from the tuition payment, but is not refundable in case of a withdrawal.

4. Deposit is $750. This advance payment is due March 15 or at the date specified below for those accepted after March 15. It will be deducted from the tuition payment, but is not refundable in the event of a withdrawal.

Due Dates for Acceptance Fees and Deposits

a. Applicants accepted prior to November 15 will have until December 14 to pay the acceptance fee and until March 15 to pay the deposit.

b. Applicants accepted between December 15 and January 14 will have 30 days to pay the acceptance fee and until March 15 to pay the deposit.

c. Applicants accepted between January 15 and February 28 will have 14 days to pay their acceptance fee and until March 15 to pay the deposit.

d. Those accepted between March 1 and May 14 will be required to submit their combined acceptance and deposit fees within 14 days.

e. Anyone accepted on May 15 or later will be asked to immediately pay the combined acceptance fee and deposit of $2,000.

The first semester’s tuition and fees, less the $2,000 previously paid, are due upon receipt of the NSU invoice. Students will be billed tuition for each subsequent semester. Students will not be admitted until their financial obligations have been met.

The financial ability of applicants to complete their training at the college is important because of the limited number of positions available in each class. Applicants should have specific plans for financing four years of medical education, including tuition and fees, living expenses, books, equipment, clinical rotation travel, and miscellaneous expenses.

Schedule of Application for Admission Cycle

June—Application cycle for the next academic year begins. Inquiries are invited by Nova Southeastern University Dr. Kiran C. Patel College of Osteopathic Medicine, and AAMCOMAS forms are made available.

July—Credentials sent to AAMCOMAS are processed, and applicant records are forwarded to Nova Southeastern University Dr. Kiran C. Patel College of Osteopathic Medicine. A supplemental application is then sent to the applicant. When the supplemental application is completed and returned and when recommendations are received, the completed application is evaluated for interview.

August—Personal interviews may begin.

January 15—Deadline for AAMCOMAS applications.

March 1—Deadline for NSU-KPCOM supplemental applications.

Technology Requirements

Students are required to own an Apple iPad with a minimum of 2 GB of ram, 128 GB of storage, and at least 500MB of free space running iOS 2011 or higher from any of the following lines or newer: iPad Pro (1st Generation), iPad (2017), iPad Mini 4 (4th Generation Mini), and iPad Air 2 (6th Generation). As part of the curriculum, students will develop medical research skills, hone and refine information management skills, and be exposed to medical informatics and advanced immersive learning technologies. Students have access to a variety of computer educational resources and course material, including:

- Canvas courses, including SharkMedia recordings
- examinations via Examplify
- electronic textbooks through the NSU bookstore and NSU libraries
- interactive learning via Turning Point™
- immersive medical simulation experience (basic and 3-D advanced immersive learning and gaming)
- medical Spanish
- web modules
- UpToDate
- Lecturio
- academic/board review materials
- clinical procedures resources

A campus-wide wireless network exists to provide students with electronic access anywhere on campus. It includes audiovisual, holographic, and videoconferencing capabilities for efficient, two-way communication during classes.
Academics

Transfer of Credit
Circumstances may warrant that a student enrolled in a medical school seeks to transfer to another institution. Credits may be transferred from medical schools and colleges accredited by the Commission on Osteopathic College Accreditation (COCA) of the American Osteopathic Association or by the Liaison Committee on Medical Education (LCME).

- Transfers from a medical school accredited by the COCA or the LCME shall require that, at minimum, the last two years of instruction be completed within the NSU Dr. Kiran C. Patel College of Osteopathic Medicine.
- Transfers from an LCME-accredited medical school must complete the NSU Dr. Kiran C. Patel College of Osteopathic Medicine's requirement for osteopathic manipulative medicine prior to graduation.
- Transfer credits will only be given if the student is in good academic standing at, and eligible for readmission to, the previously attended COCA- or LCME-accredited medical school.
- Credit is only given for completed courses with grades of 70 percent (2.0) or greater that fulfill the KPCOM's graduation requirements.

Anyone wishing to transfer to the NSU Dr. Kiran C. Patel College of Osteopathic Medicine must meet the following criteria:
1. make a formal application to NSU Dr. Kiran C. Patel College of Osteopathic Medicine Office of Admissions
2. satisfy all admission requirements to NSU Dr. Kiran C. Patel College of Osteopathic Medicine, which include submitting official transcripts of all college work (including osteopathic transcripts); MCAT scores; National Board scores, if taken; and letters of evaluation
3. be in good standing at the transferring institution, as documented by a letter from the dean of the transferring institution
4. supply a letter of recommendation from a faculty member of the transferring institution
5. supply a written statement outlining reasons for request for transfer

Decisions on transfer are made by the dean. No applicant will be accepted without an interview. The decision will be based on factors which include, but are not limited to, academic record, interview, circumstances leading to the transfer request, available space, and admission standards.

Course of Study
The Dr. Kiran C. Patel College of Osteopathic Medicine has a dedicated faculty; well established affiliations with medical centers, hospitals, and health care systems; a nationally recognized rural medicine program; and a mission to educate the finest osteopathic physicians possible. We place our students and residents at the nation’s fourth largest public hospital system—the North Broward Hospital District—or at one of our regional academic centers throughout Florida and several other states to improve continuity and coordination of clinical education within our vast and growing clinical training network.

Our innovative curriculum is designed to fulfill our mission. The design of the curriculum is based on successful academic models—carefully developed and integrated. It emphasizes interdisciplinary collaboration, guiding students to develop a holistic, and more importantly, an osteopathic approach to medicine. We continually correlate basic scientific information with fundamental clinical application. Students are exposed to clinical settings in their first year, which gives them the opportunity to prepare for the “real world” of medicine.

This clinical exposure continues into the second year when students have increased opportunity to interact with standardized patients on campus as well as be involved, under physician supervision, with real patients in the office and hospital setting.

A notable aspect of the clinical program is a required, three-month rotation in rural or urban underserved practice settings. In rural and urban underserved clinics throughout the state of Florida, nationally, and internationally, our students provide health care to medically underserved and indigent patients. Our students learn to treat various patients whose lifestyles, practices, and attitudes toward health care differ from those seen in more traditional training sites. This enriching educational experience is one that cannot be taught in the classroom.

Physicians do not work in a vacuum, but rather in a health care team, and NSU promotes interdisciplinary cooperation whenever possible. Students share faculty members and campus facilities with NSU’s pharmacy, dental, optometry, physician assistant, physical therapy, occupational therapy, public health, and nursing students.
## Curriculum Outline

### Preclinical Required Courses—Classes of 2023 and 2024

#### M1

**Fall Term**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 5010 Gross Anatomy</td>
<td>6.5</td>
</tr>
<tr>
<td>COM 5020 Medical Histology</td>
<td>3.5</td>
</tr>
<tr>
<td>COM 5021 Medical Biochemistry</td>
<td>3.5</td>
</tr>
<tr>
<td>COM 5030 Medical Microbiology</td>
<td>2.5</td>
</tr>
<tr>
<td>COM 5064 Medical Physiology</td>
<td>4.5</td>
</tr>
<tr>
<td>COM 5080 Health Care Provider Basic Life Support (BLS) and First Aid</td>
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</tr>
<tr>
<td>COM 5121 Osteopathic Principles and Practice I</td>
<td>3.5</td>
</tr>
<tr>
<td>COM 5830 Physical Diagnosis I</td>
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</table>

**Total:** 26.5

**Winter Term**

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>COM 5005 Basics of Nutrition</td>
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</tr>
<tr>
<td>COM 5006 Foundations of Research</td>
<td>1.0</td>
</tr>
<tr>
<td>COM 5081 Fundamentals of Pathology</td>
<td>1.5</td>
</tr>
<tr>
<td>COM 5082 Fundamentals of Pharmacology</td>
<td>2.0</td>
</tr>
<tr>
<td>COM 5083 Principles of Radiology</td>
<td>1.0</td>
</tr>
<tr>
<td>COM 5122 Osteopathic Principles and Practice II</td>
<td>1.5</td>
</tr>
<tr>
<td>COM 5425 Medical Procedures I</td>
<td>1.0</td>
</tr>
<tr>
<td>COM 5840 Physical Diagnosis II</td>
<td>4.5</td>
</tr>
<tr>
<td>COM 5850 Medical Immunology</td>
<td>1.5</td>
</tr>
<tr>
<td>COM 5851 Integumentary System</td>
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</tr>
<tr>
<td>COM 5855 Hematopoietic and Lymphoreticular System</td>
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</tr>
<tr>
<td>COM 5860 Respiratory System</td>
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</tr>
<tr>
<td>COM 5870 Interdisciplinary Education and Professionalism I</td>
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**Total:** 26.5

**Summer Term**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>COM 5125 Osteopathic Principles and Practice III</td>
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<tr>
<td>COM 5426 Medical Procedures II</td>
<td>1.0</td>
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<tr>
<td>COM 5802 Tobacco Use and Dependence</td>
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<tr>
<td>COM 5861 Cardiovascular System</td>
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### M2

#### Fall Term

<table>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>COM 6000</td>
<td>Principles of Clinical Medicine I</td>
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<tr>
<td>COM 6011</td>
<td>Medical Neuroanatomy</td>
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</tr>
<tr>
<td>COM 6055</td>
<td>Human Sexuality</td>
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<tr>
<td>COM 6105</td>
<td>Endocrine System</td>
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</tr>
<tr>
<td>COM 6109</td>
<td>Renal/Urinary System</td>
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<tr>
<td>COM 6110</td>
<td>Women's Health System</td>
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<tr>
<td>COM 6112</td>
<td>Nervous System</td>
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</tr>
<tr>
<td>COM 6124</td>
<td>Osteopathic Principles and Practice IV</td>
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<tr>
<td>COM 6425</td>
<td>Medical Procedures III</td>
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<tr>
<td>COM 6426</td>
<td>Medical Procedures IV</td>
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<tr>
<td>COM 6427</td>
<td>Medical Procedures V</td>
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<tr>
<td>COM 6870</td>
<td>Interdisciplinary Education and Professionalism II</td>
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**Total:** 27.5

#### Winter Term

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>COM 5000</td>
<td>Student Wellness</td>
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<tr>
<td>COM 6001</td>
<td>Principles of Clinical Medicine II</td>
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</tr>
<tr>
<td>COM 6045</td>
<td>Business of Medicine</td>
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<tr>
<td>COM 6090</td>
<td>Geriatrics System</td>
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<tr>
<td>COM 6107</td>
<td>Musculoskeletal System</td>
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<tr>
<td>COM 6108</td>
<td>Psychiatry and Behavioral Medicine System</td>
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</tr>
<tr>
<td>COM 6111</td>
<td>Pediatrics System</td>
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</tr>
<tr>
<td>COM 6114</td>
<td>Rheumatology System</td>
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<tr>
<td>COM 6125</td>
<td>Osteopathic Principles and Practice V</td>
<td>2.0</td>
</tr>
<tr>
<td>COM 6155</td>
<td>Emergency Medicine</td>
<td>1.0</td>
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<tr>
<td>COM 6428</td>
<td>Medical Procedures VI</td>
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<tr>
<td>COM 6429</td>
<td>Medical Procedures VII</td>
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<tr>
<td>COM 6871</td>
<td>Interdisciplinary Education and Professionalism III</td>
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</tr>
<tr>
<td>COM 9300</td>
<td>Medical Spanish (spans two years)</td>
<td>1.5</td>
</tr>
<tr>
<td>COM 9990</td>
<td>Community Service (spans two years)</td>
<td>2.5</td>
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**Total:** 28.5
### Summer Term

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>COM 6082</td>
<td>Pediatric Advanced Cardiac Life Support (PALS)</td>
<td>1.0</td>
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<tr>
<td>COM 6221</td>
<td>Advanced Cardiac Life Support and Basic Life Support (ACLS and BLS)</td>
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<tr>
<td>COM 6990</td>
<td>Preclinical Academic Review</td>
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<td></td>
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### Preclinical Electives

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<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>COM 9500</td>
<td>Guided Study</td>
<td>1.0–12.0</td>
</tr>
<tr>
<td>COM 9600A</td>
<td>Research</td>
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</table>

### Predoctoral Fellows Curriculum

**One-Year Course of Study Each**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 9100</td>
<td>Predoctoral Osteopathic Principles and Practice Fellowship</td>
<td>48</td>
</tr>
<tr>
<td>COM 9200</td>
<td>Predoctoral Research Fellowship</td>
<td>48</td>
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<tr>
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<td></td>
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### Preclinical Required Courses—Classes of 2021 and 2022

#### M1 Fall Term

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>COM 5021</td>
<td>Medical Biochemistry</td>
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<tr>
<td>COM 5010</td>
<td>Gross Anatomy</td>
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</tr>
<tr>
<td>COM 5020</td>
<td>Medical Histology</td>
<td>3.5</td>
</tr>
<tr>
<td>COM 5061</td>
<td>Medical Physiology I</td>
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</tr>
<tr>
<td>COM 5830</td>
<td>Physical Diagnosis I</td>
<td>2.0</td>
</tr>
<tr>
<td>COM 5835</td>
<td>Humanism in Medicine I</td>
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</tr>
<tr>
<td>COM 5121</td>
<td>Osteopathic Principles and Practice I</td>
<td>4.0</td>
</tr>
<tr>
<td>COM 5800</td>
<td>Foundations and Applications of Clinical Reasoning I</td>
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</tr>
<tr>
<td>COM 5080</td>
<td>Basic Life Support</td>
<td>1.0</td>
</tr>
<tr>
<td>COM 5802</td>
<td>Tobacco Use and Dependence</td>
<td>1.0</td>
</tr>
<tr>
<td>COM 5171</td>
<td>Interdisciplinary Generalist Curriculum Preceptorship I</td>
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<td>Winter Term</td>
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<tr>
<td>COM 5000  Student Wellness</td>
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<tr>
<td>COM 5062  Medical Physiology II</td>
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<tr>
<td>COM 5030  Medical Microbiology I</td>
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<tr>
<td>COM 5031  Medical Microbiology II</td>
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<td>COM 5011  Medical Neuroanatomy</td>
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<tr>
<td>COM 5840  Physical Diagnosis II</td>
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<tr>
<td>COM 5122  Osteopathic Principles and Practice II</td>
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<tr>
<td>COM 5845  Humanism in Medicine II</td>
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<tr>
<td>COM 5801  Foundations and Applications of Clinical Reasoning II</td>
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<tr>
<td>COM 5172  Interdisciplinary Generalist Curriculum Preceptorship II</td>
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<table>
<thead>
<tr>
<th>Summer Term</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>COM 5990  Preclinical Medical Science Review</td>
<td>3.0</td>
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<table>
<thead>
<tr>
<th>M2 Summer Term</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>COM 6030  Principles of Radiology</td>
<td>1.0</td>
</tr>
<tr>
<td>COM 6040  Principles of Pathology</td>
<td>2.0</td>
</tr>
<tr>
<td>COM 6050  Principles of Pharmacology</td>
<td>2.0</td>
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<table>
<thead>
<tr>
<th>Fall Term</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>COM 6000  Principles of Clinical Medicine I</td>
<td>2.0</td>
</tr>
<tr>
<td>COM 6100  Integumentary System</td>
<td>1.5</td>
</tr>
<tr>
<td>COM 6101  Hematopoietic Lymphoreticular System</td>
<td>1.5</td>
</tr>
<tr>
<td>COM 6102  Respiratory System</td>
<td>2.5</td>
</tr>
<tr>
<td>COM 6103  Cardiovascular System</td>
<td>2.5</td>
</tr>
<tr>
<td>COM 6105  Endocrine System</td>
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</tr>
<tr>
<td>COM 6106  ECG</td>
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</tr>
<tr>
<td>COM 6107  Rheumatology and the Musculoskeletal System</td>
<td>2.5</td>
</tr>
<tr>
<td>COM 6108  Psychiatry</td>
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<tr>
<td>COM 6173  Interdisciplinary Generalist Curriculum Preceptorship III</td>
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<tr>
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<td>Course Title</td>
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<tr>
<td>-------------</td>
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<tr>
<td>COM 6123</td>
<td>Osteopathic Principles and Practice III</td>
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<tr>
<td>COM 6300</td>
<td>Foundations and Applications of Clinical Reasoning III</td>
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**Winter Term**

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<tbody>
<tr>
<td>COM 6001</td>
<td>Principles of Clinical Medicine II</td>
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<tr>
<td>COM 6005</td>
<td>Medical Jurisprudence</td>
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<tr>
<td>COM 6090</td>
<td>Geriatrics</td>
<td>1.0</td>
</tr>
<tr>
<td>COM 6104</td>
<td>Gastrointestinal System</td>
<td>2.5</td>
</tr>
<tr>
<td>COM 6109</td>
<td>Renal/Urinary System</td>
<td>2.5</td>
</tr>
<tr>
<td>COM 6110</td>
<td>Women's Health</td>
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</tr>
<tr>
<td>COM 6111</td>
<td>Pediatrics</td>
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</tr>
<tr>
<td>COM 6112</td>
<td>Neurology</td>
<td>2.5</td>
</tr>
<tr>
<td>COM 6124</td>
<td>Osteopathic Principles and Practice IV</td>
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<tr>
<td>COM 6301</td>
<td>Foundations and Applications of Clinical Reasoning IV</td>
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<tr>
<td>COM 9990</td>
<td>Community Service</td>
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<tr>
<td>COM 9300</td>
<td>Medical Spanish</td>
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**Summer Term**

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<tr>
<td>COM 6062</td>
<td>Pediatric Advanced Life Support</td>
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<tr>
<td>COM 6221</td>
<td>Advanced Cardiac Life Support</td>
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</tr>
<tr>
<td>COM 6990</td>
<td>Preclinical Academic Review</td>
<td>3.0</td>
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**Preclinical Electives**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>COM 9500</td>
<td>Guided Study</td>
<td>1.0–12.0</td>
</tr>
<tr>
<td>COM 9600A</td>
<td>Research</td>
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**Predoctoral Fellows Curriculum**

**One-Year Course of Study Each**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>COM 9100</td>
<td>Predoctoral Osteopathic Principles and Practice Fellowship</td>
<td>48</td>
</tr>
<tr>
<td>COM 9200</td>
<td>Predoctoral Research Fellowship</td>
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### Clinical Education Required Courses—All Classes

**M3**

**Summer/Fall/Winter Terms—Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>COM 7005</td>
<td>Come Home Day I</td>
<td>1.0</td>
</tr>
<tr>
<td>COM 7006</td>
<td>Come Home Day II</td>
<td>1.0</td>
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**Total:** 2.0

**Summer/Fall/Winter Terms—Core Clinical Rotations**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>COM 7091</td>
<td>Family Medicine I Rotation</td>
<td>8.0</td>
</tr>
<tr>
<td>COM 7092</td>
<td>Family Medicine II Rotation</td>
<td>8.0</td>
</tr>
<tr>
<td>COM 7094</td>
<td>Psychiatric Medicine Rotation</td>
<td>8.0</td>
</tr>
<tr>
<td>COM 7102</td>
<td>Internal Medicine I Rotation</td>
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</tr>
<tr>
<td>COM 7103</td>
<td>Internal Medicine II Rotation</td>
<td>8.0</td>
</tr>
<tr>
<td>COM 7104</td>
<td>Surgery I Rotation</td>
<td>8.0</td>
</tr>
<tr>
<td>COM 7105</td>
<td>Surgery II Rotation</td>
<td>8.0</td>
</tr>
<tr>
<td>COM 7110</td>
<td>Obstetrics and Gynecology Rotation</td>
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<tr>
<td>COM 7131</td>
<td>Pediatrics I Rotation</td>
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<tr>
<td>COM 7132</td>
<td>Pediatrics II Rotation</td>
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<tr>
<td>COM 7151</td>
<td>Rural and Urban Underserved Medicine I Rotation</td>
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<tr>
<td>COM 7152</td>
<td>Rural and Urban Underserved Medicine II Rotation</td>
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**Rural or Urban Underserved Medicine III Selective (Must select one of the following.)**

- COM 7153 Domestic Rural and Urban Underserved Medicine Selection 8.0
- COM 7154 International Rural and Urban Underserved Medicine Selection 8.0

**Total:** 104.0

**Summer Term—Didactic Course**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>COM 7990</td>
<td>Clinical Academic Review</td>
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**Total:** 3.0
### M4

#### Summer/Fall/Winter Terms—Core Clinical Rotations

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 7093</td>
<td>Geriatrics Rotation</td>
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</tr>
<tr>
<td>COM 7095</td>
<td>Emergency Medicine Rotation</td>
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**Total: 16.0**

#### Summer/Fall/Winter Terms—Elective Rotations

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 8000</td>
<td>M4 Elective Rotations</td>
<td>48.0*</td>
</tr>
<tr>
<td>COM 8006</td>
<td>Internal Medicine or Neurology Selective</td>
<td>8.0</td>
</tr>
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</table>

(Must select one of the following.)

- Internal Medicine (Selective #1)
- Cardiovascular Disease
- Clinical Cardiac Electrophysiology
- Critical Care Medicine
- Endocrine, Diabetes, and Metabolism
- Gastroenterology
- Hematology and/or Oncology
- Infectious Disease
- Interventional Cardiology
- Nephrology
- Pulmonary Disease
- Pulmonary Disease and Critical Care Medicine
- Rheumatology
- Neurology

**Total: 16.0**

*This course encompasses the six elective rotations that are required in the fourth year of medical school. During this time, students may choose from a variety of medical specialties and subspecialties, but may not do more than three blocks in the same specific discipline.*

#### Fall/Winter Terms—Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>COM 8007</td>
<td>Come Home Day III (fall)</td>
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<tr>
<td>COM 8008</td>
<td>Come Home Day IV (winter)</td>
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**Total: 2.0**

#### Summer Term—Didactic Course

<table>
<thead>
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<tr>
<td>COM 8004</td>
<td>Senior Seminar</td>
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**Total: 1.0**
### Clinical Education Elective Courses

**M4**

**Fall and Winter Terms—Elective Rotations**  
(Must take a total of 48.0 credit hours.)

<table>
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<tbody>
<tr>
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<td>Allergy and Immunology</td>
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<tr>
<td>COM 8103A</td>
<td>Allergy and Immunology: Clinical and Laboratory Immunology</td>
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<tr>
<td>COM 8104</td>
<td>Anesthesiology</td>
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<td>COM 8104A</td>
<td>Anesthesiology: Pediatric Anesthesiology</td>
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<tr>
<td>COM 8240</td>
<td>Clinical Informatics</td>
<td>4.0–8.0</td>
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<tr>
<td>COM 8105</td>
<td>Colon and Rectal Surgery</td>
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<td>COM 8108</td>
<td>Dermatology</td>
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<td>COM 8009</td>
<td>Emergency Medicine</td>
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<td>COM 8009A</td>
<td>Emergency Medicine: Medical Toxicology</td>
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<td>COM 8009B</td>
<td>Emergency Medicine: Pediatric Emergency Medicine</td>
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<td>Family Medicine</td>
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<td>COM 8015</td>
<td>Geriatric Medicine</td>
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<tr>
<td>COM 9500</td>
<td>Guided Study</td>
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<td>COM 9600B</td>
<td>Research</td>
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<tr>
<td>COM 8215</td>
<td>Hand Surgery</td>
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<tr>
<td>COM 8241</td>
<td>Hospice and Palliative Medicine</td>
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<tr>
<td>COM 8018</td>
<td>Internal Medicine</td>
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<tr>
<td>COM 8018A</td>
<td>Internal Medicine: Cardiovascular Disease</td>
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<tr>
<td>COM 8018B</td>
<td>Internal Medicine: Clinical Cardiac Electrophysiology</td>
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<tr>
<td>COM 8018C</td>
<td>Internal Medicine: Critical Care Medicine</td>
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<tr>
<td>COM 8018D</td>
<td>Internal Medicine: Endocrine, Diabetes, and Metabolism</td>
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<tr>
<td>COM 8018E</td>
<td>Internal Medicine: Gastroenterology</td>
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<tr>
<td>COM 8018F</td>
<td>Internal Medicine: Hematology and/or Oncology</td>
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<tr>
<td>COM 8018G</td>
<td>Internal Medicine: Infectious Disease</td>
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<tr>
<td>COM 8018H</td>
<td>Internal Medicine: Interventional Cardiology</td>
<td>4.0–8.0</td>
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<tr>
<td>COM 8018I</td>
<td>Internal Medicine: Nephrology</td>
<td>4.0–8.0</td>
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<tr>
<td>COM 8018J</td>
<td>Internal Medicine: Pulmonary Disease</td>
<td>4.0–8.0</td>
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<tr>
<td>COM 8018K</td>
<td>Internal Medicine: Pulmonary Disease and Critical Care Medicine</td>
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<tr>
<td>COM 8018L</td>
<td>Internal Medicine: Rheumatology</td>
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<td>International Medicine</td>
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<tr>
<td>COM 8021</td>
<td>Medical Genetics and Genomics</td>
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<td>Medical Toxicology</td>
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<tr>
<td>COM</td>
<td>8024 Neurological Surgery</td>
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<td>COM</td>
<td>8024A Neurological Surgery: Endovascular Surgical Neuroradiology</td>
<td>4.0–8.0</td>
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<tr>
<td>COM</td>
<td>8023 Neurology</td>
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<tr>
<td>COM</td>
<td>8023A Neurology: Child Neurology</td>
<td>4.0–8.0</td>
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<tr>
<td>COM</td>
<td>8023B Neurology: Clinical Neurophysiology</td>
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<tr>
<td>COM</td>
<td>8023C Neurology: Neuromuscular Medicine</td>
<td>4.0–8.0</td>
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<tr>
<td>COM</td>
<td>8022 Nuclear Medicine</td>
<td>4.0–8.0</td>
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<tr>
<td>COM</td>
<td>8025 Obstetrics and Gynecology</td>
<td>4.0–8.0</td>
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<tr>
<td>COM</td>
<td>8025A Obstetrics and Gynecology: Maternal/Fetal Medicine</td>
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<tr>
<td>COM</td>
<td>8025B Obstetrics and Gynecology: Reproductive Endocrinology and Infertility</td>
<td>4.0–8.0</td>
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<tr>
<td>COM</td>
<td>8025C Obstetrics and Gynecology: Women’s Health</td>
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<tr>
<td>COM</td>
<td>8025D Obstetrics and Gynecology: Gynecological Oncology</td>
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<td>8028 Ophthalmology</td>
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<tr>
<td>COM</td>
<td>8028A Ophthalmology: Cornea</td>
<td>4.0–8.0</td>
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<tr>
<td>COM</td>
<td>8028B Ophthalmology: Pediatric</td>
<td>4.0–8.0</td>
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<tr>
<td>COM</td>
<td>8028C Ophthalmology: Retina</td>
<td>4.0–8.0</td>
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<td>8027 OPP Medicine</td>
<td>4.0–8.0</td>
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<tr>
<td>COM</td>
<td>8027A OPP Medicine: Neuromusculoskeletal Medicine and Osteopathic Manipulative Medicine</td>
<td>4.0–8.0</td>
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<tr>
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<td>Pediatrics: Gastroenterology</td>
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<td>Pediatrics: Hematology/Oncology</td>
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<tr>
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<td>Radiology: Diagnostic—Vascular and Interventional Radiology</td>
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<td>COM 8357</td>
<td>Research Principles in Integrative Medicine and Medication Therapy Management</td>
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**Total:** 48.0

Electives may be taken in four-week or two-week increments. No more than four two-week electives may be taken in the fourth year of study.
Preclinical Course Descriptions—Classes of 2023 and 2024

COM 5000—Student Wellness
This course provides activities that focus on different areas that are critical to student wellness. They will include mindfulness, academic wellness, physical wellness, personal wellness, relational wellness, and nutritional wellness. This course also provides students with contact information for various resources that are available to help achieve and maintain wellness. (1.0 credit hour)

COM 5005—Basics of Nutrition
This course presents fundamental concepts in the basic sciences—such as nutritional biochemistry, environmental pathology, and adaptive physiological mechanisms—and reviews the formulation of recommendations for nutritional guidelines in population health. It will integrate information and build upon related medical knowledge through the curriculum to prepare students for relevant applications within future clinical sciences courses and promote evidence-based nutrition interventions within the practice of medicine. (1.0 credit hour)

COM 5006—Foundations of Research
This course is intended to help students acquire and develop both the knowledge and the skills for evidence-based medicine (EBM). During this course, students will learn to use concepts in epidemiology and biostatistics as they are applied to help solving clinical problems. In addition, students will acquire a basic understanding of what the Internal Review Board (IRB) is about, how to present an ethical argument based on the IRB regulations for why informed consent is not an absolute, and tools for submitting an IRB application. Team-based learning (TBL) is the didactic approach used in the course. This educational method allows learners to apply course concepts through thinking and problem solving. It also nourishes lifelong learning skills and strengthens interpersonal and team-interaction skills and abilities. (1.0 credit hour)

COM 5010—Gross Anatomy
This course will introduce the students to the study of the structural and functional features of the human trunk, extremities, head, and neck. The course includes didactic sessions and virtual dissection labs utilizing BodyViz: 3-D MRI/3-D CT/Virtual Cadaver Lab. (6.5 credit hours)

COM 5020—Medical Histology
Histology is the study of the microscopic anatomy and function of the cells, tissues, and organs of the body. This course serves as a bridge among the disciplines of gross anatomy, physiology, and pathology. Basic physiological concepts and relevant areas in pathology are presented with the goal of understanding the function of, as well as abnormal changes that may occur in, the cells and organs of the body. An overview of human embryology, with an emphasis on weeks one–eight and early organogenesis, will also be included. The study of embryology is a foundation for understanding normal anatomy and birth defects. The development of the organ systems and common malformations are presented, along with the histology of each system. (3.5 credit hours)

COM 5021—Medical Biochemistry
This course covers primarily biochemical reactions and pathways of normal human health. This course introduces functions of the important carbohydrates, lipids, nucleic acids, proteins, and properties of enzymes. It covers the normal pathways of metabolism and their controls. DNA replication, transcription, and translation are discussed. Genetics is introduced, as well as genomics, as it relates to medicine. Other topics, such as oxidative damage, adhesion proteins, and extracellular fluids, are discussed. (3.5 credit hours)

COM 5030—Medical Microbiology
This course covers the principles and core concepts of microbiology. General areas that will be covered include identity and properties of microbes, microbial metabolism, control of microbes, microbial pathogenesis, and laboratory identification and diagnostic assays. This course will also include some topics related to community health, such as vaccine-preventable diseases and microbes used as weapons. The course will conclude with a series of clinical case studies of pathogens affecting the different organs systems. (2.5 credit hours)

COM 5064—Medical Physiology
This course reviews the physiological functions and regulation of the major human organ systems. Topics covered include cell physiology; membranes and membrane transport mechanisms; epithelial transport; electrophysiology; muscle physiology; the sensory and autonomic nervous system; and an introduction to cardiovascular, respiratory, and renal physiology. (4.5 credit hours)

COM 5080—Health Care Provider BLS and First Aid
This course is an American Heart Association program that includes both didactic material, including methods of reducing cardiovascular risk, and instruction in the psychomotor skills necessary for the initial resuscitation of the cardiac arrest patient. (1.0 credit hour)

COM 5081—Fundamentals of Pathology
The purpose of this course is to introduce the fundamental concepts of general pathology that span all of the human organ systems and that are essential for the student’s understanding of the basic pathological processes involved in development of the diseases most likely to be encountered in hospitals and clinics. In this way, this pathology course
Dr. Kiran C. Patel College of Osteopathic Medicine—Osteopathic Medicine Program 41

provides the bridge between medical education and clinical training by providing a scientific foundation of the etiology, pathogenesis, morphologic alterations, and effects of diseases. The course consists of the fundamental principles of general pathology as they apply to cell injury, inflammation, and repair; hemodynamic disorders; the local and systemic pathology of infectious diseases; immunopathology; systemic genetic diseases; neoplasia; and the aging process. (1.5 credit hours)

COM 5082—Fundamentals of Pharmacology
This 30-hour course consists of basic pharmacological concepts and principles needed for the applied clinical courses that follow. (2.0 credit hours)

COM 5083—Principles of Radiology
This course provides an overview of common imaging modalities used in clinical practice. This course utilizes a standard lecture format that may be supplemented with other learning technologies. (1.0 credit hour)

COM 5121—Osteopathic Principles and Practice (OPP) I
This course presents the first unit of a five-course sequence that addresses osteopathic theory, philosophy, and manipulative procedures. It provides an introduction to the general principles and techniques of osteopathic diagnosis of the axial skeleton and paraspinal regions. Student doctors will be exposed to basic terminology and examination skills through lecture, demonstration, and hands-on performance. (3.5 credit hours)

COM 5122—Osteopathic Principles and Practice (OPP) II
OPP II covers the second unit of a five-course sequence that addresses osteopathic theory, philosophy, and osteopathic manipulative procedures. OPP II provides an introduction to the general principles and techniques of osteopathic diagnosis of the axial skeleton and paraspinal regions, including the lumbar and thoracic spines. Student doctors will be exposed to basic terminology and examination skills through lecture, demonstration, and hands-on performance. (1.5 credit hours)

COM 5125—Osteopathic Principles and Practice (OPP) III
OPP III covers the third unit of a five-course sequence that addresses osteopathic theory, philosophy, and osteopathic manipulative procedures. OPP III introduces the general principles and techniques of osteopathic diagnosis of the axial skeleton and paraspinal regions, including the cervical spines and the rib cage. Student doctors will be exposed to basic terminology and examination skills through lecture, demonstration, and hands-on performance. (1.5 credit hours)

COM 5425—Medical Procedures I
This course serves to integrate the clinical skills relevant to the medical conditions learned within the systems courses. In this course, students participate in small-group, hands-on clinical procedure experiences that may include guided medical simulation scenarios. Faculty members, who demonstrate and guide the students, facilitate the small groups. The procedures focus on the real-life activities of practicing physicians. (1.0 credit hour)

COM 5426—Medical Procedures II
This course serves to integrate the clinical skills relevant to the medical conditions learned within the systems courses. In this course, students participate in small-group, hands-on clinical procedure experiences and may include guided medical simulation scenarios. Faculty members, who demonstrate and guide the students, facilitate the small groups. The procedures focus on the real-life activities of practicing physicians. (1.0 credit hour)

COM 5430—Physical Diagnosis I
Students will learn the components of a patient history and physical examination and will develop effective interviewing techniques and physical examination skills. The course will consist of assigned readings, lectures, and practical training sessions in which diagnostic techniques and ultrasound basics will be practiced and performed by students under faculty assistance and supervision. Simulation manikins and standardized patients will also be utilized for students to perform a modified history and physical examination. Students will be able to recognize normal findings in a healthy patient, as well as some abnormal findings that may represent disease. In addition, they will begin to develop proper documentation skills for both patient history and physical exam findings. This will be accomplished through a series of “write-ups” on the various history and physical exam areas taught throughout the semester. (1.5 credit hours)

COM 5840—Physical Diagnosis II
Students will continue to learn the components of a patient history and physical examination and will develop effective interviewing techniques and physical examination skills. The course will consist of assigned readings, lectures, and practical training sessions in which diagnostic techniques will be practiced and performed by students under faculty assistance and supervision. Simulation manikins and standardized patients will also be utilized for students to perform a modified history and physical examination.

Students will be able to recognize normal findings in a healthy patient, as well as some abnormal findings that may represent disease. In addition, they will begin to develop proper documentation skills for both patient history and physical exam
findings. This will be accomplished through a series of "write-ups" and SOAP notes on the various history and physical exam areas taught throughout the semester. **(4.5 credit hours)**

**COM 5850—Medical Immunology**
This course will be presented in a lecture/required readings format. This immunology course covers both innate and adaptive immune responses of humans with a focus on the host's interaction with an environment containing a variety of potential pathogens. In addition, other aspects of immunology, such as immunodeficiency disorders, autoimmune disorders, hypersensitivities, and graft rejection, are presented. **(1.5 credit hours)**

**COM 5851—Integumentary System**
This course introduces students to clinical aspects and treatments of skin diseases, infections of the skin, skin pathology, neoplastic disorders of the skin, burn management, plastic surgery, and cutaneous manifestations of systemic disorders. It consists of lectures supplemented by visual materials, pathology slides, and independent study assignments. **(2.5 credit hours)**

**COM 5855—Hematopoietic and Lymphoreticular System**
This course introduces students to the diagnosis and management of diseases of the hematopoietic and lymphoreticular system. It will include a discussion of cancer chemotherapy and principles of surgical oncology. Indications for, and adverse reaction to, blood transfusion will also be addressed. This course consists of lectures supplemented by independent study assignments. **(2.5 credit hours)**

**COM 5860—Respiratory System**
This course presents the pathophysiology, diagnosis, and management of selected respiratory disorders; infectious disorders; and neoplasms of the respiratory system. Ventilatory functions and management of respiratory failure are described. Speakers are from the departments of Family Medicine, Allergy and Immunology, Internal Medicine, Microbiology, Nutrition, Pathology, Pharmacology, Physiology, OPP, and Surgery, including the Division of Otorhinolaryngology. The course consists of lectures supplemented by independent study assignments. **(2.5 credit hours)**

**COM 5861—Cardiovascular System**
This course covers the pathophysiology, diagnosis, and management of selected cardiovascular disorders. Lectures are given in an integrated fashion by faculty members from multiple departments and disciplines, so that clinical aspects, pathophysiology of diseases, and disorders of each system are addressed. Topic presentations have been aligned between courses within the academic block. The course consists of lectures supplemented by independent study assignments. **(5.5 credit hours)**

**COM 5862—Gastrointestinal System**
This course covers pathophysiology, diagnosis, and management of gastrointestinal diseases, as well as diseases of the liver and biliary system. The instruction involves the participation of faculty members from multiple departments. The course consists of lectures supplemented by independent study assignments. **(4.5 credit hours)**

**COM 5870—Interdisciplinary Education and Professionalism I**
This course encompasses curricular concepts that run through the clinical science courses to include areas such as public health, health informatics, ethics and professionalism (leadership), humanism, humanities, research, genomics, and integrative medicine. In addition to these concepts, students will be exposed to various disciplines in the health field and how they are interrelated. Students will also be required to participate in a variety of professional activities. **(2.5 credit hours)**

**COM 5890—Preclinical Medical Science Review**
This course is a self-study course to assist students in developing lifelong learning skills. The basic science content review module is an open-ended, self-directed module that allows the student to identify specific content areas for review. Knowledge is assessed at the completion of the module utilizing a self-assessment quiz. **(1.0 credit hour)**

**COM 6000—Principles of Clinical Medicine I**
This course is composed of several components and uses multiple learning modalities. It begins in the fall semester and continues as Principles of Clinical Medicine II during the winter semester. The components of the course include Interactive Learning Group (ILG) problem-based, small-group sessions using patient cases for discussion and analysis with a clinical facilitator; Clinical Skills Exams (CSE); and a one-on-one student experience with simulated patients who have been trained to portray medical problems, as well as patient simulation and interpersonal skills programs. **(1.5 credit hours)**

**COM 6001—Principles of Clinical Medicine II**
This course is a continuation of Principles of Clinical Medicine I, which began in the fall semester. It is composed of several components, uses multiple learning modalities, and continues during the winter semester. The components of the course include Interactive Learning Group (ILG), problem-based, small-group sessions using patient cases for discussion and analysis with a clinical facilitator; Clinical Skills Exams (CSE), cumulative examinations midway and at the end of the semester involving multiple clinical stations; lectures on male and female physical examinations; and guided practical sessions for male and female examinations. **(4.5 credit hours)**
COM 6011—Medical Neuroanatomy
This course will introduce students to structural, functional, and developmental features of the human nervous system, with an emphasis on clinical concepts. It includes a combination of neuroanatomy and neurophysiology and serves as a foundation and introduction to neurology. (3.0 credit hours)

COM 6045—Business of Medicine
This course exposes students to various aspects of the business and politics of medicine and includes the understanding of the structure of the federal and state government, the political system, the U.S. health care approach, and the regulatory bodies affecting the practice of osteopathic medicine. In addition, contracts, practice, marketing, electronic medical record (EMR), and insurance will be taught. (1.0 credit hour)

COM 6055—Human Sexuality
This course is designed to familiarize students with the field of human sexuality, with emphasis on the physiological-psychological and clinical aspects of sexuality. At the end of the course, students should be knowledgeable about human sexuality and understand a physician's role in addressing sexual problems commonly found in clinical practice. (1.0 credit hour)

COM 6082—Pediatric Advanced Life Support (PALS)
PALS is an American Heart Association program that presents a systematic, interactive approach dealing with the survival of critically ill and injured children. This care includes a broad spectrum of services, from early identification of problems through pre-hospital, hospital, and rehabilitative care. (1.0 credit hour)

COM 6090—Geriatrics System
This course provides an overview of geriatric problems or syndromes in a variety of care settings that affect older adults. It uses a case-based approach, with an emphasis on differential diagnosis, systematic evaluation, and management incorporation of the interprofessional team. Concepts of physiological changes with aging, the psychosocial and functional aspects, and their effects on general medical disorders are incorporated into the lectures. (1.5 credit hour)

COM 6105—Endocrine System
This course presents the pathophysiology, biochemistry, diagnosis, and management of hormonal disorders. It explores neoplastic, autoimmune, degenerative, and infectious diseases of the endocrine glands, as well as their systematic evaluation and management. Lectures are integrated, so that pathophysiology of diseases and disorders of each system, as well as clinical aspects, including diagnosis and treatment, are addressed. The knowledge base will be presented in a blended format to include case scenarios, an algorithmic approach to diagnosis, interpretation of laboratory data, and self-study. When possible, a patient-centered approach to management will be provided. (3.5 credit hours)

COM 6107—Musculoskeletal System
This course provides an overview of musculoskeletal conditions, diseases, and disorders. It will build on basic concepts and mechanisms that were introduced in previous courses. Additionally, evidence-based treatments, independent study assignments, and radiologic interpretation of structural and functional changes will be integrated into this course. (2.0 credit hours)

COM 6108—Psychiatry and Behavioral Medicine System
Through lecture and self-study, this course introduces the fundamental clinical concepts and official nomenclature used within the realm of psychiatry and behavioral medicine. This includes the use of the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders (DSM-5) for the evaluation and diagnosis of the major psychiatric disorders. Current methodologies of treatment, communication with patients, and select topics in behavioral medicine are discussed. (2.5 credit hours)

COM 6109—Renal/Urinary System
This course presents renal and genitourinary physiology and pathophysiology; glomerular and tubulointerstitial diseases; acute and chronic kidney failure; congenital disorders; metabolic, functional, and benign disorders; and neoplasms of the renal/urinary system. The instruction involves the participation of various departments, including Internal Medicine, Surgery, Pathology, Physiology, Microbiology, and Osteopathic Principles and Practice. (3.5 credit hours)

COM 6110—Women’s Health System
The course begins with the role of the history and physical examination in a diagnostic approach to the female patient. This is followed by a review of the reproductive cycle and by general gynecologic topics, including the evaluation and treatment of the victim of sexual assault, the embryology and anatomy of the female genitalia, and the application of osteopathic principles and practice to women’s health. Lectures dealing with disorders of the breast serve as a transition between the gynecologic topics and the lectures dealing with normal and abnormal pregnancy. (4.0 credit hours)

COM 6111—Pediatrics System
This course covers the details of normal and abnormal growth and development in children. Issues involving preventive care and health interventions of newborns, growing children, and adolescents are addressed. Specifics regarding illnesses in the integumentary, hematologic, respiratory, cardiac, gastrointestinal, endocrine, renal, and neuromuscular systems are presented. (3.5 credit hours)

COM 6112—Nervous System
This course provides students with a foundation of clinical neurology in continuation of their knowledge to neuroanatomy. It covers epidemiology, pathophysiology, clinical presentation,
diagnostic approaches, and treatment options of the most common neurological diseases in a multidisciplinary approach. (4.0 credit hours)

**COM 6114—Rheumatology System**
This course introduces students to diseases and other disorders of the immune and musculoskeletal system and the pathophysiology, diagnosis, and management of rheumatologic disorders (including auto-immunity and inflammatory arthritis). Pathology, pathophysiology, pharmacology, immunology, evidence-based treatments, and independent study assignments will be integrated into this course. (2.0 credit hours)

**COM 6124—Osteopathic Principles and Practice (OPP) IV**
This course presents the fourth unit in a five-course sequence that addresses osteopathic theory, philosophy, and manipulative procedures. The second year curriculum is designed to organize all information learned in year 1 into clinical frames of reference. The student doctor is also presented with an opportunity to review and master all techniques presented in year 1, as well as an opportunity to master advanced manipulative treatment techniques. All OPP courses are presented in lecture and laboratory sessions. Practical training sessions in this year are designed to both review earlier material and to present new techniques for mastery. (2.5 credit hours)

**COM 6125—Osteopathic Principles and Practice (OPP) V**
This course presents the fifth unit in a five-course sequence that addresses osteopathic theory, philosophy, and osteopathic manipulative procedures. The second year curriculum is designed to organize all information learned in year 1 into clinical frames of reference. The student doctor is also presented with an opportunity to review and master all techniques presented in year 1, as well as an opportunity to master advanced manipulative treatment techniques. All OPP courses are presented in lecture and laboratory sessions. Laboratories in this year are designed to both review earlier material and to present new techniques for mastery. During the second half of the course, students will be exposed to various advanced techniques in osteopathic manipulative treatment. (2.0 credit hour)

**COM 6155—Emergency Medicine**
This course covers the pathophysiology, diagnosis, and management of selected emergency medicine topics. This course will help students acquire knowledge of selected emergency medicine topics not covered elsewhere in the curriculum. This course will utilize a standard lecture format and utilize various learning modalities including, but not limited to, reading assignments and interactive polling software. Topic presentations have been aligned with courses within the academic block. (1.0 credit hour)

**COM 6221—Advanced Cardiac Life Support and Basic Life Support (ACLS and BLS)**
Advanced Cardiac Life Support is an American Heart Association program that is accepted and required in most hospitals and clinics throughout the United States. ACLS presents a systematic interactive approach to dealing with people experiencing a cardiopulmonary emergency, sudden death, or an acute cerebral vascular accident. (1.0 credit hour)

**COM 6425—Medical Procedures III**
This course serves to integrate the clinical skills relevant to the medical conditions learned within the systems courses. In this course, students participate in small-group, hands-on clinical procedures experiences that may include guided medical simulation scenarios. Faculty members, who demonstrate and guide the students, facilitate the small groups. The procedures focus on the real-life activities of practicing physicians. (1.0 credit hour)

**COM 6426—Medical Procedures IV**
This course serves to integrate the clinical skills relevant to the medical conditions learned within the systems courses. In this course, students participate in small-group, hands-on clinical procedures experiences that may include guided medical simulation scenarios. Faculty members, who demonstrate and guide the students, facilitate the small groups. The procedures focus on the real-life activities of practicing physicians. (1.0 credit hour)

**COM 6427—Medical Procedures V**
This course serves to integrate the clinical skills relevant to the medical conditions learned within the systems courses. In this course, students participate in small-group, hands-on clinical procedures experiences that may include guided medical simulation scenarios. Faculty members, who demonstrate and guide the students, facilitate the small groups. The procedures focus on the real-life activities of practicing physicians. (1.0 credit hour)

**COM 6428—Medical Procedures VI**
This course serves to integrate the clinical skills relevant to the medical conditions learned within the systems courses. In this course, students participate in small-group, hands-on clinical procedures experiences that may include guided medical simulation scenarios. Faculty members, who demonstrate and guide the students, facilitate the small groups. The procedures focus on the real-life activities of practicing physicians. (1.0 credit hour)

**COM 6429—Medical Procedures VII**
This course serves to integrate the clinical skills relevant to the medical conditions learned within the systems courses. In this course, students participate in small-group, hands-on clinical procedures experiences that may include guided medical simulation scenarios. Faculty members, who demonstrate and
guide the students, facilitate the small groups. The procedures focus on the real-life activities of practicing physicians. (1.0 credit hour)

COM 6870—Interdisciplinary Education and Professionalism I
This course encompasses curricular concepts that run through the clinical science courses to include areas such as public health, health informatics, ethics and professionalism (leadership), humanism, humanities, research, genomics, and integrative medicine. In addition to these concepts, students will be exposed to various disciplines in the health field and how they are interrelated. Students will also be required to participate in a variety of professional activities. (1.5 credit hours)

COM 6871—Interdisciplinary Education and Professionalism II
This course encompasses curricular concepts that run through the clinical science courses to include areas such as public health, health informatics, ethics and professionalism (leadership), humanism, humanities, research, genomics, and integrative medicine. In addition to these concepts, students will be exposed to various disciplines in the health field and how they are interrelated. Students will also be required to participate in a variety of professional activities. (1.5 credit hours)

COM 6990—Preclinical Academic Review
This course provides students with an in-depth review of medical science content, clinical case study, practice exam questions, and a mock board examination. This online, independent-study course provides resources to the students and allows them to work at their own pace to prepare for the COMLEX Level I licensing examination. The course provides several opportunities to assess knowledge and track the student’s progression toward licensing exam preparation. (3.0 credit hours)

Preclinical Course Descriptions—Classes of 2021 and 2022

COM 5000—Student Wellness
This course provides activities that focus on different areas that are critical to student wellness including mindfulness, academic wellness, physical wellness, personal wellness, relational wellness, and nutritional wellness. It also provides students with contact information for various resources that are available to help achieve and maintain wellness.

COM 5010—Gross Anatomy
This course will introduce the students to the study of the structural and functional features of the human trunk, extremities, head, and neck. The course includes the dissection of cadavers by teams of students. (6.5 credit hours)

COM 5011—Medical Neuroanatomy
This course will introduce students to structural, functional, and developmental features of the human nervous system with an emphasis on clinical concepts. This course is an introduction to neurology. (3.0 credit hours)

COM 5020—Medical Histology
Histology is the study of the microscopic anatomy of the cell, tissues, and organs of the body. In this course, the normal microscopic anatomy of the parts of the body is presented and each part is correlated with its function. Histology is a course that serves as a bridge between the disciplines of physiology, gross anatomy, and pathology. Basic physiological concepts and relevant areas in pathology are presented with the goal of understanding the function of, as well as any abnormal changes that may occur in, the cells and organs of the body. This course includes an introduction to human embryology, with emphasis on the embryo’s first eight weeks. The study of embryology is a foundation for understanding normal anatomy and birth defects. (3.5 credit hours)

COM 5021—Medical Biochemistry
Clinical practice is changing so rapidly that the physician must be a perpetual student and must be able to read and understand the literature in order to keep up to date. This course offers the fundamentals of biochemistry, many aspects of which are currently and directly relevant to medicine. Other aspects serve to round out scientific preparation, and in the future, may emerge at the center of medical advances. This course covers biochemical reactions and pathways of normal human health; nutrition from a biochemical viewpoint; and the biochemistry of the body systems including, but not limited to, the gastrointestinal, pulmonary, renal, musculoskeletal, and endocrine systems. (5.5 credit hours)

COM 5030—Medical Microbiology I
This course will be presented in lecture/required readings format to emphasize immunology, bacteria, and viruses involved in infectious diseases. The immunology section covers both innate and adaptive immune responses of humans with a focus on the host’s interaction with an environment containing a variety of potential pathogens. In addition, other aspects of immunology, such as immunodeiciencies, autoimmunities, allergies, graft rejection, and immunity to tumors, are presented. Bacteria and viruses commonly involved in human diseases, as well as newly and reemerging pathogens, will be presented from a clinically relevant perspective. The sections on microorganisms will stress practical clinical skills by presenting pathogens employing a systems approach involving case studies, visual illustrations of typical clinical symptoms, and the most common therapies. (5.5 credit hours)
COM 5031—Medical Microbiology II
This course will consist of lectures on parasites and fungi that produce infectious disease states. Parasites and fungi commonly involved in human diseases, as well as new and reemerging pathogens, will be presented from a clinically relevant perspective in a systems format. The sections will stress practical clinical skills by presenting case studies, visual illustrations of typical clinical symptoms, and the most common therapies. (1.5 credit hours)

COM 5061—Medical Physiology I
This course reviews the physiological functions and regulation of the major human organ systems. Topics covered in the first semester include cell physiology, membranes and membrane transport mechanisms, electrophysiology, muscle physiology, the autonomic nervous system, and cardiovascular physiology. (3.0 credit hours)

COM 5080—Basic Life Support
An American Heart Association course that includes both didactic material (including methods of reducing cardiovascular risk) and instruction in the psychomotor skills necessary for the initial resuscitation of the cardiac arrest patient. (1.0 credit hour)

COM 5121—Osteopathic Principles and Practice (OPP) I
OPP I presents the first unit of a four-course sequence that addresses osteopathic theory, philosophy, and manipulative procedures. OPP I provides an introduction to the general principles and techniques of osteopathic diagnosis of the axial skeleton and paraspinal regions. Student doctors will be exposed to basic terminology and examination skills through lecture, demonstration, and hands-on performance. (4.0 credit hours)

COM 5122—Osteopathic Principles and Practice (OPP) II
OPP II covers the second unit of a four-course sequence that addresses osteopathic theory, philosophy, and osteopathic manipulative procedures. OPP II provides an introduction to the general principles and techniques of osteopathic diagnosis of the axial skeleton and paraspinal regions, including the lumbar, thoracic, and cervical spines, as well as the rib cage. Student doctors will be exposed to basic terminology and examination skills through lecture, demonstration, and hands-on performance. (3.5 credit hours)

COM 5171—Interdisciplinary Generalist Curriculum Preceptorship I
The Interdisciplinary Generalist Curriculum (IGC) Preceptorship for first-year students is composed of the IGC Primary Care Physician Mentor Preceptorship and the Explore Selective. The premise of the IGC Program is that exposure to professional role models is a significant determinant of medical students’ career choices. In addition, an early clinical experience is an essential learning component for medical students to begin to correlate classroom knowledge with actual patient encounters. Based on selection preferences, students are also assigned to an Explore Selective in either an Osteopathic Principles and Practice (OPP) clinic on or off campus, a Dr. Kiran C. Patel College of Osteopathic Medicine in Community Service (COM²Serve) site, a clinical sub-specialty session from one of at least five disciplines, or a prerequisite training program that will enable students to provide special services (e.g., HIV testing, reproductive health counseling). (1.0 credit hour)

COM 5172—Interdisciplinary Generalist Curriculum Preceptorship II
The Interdisciplinary Generalist Curriculum (IGC) Preceptorship for first-year students is composed of the IGC Primary Care Physician Mentor Preceptorship and the Explore Selective. The premise of the IGC Program is that exposure to professional role models is a significant determinant of medical students’ career choices. In addition, an early clinical experience is an essential learning component for medical students to begin to correlate classroom knowledge with actual patient encounters. Based on selection preferences, students are also assigned to an Explore Selective in either an Osteopathic Principles and Practice (OPP) clinic on or off campus, a Dr. Kiran C. Patel College of Osteopathic Medicine in Community Service (COM²Serve) site, a clinical sub-specialty session from one of at least five disciplines, or a prerequisite training program that will enable students to provide special services (e.g., HIV testing, reproductive health counseling). (1.0 credit hour)

COM 5800—Foundations and Applications of Clinical Reasoning I
This course will integrate basic and clinical sciences in a case-based approach. Faculty members from multiple disciplines will guide students in developing the skills necessary to effectively assimilate knowledge from the basic sciences into the disease processes and apply this knowledge to varied patient presentations. (1.5 credit hours)

COM 5801—Foundations and Applications of Clinical Reasoning II
This course will integrate basic and clinical sciences in a case-based approach. Faculty members from multiple disciplines will guide students in developing the skills necessary to effectively assimilate knowledge from the basic sciences into the disease processes and apply this knowledge to varied patient presentations. (1.5 credit hours)

COM 5802—Tobacco Use and Dependence
This course will focus on providing first-year osteopathic medical students with knowledge and skills-based training
Students will learn the components of a complete history and physical examination and will develop effective interviewing techniques and physical examination skills. The course will consist of assigned readings, lectures, and laboratory sessions in which diagnostic techniques will be practiced and performed by students under faculty assistance and supervision. Simulation manikins and standardized patients will be utilized in training students to perform a modified history and physical examination. (2.0 credit hours)

COM 5830—Physical Diagnosis I

Students will learn the components of a patient history and physical examination and will develop effective interviewing techniques and physical examination skills. The course will consist of assigned readings, lectures, and laboratory sessions in which diagnostic techniques will be practiced and performed by students under faculty assistance and supervision. Simulation manikins and standardized patients will be utilized in training students to perform a modified history and physical examination. (2.0 credit hours)

COM 5840—Physical Diagnosis II

Students will learn the components of a complete history and physical examination and be able to recognize normal findings in a healthy patient, as well as some abnormal findings that may represent disease. In addition, they will begin to develop proper documentation skills for both patient history and physical exam findings. This will be accomplished through a series of write-ups and SOAP notes on the various history and physical exam areas taught throughout the semester. (2.0 credit hours)

COM 5835—Humanism in Medicine I

This course consists of lectures, small group assignments, patient panel discussions, journaling, and online learning modules that run throughout the MI year of the medical curriculum. The first semester course covers the broad humanism topics of physician/patient communication and cultural competency. The course is designed to be an innovative and forward-looking way of linking the humanities and social sciences to the practice of medicine. Throughout the course, evaluations are used to measure the student’s mastery of concepts through group assignments, participation in class discussion, journaling, simulated patient experiences, self-assessment tools, and online experiences. (1.5 credit hours)

COM 5845—Humanism in Medicine II

This course consists of interactive lectures, small group assignments, patient panel discussions, journaling, and online learning modules that run throughout the MI year of the medical curriculum. The second semester course covers the humanism topics of medical ethics, social issues (including domestic violence, physician and patient addiction, and the homeless population), and wellness (including nutrition, exercise, complementary and alternative medicine, spirituality, public health, and health sexuality). The course is designed to be an innovative and forward-looking way of linking the humanities and social sciences to the practice of medicine. Throughout the course, evaluations are used to measure the student’s mastery of concepts through group assignments, participation in class discussion, journaling, self-assessment tools, and online experiences. (2.0 credit hours)

COM 5990—Preclinical Medical Science Review

The study of the medical sciences contains a broad scope of knowledge in both science disciplines and organ systems of the body. This information is the foundation of knowledge needed for study of human body functions and diseases. It is essential to master this knowledge to be successful in both the medical school curriculum and medical licensing examinations. This course provides an opportunity for students to complete a review of medical science content using an independent study program. It allows students to work at their own pace to prepare for upcoming courses within the medical school curriculum. (3.0 credit hours)

COM 6000—Principles of Clinical Medicine I

This course has several components. Using multiple learning modalities, the course begins in the fall semester and continues as Principles of Clinical Medicine II during the winter semester. The components of the course include Interactive Learning Group (ILG), a problem-based, small group using patient cases for discussion and analysis with a clinical facilitator; Standardized Patient Encounters (SPE) with an interpersonal skills review session—a one-on-one student experience with patients who have been trained to portray medical problems; Clinical Skills Exam (CSE), a cumulative examination at the end of the semester similar to the SPE but involving multiple clinical stations; and KBIT, an online, advanced, instructional sciences-derived, artificial intelligence-based approach to differential diagnosis training and assessment. (2.0 credit hours)

COM 6001—Principles of Clinical Medicine II

This course is a continuation of Principles of Clinical Medicine I. It has several components. Using multiple learning modalities, the course that began in the fall semester will now continue as Principles of Clinical Medicine II during the winter semester. The components of the course include Interactive Learning Group (ILG), a problem-based, small group using patient cases for discussion and analysis with a clinical facilitator; Clinical Skills Exam (CSE), cumulative examinations midway and at the end of the semester involving multiple clinical stations; lectures on male and female exams; guided practical sessions for male and female exams; and KBIT, an online, advanced,
instructional sciences-derived, artificial intelligence-based approach to differential diagnosis training and assessment. (2.0 credit hours)

**COM 6005—Medical Jurisprudence**
An attendance-required, mandatory, interactive program involving the issues of law that impact on a medical student and physician. Specific vignettes, clinical interactions, and role play are used to underscore some of the issues concerning actions by the Board of Osteopathic Medicine, and the issues around malpractice. Legal principles and specific cases involved in medical negligence, as well as those factors that also adversely affect the practice of osteopathic medicine, will be emphasized. (0.5 credit hours)

**COM 6040—Principles of Pathology**
The purpose of this course is to introduce the fundamental concepts of general pathology so the student may understand the basic pathological processes involved in development of diseases most likely to be encountered in hospitals and clinics. The gap between preclinical and clinical subjects may thus be spanned with a scientific foundation of the etiology, pathogenesis, morphologic alterations, and effects of diseases. The course consists of fundamental principles of general pathology, such as cell injury, inflammation, hemodynamic derangements (including thrombosis, infarction, and shock), basic pathologic processes of infectious diseases and immunity in contributing to disease, and general discussion of neoplasia. (2.0 credit hours)

**COM 6050—Principles of Pharmacology**
This 30-hour course consists of basic pharmacological concepts and principles needed for the applied clinical courses to follow during the semester. (2.0 credit hours)

**COM 6082—Pediatric Advanced Life Support**
PALS presents a systematic, interactive approach dealing with the survival of critically ill and injured children. This care includes a broad spectrum of services, from early identification of problems through pre-hospital, hospital, and rehabilitative care. It also presents a way for resuscitation providers to treat a desperately ill patient in a coordinated way, regardless of whether the response team consists of one person, two people, or a team. PALS-trained providers will use the same guidelines and approaches inside and outside the hospital, as well as nationally and internationally. This course will consist of 13 hours of interactive instruction supplemented by audiovisuals; demonstration of required skills on Pediatric Advanced Life Support Manikins; and practice using defibrillators, EKG monitors, and intubation equipment. Instruction will be formatted on case-based scenarios. (1.0 credit hour)

**COM 6090—Geriatrics**
This course of instruction provides an overview of geriatric problems or syndromes affecting older adults, using a case-based approach with an emphasis on differential diagnosis, systematic evaluation, and management incorporating the interprofessional team. Concepts of physiological changes with aging and psychosocial and functional aspects, as well as their effects on general medical disorders, will be incorporated into the lectures. (1.0 credit hours)

**COM 6100—Integumentary System**
This course introduces students to clinical aspects of skin diseases, infections of the skin, skin pathology, neoplastic disorders of the skin, burn management, and cutaneous manifestations of systemic disorders. The course consists of lectures supplemented by visual materials and pathology slides, independent reading assignments, and instruction in basic procedures. (1.5 credit hours)

**COM 6101—Hematopoietic and Lymphoreticular System**
This course covers the diagnosis and management of diseases of the hematopoietic and lymphoreticular system. It will include a discussion of cancer chemotherapy and principles of surgical oncology. Indications for, and adverse reactions to, blood transfusion will also be addressed. The systems component of the interdisciplinary curriculum involves participation by the Departments of Internal Medicine, Surgery, Pathology, and Pharmacology. Traditional classroom lecture topics are integrated so that clinical aspects, pathophysiology of diseases, and disorders of each system are addressed. (1.5 credit hours)

**COM 6102—Respiratory System**
This course presents pathophysiology, diagnosis and management of selected respiratory disorders, infectious disorders, and neoplasms of the respiratory system. Ventilatory functions and management of respiratory failure are described. Speakers are from the Departments of Internal Medicine, Family Medicine, Pathology, Pharmacology, OPP, and Surgery (including the Division of Otorhinolaryngology). This course consists of lectures supplemented by independent reading assignments and instruction in basic procedures. (2.5 credit hours)

**COM 6103—Cardiovascular System**
This course covers pathophysiology, diagnosis, and management of common cardiovascular disorders. (2.5 credit hours)

**COM 6104—Gastrointestinal System**
This course covers pathophysiology, diagnosis, and management of gastrointestinal diseases and diseases of the lower and biliary system. The instruction involves the participation of faculty members from the Departments of Internal Medicine (Gastroenterology division), Surgery, Pediatrics, Pathology, Pharmacology, and Osteopathic Principles and Practice. (2.5 credit hours)
COM 6105—Endocrine System
This course presents the pathophysiology, diagnosis, and management of hormonal disorders, including diseases of the endocrine glands, as well as neoplasms and infectious diseases affecting the endocrine system. The system component of the interdisciplinary curriculum involves participation by the Departments of Internal Medicine, Pediatrics, Surgery, Pathology, Pharmacology, and Osteopathic Principles and Practice. Lectures are integrated so that clinical aspects, pathophysiology of diseases, and disorders of each system are addressed. (2.0 credit hours)

COM 6106—ECG
This course provides an overview of electrocardiography and cardiopulmonary auscultation used in clinical practice. It will help students obtain a basic understanding of selected electrocardiographic and cardiopulmonary auscultation findings and will foster an interest in continued learning in these fields. This course utilizes a standard lecture format as well as interactive auscultatory learning sessions that may be supplemented with learning technologies and modalities, such as reading assignments. (1.5 credit hours)

COM 6107—Musculoskeletal System
This course introduces students to diseases and other disorders of the musculoskeletal system; the pathophysiology, diagnosis, and management of rheumatologic disorders; orthopedics; and physical medicine and rehabilitation. Pathology, pharmacology, osteopathic principles and practice, instruction in basic procedures, and independent reading assignments will be integrated into this course. (2.5 credit hours)

COM 6108—Psychiatry and Behavioral Medicine
Through lecture and self-study, this course introduces the fundamental clinical concepts and official nomenclature used within the realm of psychiatry and behavioral medicine. This includes the use of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM) for the evaluation and diagnosis of the major psychiatric disorders. Current methodologies of treatment, communication with patients, and select topics in behavioral medicine will be discussed. (2.0 credit hours)

COM 6109—Renal/Urinary System
This course presents renal and genitourinary pathophysiology; glomerular and tubulointerstitial diseases; acute and chronic kidney failure; congenital disorders; metabolic, functional, and benign disorders; and neoplasms of the renal/urinary system. The instruction involves the participation of the Departments of Internal Medicine (Nephrology division), Surgery (Urology division), Pathology, and Osteopathic Principles and Practices. (2.5 credit hours)

COM 6110—Women's Health System
The course begins with the role of the history and physical examination in a diagnostic approach to the female patient. This is followed by a review of the reproductive cycle and by general gynecologic topics including the evaluation and treatment of the victim of sexual assault, the embryology and anatomy of the female genitalia, and the application of osteopathic principles and practice to women's health. Lectures dealing with disorders of the breast serve as a transition between the gynecologic topics and the lectures dealing with normal and abnormal pregnancy. Genomics and minimally invasive surgical techniques, including robotic surgery, will be discussed. (3.5 credit hours)

COM 6111—Pediatrics
This course of instruction covers the details of normal and abnormal growth and development in children. Issues involving preventive care and health interventions of newborns, growing children, and adolescents will be addressed. Specifics regarding illnesses in the integumentary, hematologic, respiratory, cardiac, gastrointestinal, endocrine, renal, and neuromuscular systems will be presented. (2.5 credit hours)

COM 6112—Neurology
This course, consisting of 38 hours presented in a multidisciplinary approach, covers pathology, neurologic dysfunction, pathophysiologic mechanisms of neurologic diseases, and pharmacotherapeutics. In addition, it addresses rehabilitation of nervous system dysfunctions and introduces the students to ophthalmology. (2.5 credit hours)

COM 6123—Osteopathic Principles and Practice (OPP) III
This course presents the third unit in a four-course sequence that addresses osteopathic theory, philosophy, and manipulative procedures. The second-year curriculum is designed to organize all information learned in year 1 into clinical frames of reference (e.g., cardiovascular disease and OPP, sports injuries and OPP, pregnancy and OPP). The student doctor is also presented with an opportunity to review and master all techniques presented in year 1, as well as an opportunity to master advanced manipulative treatment techniques. All OPP courses are presented in lecture and laboratory sessions. Laboratories in this year are designed to both review earlier material and to present new techniques for mastery. (2.5 credit hours)

COM 6124—Osteopathic Principles and Practice (OPP) IV
This course presents the fourth unit in a four-course sequence that addresses osteopathic theory, philosophy, and manipulative procedures. The second-year curriculum is designed to organize all information learned in year 1 into clinical frames of reference (e.g., family medicine and OPP, pediatrics and OPP, pregnancy and OPP). The student doctor is also presented with an opportunity to review and master
all techniques presented in year 1, as well as an opportunity to master advanced manipulative treatment techniques. All OPP courses are presented in lecture and laboratory sessions. Laboratories in this year are designed to both review earlier material and to present new techniques for mastery. During the second half of the course, students will be required to attend one of three selectives in advanced osteopathic manipulative treatment. (2.5 credit hours)

**COM 6173—Interdisciplinary Generalist Curriculum Preceptorship III**
The Interdisciplinary Generalist Curriculum (IGC) Program has three components: (1) The IGC Physician Mentor Program; (2) The IGC Business of Medicine Program; (3) the Dr. Kiran C. Patel College of Osteopathic Medicine in Community Service (COMServe) Experience. The premise of the IGC Program is that exposure to professional role models is a significant determinant of medical students’ career choices. In addition, an early clinical experience is an essential learning component for medical students to begin to correlate classroom, laboratory, small group, and independent learning with actual patient encounters. The IGC Preceptorship III course exposes second-year medical students to clinical settings by matching each student with a community-based physician mentor for a primary care clinical rotation where they are also exposed to the central role of the primary care physician in the management of their patients and practices. Students also learn about the business aspects of medical practice, including private and public models of health care finance and delivery and systems-based components of providing cost-effective and evidence-based medicine. As part of the IGC COMServe Experience, students also rotate through community-based clinics and other service organizations and experiences that provide health care to medically underserved or at-risk populations. (1.0 credit hour)

**COM 6221—Advanced Cardiac Life Support**
Advanced Cardiac Life Support (ACLS) is an American Heart Association program that is accepted and required in most hospitals and clinics throughout the United States. It is required for second-year medical students from the Nova Southeastern University Dr. Kiran C. Patel College of Osteopathic Medicine. ACLS presents a systematic, interactive approach to dealing with people experiencing a cardiopulmonary emergency, sudden death, or an acute cerebral vascular accident. ACLS presents a way for resuscitation providers to treat a desperately ill patient in a coordinated way, regardless of whether the response team consists of one person, two people, or a larger team. ACLS-trained providers will use the same guidelines and approaches inside and outside the hospital, as well as nationally and internationally. This course will consist of 12 hours of interactive instruction supplemented by audiovisuals; demonstration of required skills on Advanced Life Support Manikins; and practice using defibrillators, EKG monitors, and intubation equipment. Instruction will be formatted on case-based scenarios. (1.0 credit hour)

**COM 6300—Foundations and Applications of Clinical Reasoning III**
This course will integrate basic and clinical sciences in a case-based approach. Faculty members from multiple disciplines will guide students in developing the skills necessary to effectively diagnose and manage patients. This course also includes a two-hour mandatory academic review most weeks. (3.5 credit hours)

**COM 6301—Foundations and Applications of Clinical Reasoning IV**
This course will integrate basic and clinical sciences in a case-based approach. Faculty members from multiple disciplines will guide students in developing the skills necessary to effectively diagnose and manage patients. This course also includes a weekly, two-hour session of academic review. (3.0 credit hours)

**COM 6990—Preclinical Academic Review**
The study of the medical sciences contains a broad scope of knowledge in both science disciplines and organ systems of the body. Additionally, students must be able to analyze and apply knowledge to diagnose presentations and conditions of patients, as well as to synthesize and evaluate data to develop treatment and management plans for patients presenting with varying conditions. It is essential to master this knowledge as the medical licensing examinations are required to graduate from the Dr. Kiran C. Patel College of Osteopathic Medicine. This course provides students with an in-depth review of medical science content, clinical case study, practice exam questions, and a mock board examination. This online, independent study course provides resources to the students and allows them to work at their own pace to prepare for the COMLEX Level 1 licensing examination. It provides several opportunities to assess knowledge and track the student’s progression toward preparation. (3.0 credit hours)

**Clinical Course Descriptions—All Classes**

**COM 7005—Come Home Day I**
All NSU-KPCOM third-year medical students will be required to return to NSU’s HPD Fort Lauderdale/Davie Campus once in the summer or fall semester (as scheduled) to participate in experiential learning sessions. Scheduled interactive sessions during the M3 come home course will include, but are not limited to, Patient Care Experience in OMM, Standardized Patient Physical Exam Assessment with Formative Feedback, and Hands-on OPP Seminar. Students are excused from clinical rotation responsibilities on their scheduled come home dates. (1 credit hour)

**COM 7006—Come Home Day II**
All NSU-KPCOM third-year medical students will be required to return to NSU’s HPD Fort Lauderdale/Davie Campus once in the
COM 7091—Family Medicine I Rotation (M3 Core)
Family medicine is a primary care medical specialty that provides continual and comprehensive health care for the individual and the family. It integrates the biological, clinical, and behavioral sciences with a broad understanding of all health care disciplines. The scope of family medicine encompasses all ages, sexes, and organ systems. It deals with every disease entity and includes an understanding and application of the principles of osteopathic medicine. It places in the forefront of medical care the advancement of wellness and the prevention of disease and promotes advocacy for the benefit of its patients. Family physicians possess unique attitudes, skills, and knowledge that qualify them to provide continual and comprehensive medical care within the context of social, economic, cultural, psychological, and environmental factors. The family practitioner may be involved in all aspects of medical care both in and out of the hospital setting. The family practitioner must know and use community resources to benefit the patient and the family. Most often, family medicine is practiced within the ambulatory setting, which includes outpatient clinics and private physician offices. (8.0 credit hours)

COM 7092—Family Medicine II Rotation (M3 Core)
Family medicine is a primary care medical specialty that provides continual and comprehensive health care for the individual and the family. It integrates the biological, clinical, and behavioral sciences with a broad understanding of all health care disciplines. The scope of family medicine encompasses all ages, sexes, and organ systems. It deals with every disease entity and includes an understanding and application of the principles of osteopathic medicine. It places in the forefront of medical care the advancement of wellness and the prevention of disease and promotes advocacy for the benefit of its patients. Family physicians possess unique attitudes, skills, and knowledge that qualify them to provide continual and comprehensive medical care within the context of social, economic, cultural, psychological, and environmental factors. The family practitioner may be involved in all aspects of medical care both in and out of the hospital setting. The family practitioner must know and use community resources to benefit the patient and the family. Most often, family medicine is practiced within the ambulatory setting, which includes outpatient clinics and private physician offices. (8.0 credit hours)

COM 7093—Geriatrics Rotation (M4 Core)
Geriatric medicine is the primary care medical specialty that addresses the unique health care issues of the elderly. The clinical rotation in geriatrics provides students with the opportunity to understand the special needs of the geriatric patient and the unique disease presentation and progression in the elderly. It also enables students to identify psychosocial needs and functional disabilities of the elderly and their impact on developing appropriate care planning and medical management. The focus is on an interprofessional approach, functional and neuropsychological assessment, and treatment of the geriatric patient as directed by patient needs and wishes. The objectives of this course incorporate evidence-based geriatric competencies for medical students recommended by the American Association for Colleges of Osteopathic Medicine (AACOM), Association of American Medical Colleges (AAMC), American Geriatrics Society (AGS), Directors of Geriatric Academic Programs (ADGAP), and the Association for Gerontology in Higher Education (AGHE). (8.0 credit hours)

COM 7094—Psychiatric Medicine Rotation (M3 Core)
The rotation in general psychiatry is designed for students to learn and practice the rapport-building skills necessary for working with patients in a mental health setting. The focus is on developing awareness of the impact of the patients’ biological, developmental, sociological, ethnic, and economic background on their presenting problems. Students are expected to establish professional working relationships with members of a multidisciplinary, mental health treatment team. Students will develop the ability to communicate effectively with other professionals, support an atmosphere of collegiality, and expand both their medical education and their personal growth. (8.0 credit hours)

COM 7095—Emergency Medicine Rotation (M4 Core)
The goal of the emergency medicine rotation is to introduce students to the myriad medical and surgical conditions encountered in the practice of emergency medicine. Student will have the opportunity to acquire the knowledge and practice the skills necessary to evaluate and treat any patient who presents to the emergency department. (8.0 credit hours)

COM 7102—Internal Medicine I Rotation (M3 Core)
Internal Medicine is hospital-based, content-driven specialty training that places a premium on the cognitive work and interpersonal skills necessary for providing well-patient care and for managing medical problems seen on this clinical service. Emphasis is placed on differentiating normal from abnormal history and physical findings, interpreting diagnostic tests, establishing differential diagnoses, developing skills for accurate reporting and recording of data and problems, and developing management plans—including health education for patients and families and referrals. (8.0 credit hours)
screening, anticipatory guidance, and preventative medicine

in maximizing health in each of these stages through health
vital for us to be cognizant of these changes, and to assist
during previous periods of growth. As pediatricians, it is
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as a dynamic, growing, and developing patient. All aspects
The emphasis in pediatrics is on learning to perceive the child
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in maximizing health in each of these stages through health
screening, anticipatory guidance, and preventative medicine
techniques. In this way, they can assure the best future for
maturing, young patients. (8.0 credit hours)

COM 7132—Pediatrics II Rotation (M3 Core)
Pediatrics is the study of the comprehensive care of the
growing child. This includes screening for proper growth and
development, preventive health care, and the recognition and
management of illnesses in infants, children, and adolescents.
The emphasis in pediatrics is on learning to perceive the child
as a dynamic, growing, and developing patient. All aspects
of the child’s health are based upon the foundation formed
during previous periods of growth. As pediatricians, it is
vital for us to be cognizant of these changes, and to assist
in maximizing health in each of these stages through health
screening, anticipatory guidance, and preventative medicine
techniques. In this way, they can assure the best future for
maturing, young patients. (8.0 credit hours)

COM 7104—Surgery I Rotation (M3 Core)
During this two-block clinical course, the student will be
exposed to a variety of clinical problems routinely seen on
the surgical service. Emphasis will be placed on preoperative,
intraperative, and postoperative management of the patient.
In the operating room, the student will practice aseptic
techniques, operating room principles, and assisting in surgery
(8.0 credit hours)

COM 7105—Surgery II Rotation (M3 Core)
During this two-block clinical course, the student will be
exposed to a variety of clinical problems routinely seen on
the surgical service. Emphasis will be placed on preoperative,
intraoperative, and postoperative management of the patient.
In the operating room, the student will practice aseptic
techniques, operating room principles, and assisting in surgery
(8.0 credit hours)

COM 7110—Obstetrics and Gynecology Rotation (M3 Core)
Obstetrics and gynecology is the medical specialty that
provides care for those problems unique to women dealing
with diseases of the reproductive tract and with pregnancy. The
rotation acquaints the student with the concepts and practices
utilized in this care. It is intended that the student become
familiar with techniques and procedures used in this specialty
as well as with diagnosis and management of commonly
encountered obstetrical and gynecological problems.
(8.0 credit hours)

COM 7111—Pediatrics I Rotation (M3 Core)
Pediatrics is the study of the comprehensive care of the
growing child. This includes screening for proper growth and
development, preventive health care, and the recognition and
management of illnesses in infants, children, and adolescents.
The emphasis in pediatrics is on learning to perceive the child
as a dynamic, growing, and developing patient. All aspects
of the child’s health are based upon the foundation formed
during previous periods of growth. As pediatricians, it will be
vital for students to be cognizant of these changes and to assist
in maximizing health in each of these stages through health
screening, anticipatory guidance, and preventative medicine

Student training in international settings stresses the
development of primary care practitioner skills. This practitioner, with limited availability of sophisticated technical and ancillary services, will have the ability to diagnose and formulate a treatment plan based
on information gathered through history, physical examination, laboratory, and X-ray reports. Students will learn diagnostic and therapeutic modalities not necessarily practiced in the United States. The International Rural and Urban Underserved Medicine Selective Rotation will increase the knowledge and awareness of international health care systems; introduce pathology that is, or may become, apparent in the United States; and expose students to the unique value systems of different cultures. Students will develop an understanding of the disparities and inequalities in global health systems and observe the interrelated medical, political, economic, and environmental factors influencing health care in other countries. This rotation will serve as an introduction to community medicine and the health care needs of underserved populations around the world. (8.0 credit hours)

**COM 7990—Clinical Academic Review (M3 Core)**

The study of the medical sciences contains a broad scope of knowledge in both science disciplines and organ systems of the body. Additionally, students must be able to analyze and apply knowledge to diagnose presentations and conditions of patients, as well as to synthesize and evaluate data to develop treatment and management plans for patients presenting with varying conditions. It is essential to master this knowledge as the medical licensing/examinations are required to graduate from the Dr. Kiran C. Patel College of Osteopathic Medicine. This course provides students with an in-depth review of medical science content, clinical case study, practice exam questions, and a mock board examination. This online independent study course provides resources to the students and allows them to work at their own pace to prepare for the COMLEX Level 2CE licensing examination. It provides several opportunities to assess knowledge and track the student’s progression toward preparation. (3.0 credit hours)

**COM 8004—Senior Seminar**

A series of presentations prior to graduation to reinforce knowledge and skills useful for the internship experience. Topics include medical economics, risk management, on-call medication, physician impairment, professional liability, medical licensure, and emergency management. A mock trial is presented. (1.0 credit hour)

**COM 8006—Internal Medicine or Neurology Selective**

This clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. Students must select from Neurology or the following Internal Medicine subspecialties:

- Internal Medicine
- Internal Medicine: Cardiovascular Disease
- Internal Medicine: Clinical Cardiac Electrophysiology
- Internal Medicine: Critical Care Medicine
- Internal Medicine: Endocrine, Diabetes, and Metabolism
- Internal Medicine: Gastroenterology
- Internal Medicine: Hematology and/or Oncology
- Internal Medicine: Infectious Disease
- Internal Medicine: Interventional Cardiology
- Internal Medicine: Nephrology
- Internal Medicine: Pulmonary Disease
- Internal Medicine: Pulmonary Disease and Critical Care Medicine
- Internal Medicine: Rheumatology
- Neurology

(8.0 credit hours)

**COM 8007—Come Home Day III**

All NSU-KPCOM fourth-year medical students will be required to return to NSU’s HPD Fort Lauderdale/Davie Campus once during the fall term to participate in scheduled interactive sessions. These interactive sessions are hands-on OPP Seminars that are case based and clinically driven. The scheduling of these sessions will be managed by the Department of Osteopathic Principles and Practice, using an online scheduling system. Each date will have a maximum capacity. Students may choose to coordinate attendance at the OPP Seminar with on-campus COMAT testing. Students are excused from clinical rotation responsibilities during the time of their scheduled OPP Seminars. (1.0 credit hour)

**COM 8008—Come Home Day IV**

All NSU-KPCOM fourth-year medical students will be required to return to NSU’s HPD Fort Lauderdale/Davie Campus once during the winter term to participate in scheduled interactive sessions. These interactive sessions are hands-on OPP Seminars that are case based and clinically driven. The scheduling of these sessions will be managed by the Department of Osteopathic Principles and Practice, using an online scheduling system. Each date will have a maximum capacity. Students may choose to coordinate attendance at the OPP Seminar with on-campus COMAT testing. Students are excused from clinical rotation responsibilities during the time of their scheduled OPP Seminars. (1.0 credit hour)

**COM 8009—Emergency Medicine**

This is a two–four-week elective where students gain exposure to a variety of emergency room systems, including both operational and practical issues. The student will learn the fundamentals of emergency room care. (4.0–8.0 credit hours)
COM 8009A—Emergency Medicine: Medical Toxicology
The division runs a four-week rotation introducing emergency residents to the care of poisoned, intoxicated, or exposed patients, including recognizing toxidromes, appropriate use of laboratory testing, familiarity with antidotes, decontamination techniques, and disposition that is a required part of the Emergency Medicine Residency Program syllabus. (4.0–8.0 credit hours)

COM 8009B—Emergency Medicine: Pediatric Emergency Medicine
The clerkship will expose the student to a variety of emergency room systems, including both operational and practical issues as related to and applied to the pediatric patient. The student will learn the fundamentals of emergency room care in this patient population. (4.0–8.0 credit hours)

COM 8011—Otolaryngology
The clerkship will expose the student to otolaryngology through lectures; interactive participatory groups; clinical rounds; operative experiences; and other formats leading to the understanding of the structure, function, pathology, and performance of ENT (otolaryngology) surgery and nonoperative otolaryngology as it relates to the diagnosis and treatment of ENT lesions. There will be a practical element of the rotation such that the student is introduced to basic and intermediate nonoperative, preoperative, operative, and postoperative otolaryngology and otolaryngology surgery care, practice, and critical skills as they pertain to ENT pathology.

The clerkship is designed to promote the understanding of the relationship between surgery; specialized ENT conditions and ENT surgery; and the patient in the nonoperative, preoperative, operative, and postoperative care including indications and contraindications for otolaryngologic surgery. The course will assist the student in preparing for the clinical questions on the COMLEX-USA and other licensing examinations. (4.0–8.0 credit hours)

COM 8011A—Otolaryngology: Otology/Neurotology
The clerkship will consist of lectures, interactive participatory groups, clinical rounds, operative experience, and other formats leading to the understanding of the structure, function, pathology, and performance of ENT (otolaryngology) surgery and nonoperative otolaryngology as it relates to the diagnosis and treatment of ENT lesions, especially as it relates to the ear, hearing, and vestibular apparatus. There will be a practical element of the rotation such that the student is introduced to basic and intermediate nonoperative, preoperative, operative, and postoperative otolaryngology and otolaryngology surgery care, practice, and critical skills as they pertain to ENT pathology and hearing and vestibular functions.

The clerkship is designed to promote the understanding of the relationship between surgery; specialized ENT conditions and ENT surgery; and the patient in the nonoperative, preoperative, operative, and postoperative care including indications and contraindications for otolaryngologic surgery. The course will assist the student in preparing for the clinical questions on the COMLEX-USA and other licensing examinations. (4.0–8.0 credit hours)

COM 8011B—Otolaryngology: Pediatric Otolaryngology
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8012—Family Medicine
Family medicine is a primary care medical specialty that provides continual and comprehensive health care for the individual and the family. It integrates the biological, clinical, and behavioral sciences with a broad understanding of all health care disciplines. The scope of family medicine encompasses all ages, sexes, and organ systems. It deals with every disease entity and includes an understanding and application of the principles of osteopathic medicine. It places in the forefront of medical care the advancement of wellness and the prevention of disease and promotes advocacy for the benefit of its patients. Family physicians possess unique attitudes, skills, and knowledge that qualify them to provide continual and comprehensive medical care within the context of social, economic, cultural, psychological, and environmental factors. The family practitioner may be involved in all aspects of medical care both in and out of the hospital setting. The family practitioner must know and use community resources to benefit the patient and the family. Most often, family medicine is practiced within the ambulatory setting, which includes outpatient clinics and private physician offices. (4.0–8.0 credit hours)

COM 8014—Surgery: General
The fourth-year medical student general surgery elective should include advanced training in the preoperative, intraoperative and postoperative management of general surgery patients. The student should work with patients on the general surgery wards, in the operating room, in the emergency room, and in the clinic. (4.0–8.0 credit hours)

COM 8014A—Surgery: Pediatric Surgery
In this clerkship, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the skills learned in the pediatric and surgery rotations already taken. Knowledge of surgery, surgical indications, and surgical contraindications is essential for the competent practice of osteopathic medicine in the pediatric patient.
COM 8014B—Surgery: Surgical Critical Care
In this clerkship, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance within the objectives and goals of the general surgery rotation as follows. This will involve inpatient care of critically ill patients coming from the emergency room, the intensive care units or complications arising on the floor. Emphasis will be placed on preoperative evaluation of the critically ill patient, intraoperative, and postoperative management of the patient. In the operating room, the student will practice aseptic techniques and operating room principles and assist in surgery as well as in procedures performed outside the operating room as necessary. (4.0–8.0 credit hours)

COM 8014C—Surgery: Vascular Surgery
In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance within the objectives and goals of the general surgery rotation as follows. This will provide the student with a focused study of disease processes of the peripheral vascular system. This will include problems related to lower extremity occlusive disease, arterial aneurysms, and venous disorders. There is a special emphasis on preoperative patient assessment, both clinically and radiographically. The student will be exposed to the management of vascular patients by both traditional open techniques and newer minimally invasive endovascular routes. (4.0–8.0 credit hours)

COM 8014D—Surgery: Vascular Surgery—Integrated
In this elective, the student will spend time with both the vascular surgery and interventional radiology services. Student and preceptors will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance within the objectives and goals of the general surgery rotation and diagnostic radiology. This will provide the student with a focused study of disease processes of the peripheral vascular system. This will include problems related to lower extremity occlusive disease, arterial aneurysms, and venous disorders. There is a special emphasis on preoperative patient assessment both clinically and radiographically. The student will be exposed to the management of vascular patients by both traditional open techniques and newer minimally invasive endovascular routes. (4.0–8.0 credit hours)

COM 8015—Geriatric Medicine
Geriatric medicine is the primary care medical specialty that addresses the unique health care issues of the elderly. The clinical rotation in geriatrics provides students with the opportunity to understand the special needs of the geriatric patient and unique disease presentation and progression in the elderly. It also enables students to identify psychosocial needs and functional disabilities of the elderly and their impact on developing appropriate care planning and medical management. The focus is on an interprofessional approach, functional and neuropsychological assessment, and treatment of the geriatric patient as directed by patient needs and wishes. (4.0–8.0 credit hours)

COM 8018—Internal Medicine
Internal medicine is a broad-based, content-driven medical specialty that places a premium on the cognitive work and interpersonal skills necessary to providing well-patient care and in caring for medical problems seen on clinical service. Emphasis is placed on determining normal from abnormal history and physical findings, using diagnostic tests, making logical selections, and defending hypotheses (preliminary problem list), as well as accurate reporting and recording of data and problems and beginning development of management plans, including health education for patients and families and referrals. (4.0–8.0 credit hours)

COM 8018A—Internal Medicine: Cardiovascular Disease
The goals of the elective are to provide the student with instruction and a broad experience in clinical cardiology. (4.0–8.0 credit hours)

COM 8018B—Internal Medicine: Clinical Cardiac Electrophysiology
The goals of the elective are to provide the student with instruction and a broad experience in clinical cardiology. (4.0–8.0 credit hours)

COM 8018C—Internal Medicine: Critical Care Medicine
Internal medicine is a broad-based, content-driven medical specialty that places a premium on the cognitive work and interpersonal skills necessary to providing well-patient care and caring for medical problems seen on clinical service. Emphasis is placed on determining normal from abnormal history and physical findings, using diagnostic tests, making logical selections, and defending hypotheses (preliminary problem list), as well as accurate reporting and recording of data and problems and beginning development of management plans, including health education for patients and families and referrals. (4.0–8.0 credit hours)
COM 8018D—Internal Medicine: Endocrine, Diabetes, and Metabolism
This elective will involve inpatient and ambulatory care. During the elective, students will be exposed to the consultative practice of endocrinology and will participate in the evaluation and management of a broad spectrum of endocrine disorders. This will include the evaluation and treatment of patients with diabetes, hyperlipidemia, and nutritional disorders. (4.0–8.0 credit hours)

COM 8018E—Internal Medicine: Gastroenterology
This elective is designed to allow ambulatory and hospital-based exposure to patients with gastroenterology issues. The student will gain exposure to a variety of common, and some uncommon, gastrointestinal disorders, both through evaluation of the patient and through observation of endoscopy. The student will gain preliminary experience in managing gastrointestinal disorders and, in particular, the use of endoscopic intervention for diagnosis and treatment of gastrointestinal disorders. (4.0–8.0 credit hours)

COM 8018F—Internal Medicine: Hematology and/or Oncology
This elective will involve inpatient and ambulatory care in the care of hematology and oncology patients. The student is expected to learn the diagnostic and therapeutic approaches for hematologic and oncologic diseases through direct patient contact. The student will participate in bone marrow aspirate and biopsy procedures, as well as the interpretation of peripheral blood smears and serum protein electrophoresis results. The student will be expected to expand his or her basic knowledge with appropriate reading materials, as well as weekly clinical conferences (4.0–8.0 credit hours)

COM 8018G—Internal Medicine: Infectious Disease
This elective will involve inpatient and ambulatory care in the care of infectious diseases. The student will see both inpatient and outpatient consults that have a broad range of infectious disease problems. There will be a variety of infectious disease presentations, ranging from complicated, hospital-acquired, multidrug-resistant infections to outpatient consults for fevers of unknown origin or for vector-transmitted infections. Students will also be exposed to the primary and longitudinal care of patients with human immunodeficiency virus (HIV) infection. Students on this elective are expected to review relevant literature and present that review. (4.0–8.0 credit hours)

COM 8018H—Internal Medicine: Interventional Cardiology
The goals of the elective are to provide the student with instruction and a broad experience in clinical cardiology. (4.0–8.0 credit hours)

COM 8018I—Internal Medicine: Nephrology
This elective will involve inpatient and ambulatory care in the evaluation and treatment of a range of kidney and urinary tract clinical problems. It is designed to provide the student with an opportunity to actively engage in patient-based learning experiences under the guidance of a faculty member (preceptor). The clinical experience will emphasize the diagnosis and management of acute and chronic kidney and urologic tract diseases and the management of risk factors associated with the diseases. Objectives will focus on the complete and accurate patient history and physical examination, indications for appropriate diagnostic studies, and the understanding of first-line therapy for common nephrology diseases. (4.0–8.0 credit hours)

COM 8018J—Internal Medicine: Pulmonary Disease
This pulmonary medicine elective is scheduled with a preceptor who is an expert in this field. The student will experience the day-to-day activities of clinicians assisting in the care of ambulatory and hospitalized patients. This will give the student opportunity to practice interview and documentation skills. The student may be given the opportunity to participate in procedures as the preceptor determines his or her readiness. (4.0–8.0 credit hours)

COM 8018K—Internal Medicine: Pulmonary Disease and Critical Care Medicine
This elective is designed for hospitalized patient care. It will combine critical care in the hospital while focusing on pulmonary disease and management. The specifics of this elective will be agreed to by the student and preceptor, with the student participating in treatment and assisting in procedures as felt appropriate by the preceptor. (4.0–8.0 credit hours)

COM 8018L—Internal Medicine: Rheumatology
This clerkship will involve primarily ambulatory patients. It is designed to provide the student with an opportunity to actively engage in patient-based learning experiences under the guidance of a faculty member (preceptor). The clinical experience will emphasize the diagnosis and management of rheumatologic diseases and the management of risk factors associated with the diseases. Objectives will focus on the complete and accurate patient history and physical examination, indications for appropriate diagnostic studies, and the understanding of first-line therapy for common rheumatology diseases. It will involve the practice of rheumatology in an office and possibly a hospital setting. It is expected to incorporate a musculoskeletal, orthopedic and multidisciplinary approach to various rheumatologic diseases. There will be direct patient contact under supervision. (4.0–8.0 credit hours)
COM 8019—International Medicine
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8020—Radiation Oncology
This rotation is designed as an introduction to radiation oncology. During this rotation, the medical student will work with the preceptor and see patients in clinic and the Radiation Oncology Department. This is designed to expose the student to the entire spectrum of radiation oncology. Students will participate in discussions with the preceptor or resident staff on different radiation oncology topics and will also be expected to make case presentations and give presentations on general radiation oncology and treatment planning. (4.0–8.0 credit hours)

COM 8021—Medical Genetics and Genomics
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8022—Nuclear Medicine
The purpose of the elective is to teach the appropriate use of nuclear medicine as a diagnostic tool, as well as to teach the fundamentals of nuclear medicine interpretation and application. The student will also be exposed to the use of nuclear medicine in the treatment of disease. This will provide the student with a base of information of great use to him or her during postgraduate education and practice. The preceptor and student will outline available studies and course expectations prior to the beginning of the rotation. (4.0–8.0 credit hours)

COM 8023—Neurology
This rotation is the introduction to clinical neurology. It is a four-week rotation exposing the student to inpatient and outpatient acute and chronic neurologic diseases and treatment. It is a prerequisite for taking more advanced rotations in neurology. (4.0–8.0 credit hours)

COM 8023A—Neurology: Child Neurology
This rotation is the introduction to child neurology. It is a four-week rotation exposing the student to inpatient and outpatient acute and chronic neurologic diseases and treatment. It is a prerequisite for the student to have taken rotation COM 8023 in neurology and COM 8032 in pediatrics. (4.0–8.0 credit hours)

COM 8023B—Neurology: Clinical
This rotation is the introduction to clinical neurology. It is a four-week rotation exposing the student to inpatient and outpatient acute and chronic neurologic diseases and treatment. It is a prerequisite for taking more advanced rotations in neurology. The preceptor and student will define the focus of this clinical neurology rotation in advance. (4.0–8.0 credit hours)

COM 8023C—Neurology: Neuromuscular Medicine
This rotation is the introduction to neuromuscular medicine. It is a four-week rotation exposing the student to building upon lessons and methods learned in COM 8023 Neurology. It will involve inpatient and outpatient medicine in patients with ALS, myasthenia gravis, myopathies, muscular dystrophy and other neuromuscular diseases. (4.0–8.0 credit hours)

COM 8024—Neurological Surgery
The course will consist of lectures, interactive participatory groups, clinical rounds, operative experience, and other formats leading to the understanding of the structure, function, pathology, and performance of neurological surgery. There will be a practical element of the rotation such that the student is introduced to basic and intermediate levels of nonoperative, preoperative, operative, and postoperative neurological surgery care, practice, and critical skills. The course is designed to promote the understanding of the relationship between surgery; specialized neurological surgery; and the patient in the nonoperative, preoperative, operative, and postoperative care including indications and contraindications for neurological surgery. The course will assist the student in preparing for the clinical questions on the COMLEX-USA and other licensing examinations. (4.0–8.0 credit hours)

COM 8024A—Neurological Surgery: Endovascular Surgical Neuroradiology
The course will consist of lectures, interactive participatory groups, clinical rounds, operative experience, and other formats leading to the understanding of the structure, function, pathology, and performance of endovascular neurological surgery. There will be a practical element of the rotation such that the student is introduced to basic and intermediate levels of nonoperative, preoperative, operative and postoperative neurological surgery care, practice, and critical skills. The course is designed to promote the understanding of the relationship between surgery; specialized neurological surgery; and the patient in the nonoperative, preoperative, operative, and postoperative care including indications and contraindications for endovascular neurological surgery. The course will assist the student in preparing for the clinical questions on the COMLEX-USA and other licensing examinations. (4.0–8.0 credit hours)

COM 8025—Obstetrics and Gynecology
Obstetrics and gynecology is the medical specialty that provides care for those problems unique to women dealing with diseases of the reproductive tract and with pregnancy. The rotation acquaints the student with the concepts and practices utilized in this care. It is intended that the student become familiar with techniques and procedures used in this specialty as well as with diagnosis and management of commonly encountered obstetrical and gynecological problems. (4.0–8.0 credit hours)
COM 8025A—Obstetrics and Gynecology: Maternal/Fetal Medicine
Upon completion of COM 8025 Obstetrics and Gynecology, the student may take this elective rotation. The rotation on maternal/fetal medicine is an inpatient service. Students will participate in the admission and follow-up of patients, participating in their procedures and deliveries. The students are expected to follow their panel of patients under the supervision of the obstetrics and gynecology as well as neonatology staff members. Formal, structured teaching occurs during didactic sessions, after morning rounds, and during weekly perinatal conferences. Students are expected to take night call, but the schedule is flexible. Grading is based on evaluations from resident staff and faculty members. (4.0–8.0 credit hours)

COM 8025B—Obstetrics and Gynecology: Reproductive Endocrinology and Infertility Elective
Upon completion of COM 8025 Obstetrics and Gynecology, the student may take this elective rotation. The course is designed to acquaint students with current concepts of infertility and management of interrelated reproductive endocrine problems and to familiarize them with laboratory techniques used in evaluating patients with such problems. Students will observe the workup and care of fertility and endocrinology patients, as well as patients with recurrent miscarriage. There is exposure to surgical management of such patients, including minimally invasive surgery. Students will have exposure to laboratory techniques used in the work up and treatment of such patients. There will be exposure to assisted reproductive technologies in clinics and laboratories, as well as endocrinology. (4.0–8.0 credit hours)

COM 8025C—Obstetrics and Gynecology: Women’s Health Elective
Upon completion of COM 8025 Obstetrics and Gynecology, the student may take this elective rotation. This rotation includes the disciplines of gynecology/obstetrics and women’s health. (4.0–8.0 credit hours)

COM 8025D—Obstetrics and Gynecology: Gynecological Oncology
Upon completion of COM 8025 Obstetrics and Gynecology, the student may take this elective rotation. The student will have the opportunity to participate in the field of gynecologic oncology and care for women with gynecologic cancer, as well as fully participate in the connection between gynecologic oncology and integrative medicine. The student will be exposed to all outpatient areas of gynecologic oncology and integrative medicine including new patient visits, follow-up visits, surgical oncology, chemotherapy, radiation oncology, and clinical research. (4.0–8.0 credit hours)

COM 8025E—Obstetrics and Gynecology: Maternal-Fetal Medicine
Upon completion of COM 8025 Obstetrics and Gynecology, the student may take this elective rotation. The rotation on maternal/fetal medicine is an inpatient service. Students will participate in the admission and follow-up of patients, participating in their procedures and deliveries. The students are expected to follow their panel of patients under the supervision of the obstetrics and gynecology as well as neonatology staff members. Formal, structured teaching occurs during didactic sessions, after morning rounds, and during weekly perinatal conferences. Students are expected to take night call, but the schedule is flexible. Grading is based on evaluations from resident staff and faculty members. (4.0–8.0 credit hours)

COM 8025F—Obstetrics and Gynecology: Reproductive Endocrinology and Infertility Elective
Upon completion of COM 8025 Obstetrics and Gynecology, the student may take this elective rotation. The course is designed to acquaint students with current concepts of infertility and management of interrelated reproductive endocrine problems and to familiarize them with laboratory techniques used in evaluating patients with such problems. Students will observe the workup and care of fertility and endocrinology patients, as well as patients with recurrent miscarriage. There is exposure to surgical management of such patients, including minimally invasive surgery. Students will have exposure to laboratory techniques used in the work up and treatment of such patients. There will be exposure to assisted reproductive technologies in clinics and laboratories, as well as endocrinology. (4.0–8.0 credit hours)

COM 8025G—Obstetrics and Gynecology: Women’s Health Elective
Upon completion of COM 8025 Obstetrics and Gynecology, the student may take this elective rotation. This rotation includes the disciplines of gynecology/obstetrics and women’s health. (4.0–8.0 credit hours)

COM 8025H—Obstetrics and Gynecology: Gynecological Oncology
Upon completion of COM 8025 Obstetrics and Gynecology, the student may take this elective rotation. The student will have the opportunity to participate in the field of gynecologic oncology and care for women with gynecologic cancer, as well as fully participate in the connection between gynecologic oncology and integrative medicine. The student will be exposed to all outpatient areas of gynecologic oncology and integrative medicine including new patient visits, follow-up visits, surgical oncology, chemotherapy, radiation oncology, and clinical research. (4.0–8.0 credit hours)

COM 8025I—Obstetrics and Gynecology: Maternal-Fetal Medicine
Upon completion of COM 8025 Obstetrics and Gynecology, the student may take this elective rotation. The rotation on maternal/fetal medicine is an inpatient service. Students will participate in the admission and follow-up of patients, participating in their procedures and deliveries. The students are expected to follow their panel of patients under the supervision of the obstetrics and gynecology as well as neonatology staff members. Formal, structured teaching occurs during didactic sessions, after morning rounds, and during weekly perinatal conferences. Students are expected to take night call, but the schedule is flexible. Grading is based on evaluations from resident staff and faculty members. (4.0–8.0 credit hours)

COM 8025J—Obstetrics and Gynecology: Reproductive Endocrinology and Infertility Elective
Upon completion of COM 8025 Obstetrics and Gynecology, the student may take this elective rotation. The course is designed to acquaint students with current concepts of infertility and management of interrelated reproductive endocrine problems and to familiarize them with laboratory techniques used in evaluating patients with such problems. Students will observe the workup and care of fertility and endocrinology patients, as well as patients with recurrent miscarriage. There is exposure to surgical management of such patients, including minimally invasive surgery. Students will have exposure to laboratory techniques used in the work up and treatment of such patients. There will be exposure to assisted reproductive technologies in clinics and laboratories, as well as endocrinology. (4.0–8.0 credit hours)

COM 8025K—Obstetrics and Gynecology: Women’s Health Elective
Upon completion of COM 8025 Obstetrics and Gynecology, the student may take this elective rotation. This rotation includes the disciplines of gynecology/obstetrics and women’s health. (4.0–8.0 credit hours)

COM 8025L—Obstetrics and Gynecology: Gynecological Oncology
Upon completion of COM 8025 Obstetrics and Gynecology, the student may take this elective rotation. The student will have the opportunity to participate in the field of gynecologic oncology and care for women with gynecologic cancer, as well as fully participate in the connection between gynecologic oncology and integrative medicine. The student will be exposed to all outpatient areas of gynecologic oncology and integrative medicine including new patient visits, follow-up visits, surgical oncology, chemotherapy, radiation oncology, and clinical research. (4.0–8.0 credit hours)
COM 8028B—Ophthalmology: Cornea Surgery
The course will consist of lectures, interactive participatory groups, clinical rounds, operative experience, and other formats leading to the understanding of the anatomy, function, pathology, and performance of ophthalmic surgery and nonoperative ophthalmology as it relates to the diagnosis and treatment of corneal lesions. There will be a practical element of the rotation such that the student is introduced to basic and intermediate levels of nonoperative, preoperative, operative, and postoperative ophthalmic care as well as knowledge of corneal conditions and surgery; and the patient in nonoperative, preoperative, operative, and postoperative care including indications and contraindications for corneal surgery. The course will assist the student in preparing for the clinical questions on the COMLEX-USA and other licensing examinations. (4.0–8.0 credit hours)

COM 8029—Orthopedic Surgery
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. Knowledge of orthopedic surgery, surgical indications, and surgical contraindications is essential for the competent practice of osteopathic medicine. The Department of Surgery closely partners with all areas of clinical instruction of all academic courses and programs of a clinical nature in the Dr. Kiran C. Patel College of Osteopathic Medicine. The Department of Surgery closely partners with all areas of clinical instruction of all academic courses and programs of a clinical nature in the Dr. Kiran C. Patel College of Osteopathic Medicine.

During this elective, the student will be exposed to a variety of clinical problems routinely seen in the orthopedic surgical service. Emphasis will be placed on preoperative, intraoperative, and postoperative management of the patient. In the operating room, the student will practice aseptic techniques and operating room principles and assist in surgery. (4.0–8.0 credit hours)

COM 8029A—Orthopedic Surgery: Adult Reconstructive Orthopedics
Once the student has completed the basic COM 8029 orthopedic rotation, the student may take this elective. The student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of the adult reconstructive orthopedic surgery rotation as follows. Knowledge of orthopedic surgery, surgical indications, and surgical contraindications is essential for the competent practice of orthopedic medicine. The Department of Surgery closely partners with all areas of clinical instruction of all academic courses and programs of a clinical nature in the Dr. Kiran C. Patel College of Osteopathic Medicine. During this elective, the student will experience hands-on exposure to adult reconstructive surgery. The student will be able to integrate surgical knowledge in the care of orthopedic patients in both the inpatient and outpatient settings. (4.0–8.0 credit hours)

COM 8029B—Orthopedic Surgery: Foot and Ankle Orthopedics
Once the student has completed the basic COM 8029 orthopedic rotation, the student may take this elective. The student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of the orthopedic surgery rotation as follows. Knowledge of orthopedic surgery, surgical indications, and surgical contraindications is essential for the competent practice of orthopedic medicine. The Department of Surgery closely partners with all areas of clinical instruction of all academic courses and programs of a clinical nature in the Dr. Kiran C. Patel College of Osteopathic Medicine. During this elective, the student will participate in the preoperative, postoperative, and surgical care of patients with foot and ankle disorders. The student is exposed to inpatient and outpatient settings. Objectives include understanding of the evaluation and management of arthritis, sports medicine, common deformities, tendonopathies, and neuropathy pertaining to the foot and ankle as well as orthotic and pedorthic management. (4.0–8.0 credit hours)

COM 8029C—Orthopedic Surgery: Hand Orthopedic Surgery
Once the student has completed the basic COM 8029 orthopedic rotation, the student may take this elective. The student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of the hand orthopedic surgery rotation as follows. Knowledge of orthopedic surgery, surgical indications, and surgical contraindications is essential for the competent practice of orthopedic medicine. The Department of Surgery closely partners with all areas of clinical instruction of all academic courses and programs of a clinical nature in the Dr. Kiran C. Patel College of Osteopathic Medicine. During this elective, the student will have exposure to hand surgery. The student will be able to integrate surgical knowledge in the care of orthopedic patients in both the inpatient and outpatient settings. This will include congenital hand deformities, musculoskeletal hand injuries, arthritis, and tendonopathies in both inpatient and outpatient settings. (4.0–8.0 credit hours)
COM 8029D—Orthopedic Surgery: Musculoskeletal Oncology

Once the student has completed the basic COM 8029 orthopedic rotation, the student may take this elective. The student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of the orthopedic musculoskeletal oncology rotation as follows. Knowledge of orthopedic surgery, surgical indications, and surgical contraindications is essential for the competent practice of osteopathic medicine. The Department of Surgery closely partners with all areas of clinical instruction of all academic courses and programs of a clinical nature in the Dr. Kiran C. Patel College of Osteopathic Medicine.

During this elective the student will be exposed to patients with orthopedic diagnoses and problems arising from musculoskeletal oncology. This will involve integration of medical, surgical, pathological, and radiological patient information. Patients are evaluated in both the inpatient and outpatient settings. *(4.0–8.0 credit hours)*

COM 8029E—Orthopedic Surgery: Orthopedic Sports Medicine

In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of the orthopedic sports medicine rotation as listed follows. Knowledge of orthopedic surgery, surgical indications, and surgical contraindications is essential for the competent practice of osteopathic medicine. The Department of Surgery closely partners with all areas of clinical instruction of all academic courses and programs of a clinical nature in the Dr. Kiran C. Patel College of Osteopathic Medicine.

This elective is designed to help the student integrate medical and surgical knowledge in the care of patients with spine-related deformities and injuries. This will be both inpatient and outpatient and will include a wide variety of spinal disorders. The rotation is designed to provide assessment of patients with low back pain and spinal injuries with and without neurological involvement. The student is expected to participate in preoperative, surgical, postoperative hospital, and outpatient diagnostic and therapeutic care of the orthopedic spine patient. *(4.0–8.0 credit hours)*

COM 8029G—Orthopedic Surgery: Orthopedic Trauma

The student will have already been on rotation COM 8029 Orthopedic Surgery. In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of the orthopedic trauma rotation as follows. Knowledge of orthopedic surgery, surgical indications, and surgical contraindications is essential for the competent practice of osteopathic medicine. The Department of Surgery closely partners with all areas of clinical instruction of all academic courses and programs of a clinical nature in the Dr. Kiran C. Patel College of Osteopathic Medicine.

During this elective, the student will have exposure to patients with orthopedic trauma. The student will use medical and surgical skills in the care of trauma victims and musculoskeletal injuries in the inpatient and outpatient setting. This is to include orthopedic preoperative, operative, postoperative hospital, and outpatient diagnostic and therapeutic care of orthopedic trauma patients. *(4.0–8.0 credit hours)*

COM 8029H—Orthopedic Surgery: Pediatric Orthopedics

In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. This elective involves the speciality of orthopedics exclusively in the pediatric and adolescent patient. The basic rotations of COM 8029 Orthopedic Surgery and COM 8032 Pediatrics should be completed before this elective.

Knowledge of orthopedic surgery, surgical indications, and surgical contraindications is essential for the competent practice of osteopathic medicine. The Department of Surgery closely partners with all areas of clinical instruction of all academic courses and programs of a clinical nature in the Dr. Kiran C. Patel College of Osteopathic Medicine.

During this elective, the student will be exposed to a variety of clinical problems routinely seen in the pediatric orthopedic surgical service. Emphasis will be placed on preoperative, intraoperative, and postoperative management of the patient. In the operating room, the student will practice aseptic
techniques and operating room principles and assist in surgery. (4.0–8.0 credit hours)

COM 8030—Preventive Medicine
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8030A—Preventive Medicine: Aerospace Medicine
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8030B—Preventive Medicine: Occupational Medicine
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8030C—Preventive Medicine: Public Health Medicine
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8031—Pathology
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8031A—Pathology: Blood Banking/Transfusion Medicine
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8031B—Pathology: Chemical Pathology
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8031C—Pathology: Cytopathology
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8031D—Pathology: Dermatopathology
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8031E—Pathology: Forensic Pathology
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8031F—Pathology: Medical Microbiology
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8031G—Pathology: Neuropathology
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8031H—Pathology: Pediatric Pathology
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8031J—Pathology: Selective Pathology
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8032—Pediatrics
Pediatrics is the study of the comprehensive care of the growing child. This includes screening for proper growth and development, preventive health care, and the recognition and management of illnesses in infants, children, and adolescents. The elective is to build upon fundamentals learned in Pediatrics Rotation I Ambulatory Care and Pediatrics II Hospital Care. (4.0–8.0 credit hours)

COM 8032A—Pediatrics: Adolescent Medicine
In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of general pediatric rotations I and II as outlined in the General Curriculum for Pediatrics Adolescent Medicine, the study of the comprehensive care of the adolescent. This includes screening for proper growth and development, preventive health care, and the recognition and management of illnesses in adolescents.

The emphasis is on learning to perceive the adolescent as a dynamic, growing and developing patient. All aspects of the
in the pediatric patient and the recognition and management of illnesses in the pediatric patient. The emphasis is on learning to perceive the neonatal/perinatal patient as a growing and developing patient. As pediatricians, it is vital for us to be cognizant of, and to assist in, maximizing health in these early stages through health screening, anticipatory guidance, and preventative medicine techniques. In this way, we can assure the best future for this group of patients.

In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of general pediatric rotations I and II as outlined in the General Curriculum for Pediatrics. (4.0–8.0 credit hours)

COM 8032C—Pediatrics: Cardiology
Pediatric cardiology is the study of the comprehensive care of cardiologic issues in the pediatric patient. This includes screening for and recognition and management of cardiac illnesses in the pediatric patient. The emphasis is on learning to perceive the pediatric patient as a growing and developing patient. As pediatricians, it is vital for us to be cognizant of, and to assist in understanding and diagnosing, cardiac diseases and findings in these early stages through health screening, anticipatory guidance, and preventative medicine techniques. In this way, we can assure the best future for this group of patients.

In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of general pediatric rotations I and II as outlined in the General Curriculum for Pediatrics. (4.0–8.0 credit hours)

COM 8032D—Pediatrics: Critical Care Medicine
Pediatric critical care is the study and comprehensive care of the pediatric patient in the critical care setting. This will be primarily an inpatient rotation and may involve outpatient follow-up. The emphasis is on learning to perceive, understand, and learn treatment strategies in the growing and developing pediatric patient in a critical care setting. As pediatricians, it is vital to learn to treat the pediatric patient and help the families when critical care settings and diseases arise.

In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of general pediatric rotations I and II as outlined in the General Curriculum for Pediatrics. (4.0–8.0 credit hours)

COM 8032E—Pediatrics: Endocrinology
Pediatric endocrinology is the study of the comprehensive care of the pediatric patient with endocrinologic disease. This includes screening for proper growth and development, preventive health care, and the recognition and management of these illnesses in the pediatric patient. The emphasis is on learning to perceive the pediatric endocrinology patient as a growing and developing patient. As pediatricians, it is vital for us to be cognizant of, and to assist in, maximizing health in these early stages through health screening, anticipatory guidance, and preventative medicine techniques. In this way, we can assure the best future for this group of patients.

In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of general pediatric rotations I and II as outlined in the General Curriculum for Pediatrics. (4.0–8.0 credit hours)

COM 8032F—Pediatrics: Gastroenterology
Pediatric gastroenterology is the study of the comprehensive care of the pediatric patient with gastroenterologic disease. This includes screening for proper growth and development, preventive health care, and the recognition and management of these illnesses in the pediatric patient. The emphasis is on learning to perceive the pediatric gastroenterology patient as a growing and developing patient. As pediatricians, it is vital for us to be cognizant of, and to assist in maximizing health in these early stages through health screening, anticipatory guidance, and preventative medicine techniques. In this way, we can assure the best future for this group of patients.

In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of general pediatric rotations I and II as outlined in the General Curriculum for Pediatrics. (4.0–8.0 credit hours)

COM 8032G—Pediatrics: Hematology/Oncology
Pediatric hematology/oncology is the study of the comprehensive care of the pediatric patient with hematologic or oncologic disease. This will include the recognition and management of these illnesses in the pediatric patient and family. The emphasis is on learning to perceive the pediatric hematology/oncology patient as a growing and developing patient. As pediatricians, it is vital for us to be cognizant of, and to assist in, maximizing health in these early stages through health screening, anticipatory guidance, and preventative medicine techniques. In this way, we can assure the best future for this group of patients.
In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of general pediatric rotations I and II as outlined in the General Curriculum for Pediatrics. (4.0–8.0 credit hours)

COM 8032H—Pediatrics: Infectious Diseases
Pediatric infectious disease is the study of the comprehensive care of the pediatric patient with infectious diseases. This will include the recognition and management of these illnesses in the pediatric patient. The emphasis is on learning to recognize and treat infectious diseases in the pediatric patient. As pediatricians, it is vital for us to be cognizant of, and to assist in, maximizing health in these early stages through health screenings, testing for, and diagnosing infectious diseases. In this way, we can assure the best future for this group of patients.

In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of general pediatric rotations I and II as outlined in the General Curriculum for Pediatrics. (4.0–8.0 credit hours)

COM 8032I—Pediatrics: Nephrology
Pediatric nephrology is the study of the comprehensive care of the pediatric patient with nephrologic disease. This will include the recognition and management of these illnesses in the pediatric patient. The emphasis is on learning to recognize and treat nephrologic disease in the pediatric patient. As pediatricians, it is vital for us to be cognizant of, and to assist in, maximizing health in these early stages through health screenings, testing for, and diagnosing nephrologic diseases. In this way, we can assure the best future for this group of patients.

In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of general pediatric rotations I and II as outlined in the General Curriculum for Pediatrics. (4.0–8.0 credit hours)

COM 8032J—Pediatrics: Pulmonology
Pediatric pulmonology is the study of the comprehensive care of the pediatric patient with pulmonology disease. This will include the recognition and management of these illnesses in the pediatric patient. The emphasis is on learning to recognize and treat pulmonology diseases in the pediatric patient. As pediatricians, it is vital for us to be cognizant of, and to assist in, maximizing health in these early stages through health screenings, testing for, and diagnosing pulmonology diseases. In this way, we can assure the best future for this group of patients.

In this elective, the student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of general pediatric rotations I and II as outlined in the General Curriculum for Pediatrics. (4.0–8.0 credit hours)
COM 8036C—Psychiatry: Forensic Psychiatry
The objective of this rotation is to provide a clinical experience in forensic psychiatry, thereby, increasing the students’ skills, knowledge, and comfort in the interface between psychiatry and the law. The student will work up some inpatients and may help prepare some written reports for the court. There is no night call, but students will be available five days a week. The basic psychiatry rotation is a prerequisite for this rotation. (4.0–8.0 credit hours)

COM 8036D—Psychiatry: Geriatric Psychiatry
This is a four-week rotation that will provide experience and information in the psychiatric care of the geriatric patient. This will expose the student to inpatient and ambulatory care in the geriatric population. Among the patients are those who are community dwelling, inpatient, undergoing palliative care, and in the hospice unit. It is required that students have been though both the basic psychiatry and geriatric rotations. Students will gain medical knowledge about established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences and the application of this knowledge to geriatric patient care. (4.0–8.0 credit hours)

COM 8037—Radiology: Diagnostic
The purpose of the elective is to teach the appropriate use of radiology as a diagnostic tool, as well as to teach the fundamentals of X-ray interpretation. This will involve all areas of diagnostic radiology and will provide the student with a base of information of great use to him or her during postgraduate education and practice. (4.0–8.0 credit hours)

COM 8037A—Radiology: Diagnostic—Abdominal Radiology
After completion of the initial diagnostic radiology rotation COM 8037, the student may choose to take this elective rotation. It will be an introduction to abdominal imaging and include, but not be limited to, abdominal X-ray studies; ultrasound of the GI, GU, and vascular structures; CT; CT colonography; and MRI. The preceptor and student will outline available studies and course expectations prior to the beginning of the rotation. (4.0–8.0 credit hours)

COM 8037B—Radiology: Diagnostic—Cardiothoracic Radiology
After completion of the initial diagnostic radiology rotation COM 8037, the student may choose to take this elective rotation. It will be an introduction to basic chest X-ray and interpretation, cardiac CT, coronary CTA, pulmonary CT angiography, and radionuclear chest studies. It may also include echocardiography, dependent on the prior rotations of the student. The preceptor and student will outline available studies and course expectations prior to the beginning of the rotation. (4.0–8.0 credit hours)

COM 8037C—Radiology: Diagnostic—Endovascular Surgical Neuroradiology
After completion of the initial diagnostic radiology rotation COM 8037 and completion of surgical rotations I and II, the student may choose to take this elective rotation. It will involve the observation and participation in endovascular surgical neuroradiology procedures, with integration of the techniques into appropriate patient management. Appropriate management includes the recognition of the importance of signs and symptoms and the understanding of indications for, and contraindications to, endovascular surgical neuroradiology procedures. The preceptor and the student will outline available studies and course expectations prior to the beginning of the rotation. (4.0–8.0 credit hours)

COM 8037D—Radiology: Diagnostic—Musculoskeletal Radiology
After completion of the initial diagnostic radiology rotation COM 8037, and completion of surgical rotations I and II, the student may choose to take this elective rotation. It will involve the observation and participation in endovascular surgical neuroradiology procedures, with integration of the techniques into appropriate patient management. Appropriate management includes the recognition of the importance of signs and symptoms and the understanding of indications for, and contraindications to, endovascular surgical neuroradiology procedures. The preceptor and student will outline available studies and course expectations prior to the beginning of the rotation. (4.0–8.0 credit hours)

COM 8037E—Radiology: Diagnostic—Neuroradiology
After completion of the initial diagnostic radiology rotation COM 8037, the student may choose to take this elective rotation. It will involve the observation of and participation in neuroradiology procedures, with integration of the techniques into appropriate patient management. Appropriate management includes the recognition of the importance of signs and symptoms and the understanding of indications for, and contraindications to, performing neuroradiology procedures. The preceptor and student will outline available studies and course expectations prior to the beginning of the rotation. (4.0–8.0 credit hours)

COM 8037F—Radiology: Diagnostic—Nuclear Radiology
Upon completion of the basic radiology rotation, the student may choose to take this rotation. The purpose of the elective is to teach the appropriate use of nuclear medicine as a diagnostic tool, as well as to teach the fundamentals of nuclear medicine interpretation and application. The student will also be exposed to the use of nuclear medicine in the treatment of disease. This will provide the student with a base of information of great use to his or her during postgraduate education and practice. The preceptor and student will outline available studies and course expectations prior to the beginning of the rotation. (4.0–8.0 credit hours)
COM 8037G—Radiology: Diagnostic—Pediatric Radiology
After completion of the initial diagnostic radiology rotation COM 8037 and pediatrics 8035, the student may choose to take this elective rotation. The purpose of the elective is to teach the appropriate use of radiology as a diagnostic tool in the pediatric patient, as well as to teach the fundamentals of X-ray interpretation. This will involve all areas of pediatric diagnostic radiology and will provide the student with a base of information of great use to him or her during postgraduate education and practice. (4.0–8.0 credit hours)

COM 8037I—Radiology: Diagnostic—Vascular and Interventional Radiology
Upon completion of COM 8037, diagnostic radiology, the student may consider taking this rotation in interventional radiology (IR). IR is a therapeutic and diagnostic specialty. It comprises minimally invasive, image-guided therapeutic procedures as well as invasive diagnostic imaging. The range of diseases and organs amenable to image-guided therapeutic and diagnostic procedures are extensive and constantly evolving and include, but are not limited to, diseases and elements of the vascular, gastrointestinal, hepatobiliary, genitourinary, pulmonary, musculoskeletal, and the central nervous system. As part of the IR rotation, students will participate in the evaluation and management relevant to image-guided interventions. This rotation is to provide the student with a base of information of great use to him or her during postgraduate education and practice. (4.0–8.0 credit hours)

COM 8038—Physical Medicine and Rehabilitation
Physical medicine and rehabilitation, also known as physiatry, is a specialty that emphasizes the prevention, diagnosis, and treatment of individuals with physical disabilities. These disabilities may arise from conditions affecting the musculoskeletal system, neurological trauma, and/or painful conditions secondary to various hereditary and acquired diseases.

Physiatrists utilize skills to achieve maximal restoration of physical, psychosocial, and vocational functioning through a comprehensive, multidisciplinary team approach, which may include, but is not limited to, physical therapists, occupational therapists, speech-language pathologists, rehabilitation nurses, psychologists, and social workers. (4.0–8.0 credit hours)

COM 8038A—Physical Medicine and Rehabilitation: Spinal Cord Injury Medicine
Spinal cord injury medicine is a specialty that addresses the prevention, diagnosis, treatment, and management of traumatic spinal cord injury and nontraumatic etiologies of spinal cord dysfunctions by working in an interdisciplinary manner. The interdisciplinary team is composed of health care professionals providing care on a lifelong basis, including related medical, physical, psychological, and vocational disabilities and complications. This specialty encompasses patients of all ages. (4.0–8.0 credit hours)

COM 8042—Thoracic Surgery
The course will consist of lectures, interactive participatory groups, clinical rounds, operative experiences, and other formats leading to the understanding of the structure, function, pathology, and performance of thoracic surgery. There will be a practical element of the rotation such that the student is introduced to basic and intermediate level of nonoperative, preoperative, operative, and postoperative thoracic surgery care, practice, and critical skills. The course is designed to promote the understanding of the relationship between surgery, specialized thoracic surgery, and the patient in the nonoperative, preoperative, operative, and postoperative care including indications and contraindications for thoracic surgery. The course will assist the student in preparing for the clinical questions on the COMLEX-USA and other licensing examinations. (4.0–8.0 credit hours)

COM 8044—Urology
The course will consist of lectures, interactive participatory groups, clinical rounds, operative experiences, and other formats leading to the understanding of the structure, function, pathology, and performance of urologic surgery and nonoperative urology as it relates to the diagnosis and treatment of urologic lesions. There will be a practical element of the rotation such that the student is introduced to basic and intermediate level of nonoperative, preoperative, operative and postoperative urology and urologic surgery care, practice, and critical skills as they pertain to genitourinary pathology. The course is designed to promote the understanding of the relationship between surgery; specialized urologic conditions and urologic surgery; and the patient in the nonoperative, preoperative, operative, and postoperative care including indications and contraindications for urologic surgery. The course will assist the student in preparing for the clinical questions on the COMLEX-USA and other licensing examinations. (4.0–8.0 credit hours)

COM 8044A—Urology: Pediatric Urology
The course will consist of lectures, interactive participatory groups, clinical rounds, operative experiences, and other formats leading to the understanding of the structure, function, pathology, and performance of pediatric urologic surgery and nonoperative urology as it relates to the diagnosis and treatment of pediatric urologic lesions. There will be a practical element of the rotation such that the student is introduced to basic and intermediate level of nonoperative, preoperative, operative and postoperative urology and urologic surgery care, practice, and critical skills as they pertain to the pediatric genitourinary pathology. The course is designed to promote the understanding of the relationship between surgery, specialized pediatric urologic conditions and pediatric urologic surgery, and
the patient in the nonoperative, preoperative, operative, and postoperative care including indications and contraindications for pediatric urologic surgery. The course will assist the student in preparing for the clinical questions on the COMLEX-USA and other licensing examinations. (4.0–8.0 credit hours)

COM 8095—Emergency Medicine (M4 Core)
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (8.0 credit hours)

COM 8103A—Allergy and Immunology:
Clinical and Laboratory Immunology
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8104—Anesthesiology
Students will receive instruction and clinical experience in anesthesiology. Time is spent in operating rooms representing all surgical specialties. There are options for time in the obstetrical suite, chronic pain clinic, preoperative screening clinic, pediatric anesthesia, regional anesthesia, cardiac anesthesia, and intraoperative and postoperative acute pain management. (4.0–8.0 credit hours)

COM 8104A—Anesthesiology: Critical Care
The course will consist of lectures, interactive participatory groups, clinical rounds, operative experiences, and other formats leading to the understanding of the structure, function, pathology, and performance of anesthesia critical care skills. There will be a practical element of the rotation such that the student is introduced to basic and intermediate levels of preoperative, operative, and postoperative anesthesia care, practice, and critical care skills. The course is designed to promote the understanding of the relationship between anesthesia and surgery and anesthesia and the patient, as well as critical care anesthesia, especially in the postoperative recovery phase. The course will assist the student in preparing for the clinical questions on the COMLEX-USA and other licensing examinations. (4.0–8.0 credit hours)

COM 8104B—Anesthesiology: Pain Management
The course will consist of lectures, interactive participatory groups, clinical rounds, operative experiences, and other formats leading to the understanding of the structure, function, pathology, and performance of anesthesia critical care skills. There will be a practical element of the rotation such that the student is introduced to basic and intermediate levels of preoperative, operative, and postoperative anesthesia care, practice, and critical care skills. The course is designed to promote the understanding of the relationship between anesthesia and surgery and anesthesia and the patient, as well as critical care anesthesia, especially in the postoperative recovery phase. The course will assist the student in preparing for the clinical questions on the COMLEX-USA and other licensing examinations. (4.0–8.0 credit hours)

COM 8104AC—Anesthesiology: Pediatric Anesthesiology
The course will consist of lectures, interactive participatory groups, clinical rounds, operative experiences, and other formats leading to the understanding of the structure, function, pathology, and performance of anesthesia critical care skills. There will be a practical element of the rotation such that the student is introduced to basic and intermediate level preoperative, operative, and postoperative anesthesia care, practice, and critical care skills. The course is designed to promote the understanding of the relationship between anesthesia and surgery and anesthesia and the patient, as well as critical care anesthesia, especially in the postoperative recovery phase. The course will assist the student in preparing for the clinical questions on the COMLEX-USA and other licensing examinations. (4.0–8.0 credit hours)

COM 8105—Colon and Rectal Surgery
The course will consist of lectures, interactive participatory groups, clinical rounds, operative experiences, and other formats leading to the understanding of the structure, function, pathology, and performance of colon and rectal surgery. There will be a practical element of the rotation such that the student is introduced to basic and intermediate levels of nonoperative, preoperative, operative, and postoperative colon and rectal care, practice, and critical skills. The course is designed to promote the understanding of the relationship between surgery, specialized colon and rectal surgery, and the patient in the nonoperative, preoperative, operative, and postoperative care including indications and contraindications for colon and rectal surgery. The course will assist the student in preparing for the clinical questions on the COMLEX-USA and other licensing examinations. (4.0–8.0 credit hours)

COM 8108—Dermatology
The goals of the elective are to provide the student with instruction and a broad experience in dermatology. The student will participate in the outpatient setting. The student will attend all teaching conferences and the focus will be on the history and physical examination skills particularly pertaining to dermatology. In the outpatient setting, the student will be assigned to a clinic and evaluate patients under supervision of an attending physician. (4.0–8.0 credit hours)
COM 8170—Public Health
This course provides a structured and supervised experience at a public health agency or public health-related institution. The student will acquire skills and experiences in the application of basic public health concepts and specialty knowledge of the solution to community health problems. (4.0–8.0 credit hours)

COM 8215—Hand Surgery
Once the student has completed the basic COM 8029 Orthopedic Rotation, the student may take this elective. The student and preceptor will establish the goals of the elective, as well as testing, on-call duties, lectures, and presentations. It will be in accordance with the objectives and goals of the hand surgery rotation as follows. Knowledge of orthopedic surgery, surgical indications, and surgical contraindications is essential for the competent practice of osteopathic medicine. The Department of Surgery closely partners with all areas of clinical instruction of all academic courses and programs of a clinical nature in the Dr. Kiran C. Patel College of Osteopathic Medicine.

During this elective, the student will have exposure to hand surgery. The student will be able to integrate surgical knowledge in the care of hand surgery patients in both the inpatient and outpatient settings. This will include congenital hand deformities and musculoskeletal hand injuries, arthritis, and tendinopathies in both inpatient and outpatient settings. (4.0–8.0 credit hours)

COM 8240—Clinical Informatics
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8241—Hospice and Palliative Medicine
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8279—Medical Toxicology
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8297—Pediatric Emergency Medicine
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8336—Sports Medicine
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8334—Pain Medicine
Pain Medicine is a specialty that is concerned with the prevention of pain and the evaluation, treatment, and rehabilitation of people in pain. Acute and chronic pain are common reasons for patients to seek medical attention. Pain may be due to a localized process, but may also represent life-threatening primary disorders or indicate serious internal disorders. Because of their frequency and potential importance, it is necessary to recognize different pain syndromes and initiate management. Students should become familiar with different therapeutic modalities utilized for treatment of pain. (4.0–8.0 credit hours)

COM 8355—Sleep Medicine
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8356—Undersea and Hyperbaric Medicine
The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. (4.0–8.0 credit hours)

COM 8357—Research Principles in Integrative Medicine and Medication Therapy Management
This rotation reviews basic principles in integrative medicine and focuses on clinical nutrition; herbal therapy; mindful meditation; and other researched, science-informed topics. Students will work with patients one day each week, comprehend and assess the pharmacology of the medications they are currently taking, and consider where complementary therapies might also be appropriately incorporated into patients’ wellness plans. Students will select and research subject matter within the scientific literature relevant to areas covered within the rotation. Students will present a slide presentation and write a research paper on their selected topic(s). (4.0–8.0 credit hours)

COM 9100—Predoctoral Osteopathic Principles and Practice Fellowship
The Predoctoral OPP Fellowship Program is a unique opportunity that is made available to exceptional students. It expands the medical training period from four to five years by including a one-year fellowship with two years of clinical rotations. The fellowship program is a 12-month program that takes place between the M2 and M3 years. The curriculum includes guided clinical experience, teaching in the OPP courses, participation in department research activities, and a program of didactics. (8.0–48.0 credit hours)
COM 9200—Predoctoral Research Fellowship
The goal of the research fellowship is to provide a year-long, structured training experience in conceptualizing, conducting, and disseminating research for select medical students in the Dr. Kiran C. Patel College of Osteopathic Medicine (KPCOM). The fellowship consists of three core activities: completing academic coursework, serving as research associate on an existing research study, and participating in communication of scientific knowledge. The percentage of time each fellow will dedicate to the three activities will be outlined in an individualized fellowship training plan. Following the model of the OPP fellowship, the fellowship year will occur between the M2 and M3 years. In addition to their fellowship year, fellows will receive tuition remission for their M3 and M4 years. (8.0–48.0 credit hours)

COM 9300—Medical Spanish
This course is designed for students in health care with little or no formal background in Spanish to obtain the language skills needed to carry out a basic conversation with a Spanish-speaking patient. This course also provides students who are fluent in Spanish with the opportunity to learn medical terminology and/or to use Spanish in a patient encounter. It utilizes an online format of independent modules supplemented by optional weekly tutoring sessions. The modules focus on medical vocabulary, phrases, and grammar needed to communicate in Spanish during a patient encounter. The tutoring sessions focus on providing live practice and help with pronunciation. Students are evaluated by three online, modular quizzes and a language skills examination (a competency-based, standardized, patient assessment). (1.5 credit hours)

COM 9400—Preclinical Preceptorship
This course provides the opportunity for the student to participate in a self-guided experience in health-related fields. The student will be under the supervision of a Dr. Kiran C. Patel College of Osteopathic Medicine faculty member. Publications and presentations may be generated from this experience. (2.0 credit hours)

COM 9500—Guided Study
Special assignment on a clinical or scientific subject, under faculty supervision. (2.0 credit hours)

COM 9600A—Research
This course provides the opportunity for the student to participate in scientific research in health-related fields. The student will be under the supervision of a research scientist/faculty member. Publications and presentations may be generated from this experience. (3.0 credit hours)

COM 9600B—Research Elective Rotation
This course provides the opportunity for the M4 student to participate in scientific research in health-related fields as a four-week elective rotation. The student will be under the supervision of a research scientist/faculty member. Publications and presentations may be generated from this experience. (8.0 credit hours)

COM 9707—Honors Histology
This course will provide an opportunity for medical students to assist first-year students with acquisition and application of basic science knowledge in histology. The goal for the enrollees will be to learn the skills necessary to facilitate self-directed learning. After a brief training period that will include specific tutoring skills training, expectations and process will be clearly discussed, and the enrollee will be expected to effectively facilitate group sessions that occur in the M1 curriculum. Specifically, the student will be assigned to facilitate a group of M1 students throughout the courses. Each session will be one–two hours, for a total of two hours per week during the semester. It is expected that enrollees will broaden their understanding of group learning, which can be used to facilitate basic science knowledge. Prerequisite: Grade of 90 or higher in NSU College of Medical Sciences Master of Biomedical Sciences histology course. (3.0 credit hours)

COM 9708—Honors Microbiology I
This course will provide an opportunity for medical students to assist first-year students with acquisition and application of basic science knowledge in microbiology. The goal for the enrollees will be to learn the skills necessary to facilitate self-directed learning. After a brief training period that will include specific tutoring skills training, expectations and process will be clearly discussed, and the enrollee will be expected to effectively facilitate group sessions that occur in the M1 curriculum. Specifically, the student will be assigned to facilitate a group of M1 students throughout the courses. Each session will be one–two hours, for a total of two hours per week during the semester. It is expected that enrollees will broaden their understanding of group learning, which can be used to facilitate basic science knowledge. Prerequisite: Grade of 90 or higher in NSU College of Medical Sciences Master of Biomedical Sciences Microbiology I course. (5.5 credit hours)

COM 9709—Honors Microbiology II
This course will provide an opportunity for medical students to assist first-year students with acquisition and application of basic science knowledge in microbiology. The goal for the enrollees will be to learn the skills necessary to facilitate self-directed learning. After a brief training period that will include specific tutoring skills training, expectations and process will be clearly discussed, and the enrollee will be expected to effectively facilitate group sessions that occur in the M1 curriculum. Specifically, the student will be assigned to facilitate a group of M1 students throughout the courses. Each session will be one–two hours, for a total of two hours per week during the semester. It is expected that enrollees will broaden
their understanding of group learning, which can be used to facilitate basic science knowledge. **Prerequisite:** Grade of 90 or higher in NSU College of Medical Sciences Master of Biomedical Sciences physiology course (1.5 credit hours)

**COM 9710—Honors Biochemistry**

This course will provide an opportunity for medical students to assist first-year students with acquisition and application of basic science knowledge in biochemistry. The goal for the enrollees will be to learn the skills necessary to facilitate self-directed learning. After a brief training period that will include specific tutoring skills training, expectations and process will be clearly discussed, and the enrollee will be expected to effectively facilitate group sessions that occur in the M1 curriculum. Specifically, the student will be assigned to facilitate a group of M1 students throughout the courses. Each session will be one–two hours, for a total of two hours per week during the semester. It is expected that enrollees will broaden their understanding of group learning, which can be used to facilitate basic science knowledge. **Prerequisite:** Grade of 90 or higher in NSU College of Medical Sciences Master of Biomedical Sciences biochemistry course (5.5 credit hours)

**COM 9711—Honors Summer Gross Anatomy Fellowship**

This course will provide an opportunity for medical students to further dissect a human cadaver, and afford them the chance to assist graduate- and professional-level students with the acquisition and application of gross anatomy. The goal for the enrollees is to facilitate laboratory and classroom learning. Students will work in groups in which they will dissect cadaveric specimens and facilitate graduate- and professional-level students throughout the gross anatomy laboratories. Additionally, students will make weekly presentations. **(4.5 credit hours)**

**COM 9703—Honors Anatomy**

This course will provide an opportunity for medical students to assist first-year students with acquisition and application of basic science knowledge in anatomy. The goal for the enrollees will be to learn the skills necessary to facilitate self-directed learning. After a brief training period that will include specific tutoring skills training, expectations and process will be clearly discussed, and the enrollee will be expected to effectively facilitate group sessions that occur in the M1 curriculum. Specifically, the student will be assigned to facilitate a group of M1 students throughout the courses. Each session will be one–two hours, for a total of two hours per week during the semester. It is expected that enrollees will broaden their understanding of group learning, which can be used to facilitate basic science knowledge. **Prerequisite:** Grade of 90 or higher in NSU College of Medical Sciences Master of Biomedical Sciences anatomy course (6.5 credit hours)

**COM 9704—Honors Neuroanatomy**

This course will provide an opportunity for medical students to assist first-year students with acquisition and application of basic science knowledge in neuroanatomy. The goal for the enrollees will be to learn the skills necessary to facilitate self-directed learning. After a brief training period that will include specific tutoring skills training, expectations and process will be clearly discussed, and the enrollee will be expected to effectively facilitate group sessions that occur in the M1 curriculum. Specifically, the student will be assigned to facilitate a group of M1 students throughout the courses. Each session will be one–two hours, for a total of two hours per week during the semester. It is expected that enrollees will broaden their understanding of group learning, which can be used to facilitate basic science knowledge. **Prerequisite:** Grade of 90 or higher in NSU College of Medical Sciences Master of Biomedical Sciences neuroanatomy course (3.0 credit hours)

**COM 9705—Honors Physiology I**

This course will provide an opportunity for medical students to assist first-year students with acquisition and application of basic science knowledge in physiology. The goal for the enrollees will be to learn the skills necessary to facilitate self-directed learning. After a brief training period that will include specific tutoring skills training, expectations and process will be clearly discussed, and the enrollee will be expected to effectively facilitate group sessions that occur in the M1 curriculum. Specifically, the student will be assigned to facilitate a group of M1 students throughout the courses. Each session will be one–two hours, for a total of two hours per week during the semester. It is expected that enrollees will broaden their understanding of group learning, which can be used to facilitate basic science knowledge. **Prerequisite:** Grade of 90 or higher in NSU College of Medical Sciences Master of Biomedical Sciences Physiology I course (3.0 credit hours)

**COM 9706—Honors Physiology II**

This course will provide an opportunity for medical students to assist first-year students with acquisition and application of basic science knowledge in physiology. The goal for the enrollees will be to learn the skills necessary to facilitate self-directed learning. After a brief training period that will include specific tutoring skills training, expectations and process will be clearly discussed, and the enrollee will be expected to effectively facilitate group sessions that occur in the M1 curriculum. Specifically, the student will be assigned to facilitate a group of M1 students throughout the courses. Each session will be one–two hours, for a total of two hours per week during the semester. It is expected that enrollees will broaden their understanding of group learning, which can be used to facilitate basic science knowledge. **Prerequisite:** Grade of 90 or higher in NSU College of Medical Sciences Master of Biomedical Sciences Physiology II course (4.5 credit hours)
COM 9990—Community Service

NSU-COM students are enrolled in the Community Service Course in order to provide direct community service to improve the world around them, in the best traditions of holistic and complimentary care. The goal of the NSU-COM Community Service Program is to provide altruistic service to the community at large, treating all people with dignity and respect, to foster among NSU-COM students a sense and habit of stewardship for people and the environment. (2.5 credit hours)

Affiliated Hospitals

The Dr. Kiran C. Patel College of Osteopathic Medicine affiliates with a large variety of teaching partners throughout local, regional, and national territories to provide valuable clinical training experiences. A sample selection of these sites is highlighted below.

Aventura Hospital and Medical Center
Aventura, FL

AdventHealth East Orlando
Orlando, FL

AdventHealth Ocala
Ocala, FL

Bethesda Health, Inc.
Boynton Beach, Florida

Broward Health System
South Florida locations

Good Samaritan Hospital
West Islip, New York

JFK Medical Center—North Campus
West Palm Beach, Florida

Kendall Regional Medical Center
Kendall, Florida

Lakeside Medical Center
Belle Glade, Florida

Largo Medical Center
Largo, Florida

Larkin Community Hospital
Miami, Florida

Lee Memorial Health Systems
Fort Myers, Florida

Magnolia Regional Health Center
Corinth, Mississippi

Memorial Hospital Health Systems
South Florida locations

Mount Sinai Medical Center
Miami Beach, Florida

Northwest Medical Center
Margate, Florida

Orlando VA Medical Center
Orlando, Florida

Palm Beach Gardens Medical Center
Palm Beach Gardens, Florida

Palmetto General Hospital
Hialeah, Florida

Palms West Hospital
Loxahatchee, Florida

St. Lucie Medical Center
St. Lucie, Florida

Stony Brook Southampton Hospital
Southampton, New York

University Hospital and Medical Center
Fort Lauderdale, Florida

Westside Regional Medical Center
Plantation, Florida

Special Academic Programs

Osteopathic Principles and Practice
Practical Training Sessions

The development of the palpatory skills used for diagnosis and treatment is a significant distinction between the educational programs in osteopathic and allopathic medical schools. *Stedman’s Medical Dictionary* defines palpation as “examination with the hands and fingers; touching, feeling, or perceiving by the sense of touch.” Palpation in the osteopathic medical education context is the use of touch to examine the body. Palpatory skills are used in all areas of osteopathic medical practice and are especially important in the evaluation, diagnosis, and treatment of the musculoskeletal system.

The development of palpatory skills is taught in the first- and second-year osteopathic principles and practice (OPP) courses. Successful completion of these courses requires active participation in all laboratory sessions. In the laboratory setting, during the two years, each student will palpate a variety of people with different body types to simulate the diversity of patients expected in a practice setting. Being palpated by other students helps the student understand from the patient’s perspective how palpation feels and enables the students to provide feedback to their laboratory partners, thus enhancing the palpatory skills of all students.
The osteopathic medical profession uses a variety of treatment models, and through the skills development process, the student learns the art and skills of manipulative treatment. Psychomotor skills are developed by repeated practice. Reading and observation, although helpful, do not develop the skills required to perform palpatory diagnosis and manipulative treatment.

**Predoctoral Osteopathic Principles and Practice Fellowship**

KPCOM offers a Predoctoral OPP Fellowship Program annually to at least nine students through a competitive application process. This is a unique opportunity that is made available to exceptional students. It expands the medical training period from four to five years by including a one-year fellowship with two years of clinical rotations. The fellowship program is a 12-month program that takes place between the M2 and M3 years. The curriculum includes guided clinical experience in osteopathic manipulative medicine and other medical specialties, teaching in the OPP courses, participation in department research activities, and a program of didactics.

**KPCOM Student Research Opportunities**

**Director, Student Research Alison Bested M.D., FRCPC**

**Undergraduate KPCOM Research Fellowship Program**

This is a unique opportunity for two second-year osteopathic students to participate in one fully funded year of research. The fellowship year occurs between the second and third years of study. Research fellows are included in the department as members of the research staff. Fellows participate as team members in an ongoing study or conduct an individual research project. During this fellowship process, they acquire skills in conceptualizing, writing, and submitting an application to the Institutional Review Board. They learn the principles guiding the treatment of human participants in research studies. The research fellow acquires experience in budgeting a research project using university and federal guidelines. During this fellowship year, fellows develop writing skills as they conceptualize their research ideas and submit their scholarly manuscripts to peer-reviewed journals. This opportunity includes presenting their research at a national or international meeting.

The KPCOM rewards the fellows for their research efforts. The university pays their tuition for years three, four, and five of the fellows' medical training. This eliminates tuition expense for clinical years, including the fellowship year.

**Research Elective Courses**

**M1 or M2: COM 9600A (3 credit hours/semester)**

Course Director: Alison Bested, M.D., FRCPC

This course is a research elective that can be taken by first- (in the second half of the year) and second-year KPCOM students who have maintained a good academic standing. Under the supervision of a research mentor (instructor/research scientist/faculty member), this course provides the opportunity for the student to develop an original research project or participate in scientific research in a health-related field. This experience will encourage students to publish and/or present their findings. This course allows the student to select an area of interest to learn and/or apply research concepts applicable to that specific area of interest and level of knowledge, as determined by the course instructor (see syllabus). Dependent on the individual student needs and/or the instructor’s area of research, each student who enrolls in this course may have different responsibilities and assignments. Examples of possible projects/experiences may include, but are not limited to, the following options:

- **Systematic Literature Research Option**

  This course option provides the opportunity for the student to develop an original research project focusing on an applied or theoretical medical construct in a health-related field.

- **Experiential Research Option**

  This course option provides the opportunity for the student to participate in an ongoing research study or develop an original research study in a health-related field.

**M4: COM 9600B Block Rotation (8 credit hours)**

Course Director: Daniel E. Shaw, Ph.D., Ed.S., M.Ed.

Under the supervision of a research mentor (instructor/research scientist/preceptor/faculty member), this elective rotation provides the opportunity for an OMS-IV student to develop an original research project or participate in scientific research in a health-related field. This Pass/Fail rotation allows students to select an area of interest in which to learn and/or apply research concepts applicable to their specific area of interest and level of knowledge as determined by the research mentor. Dependent on the individual student needs and/or the research mentor’s area of research, each student who registers for this rotation may have different responsibilities, assignments, and requirements. Publications and/or presentations that may be generated from this experience are encouraged.
COM 9600, 9601, 9602 (3 credit hours each)
Course Director: Daniel E. Shaw, Ph.D., Ed.D., M.Ed.

Under the supervision of a research mentor (research scientist/ faculty member), COM 9600/9601/9602 provides the student with an opportunity to develop an original research project or participate in scientific research in a health-related field. These Pass/Fail courses allow students to select an area of interest in which to learn and/or apply research concepts applicable to their specific area of interest and level of knowledge as determined by the research mentor. This series of three courses is typically taken consecutively, beginning with COM 9600 in the summer, COM 9601 in the fall, and COM 9602 in the winter semesters. Following completion M1, M2, or M3, a student may take a Gap Research Elective Year to do research. OMS-I and II students must be in good academic standing and get written permission from the associate dean, Preclinical Education. OMS-III students must get written permission from the assistant dean, Osteopathic Clinical Education.

KPCOM Student Research Club—Student Osteopathic Association for Research (SOAR)
Faculty Advisers: Bindu S. Mayi, M.Sc., Ph.D., and Alison Bested, M.D., FRCPC

The mission of the Student Osteopathic Association for Research is to encourage and foster interest in clinical and laboratory research through Nova Southeastern University and other venues. Through informational meetings, campus events, and speakers, SOAR aims to provide information on how to initiate and participate in research and gain a better understanding of its impact on medicine and the lives of medical students. SOAR also promotes connections with physicians and faculty members to initiate not only current, but also future opportunities for student participation in research.

Student Research Days
KPCOM faculty members contribute to or host several research days throughout the school year at Nova Southeastern University where students and residents have the opportunity to present their research and case studies. These include the following:

- KPCCOM Office of Graduate Medical Education Scientific Research Case and Experimental Research Poster Competition—Contact: Janet Hamstra, Ed.D.
- Council of Osteopathic Student Government Presidents (COSGP) Research Symposium—Contact KPCCOM Student Government
- HPD Research Day—Contact: Kathleen Hagen, Ed.D.
- Florida Osteopathic Medical Association (FOMA) Annual Poster Competition—Contact: Janet Hamstra, Ed.D.
- Osteopathic Surgical Association Spring Conference (OSASC)—Contact: Eric Goldsmith, D.O.

Area Health Education Center (AHEC) Program
The mission of NSU’s Area Health Education Center (AHEC) Program is to improve the access to and the quality of primary health care service to medically underserved communities by linking the resources of academic health centers with community-based health care providers. Nova Southeastern University’s Dr. Kiran C. Patel College of Osteopathic Medicine, the first medical school in the state of Florida to develop an AHEC Program, officially began its program in 1985. Since its inception, the program has worked to develop effective and comprehensive training programs that improve access to quality primary health care for Florida’s medically underserved rural and inner-city urban communities.

Our nationally recognized program now serves underserved communities and populations throughout a nearly 20,000 square mile area of South and Central Florida. Our first AHEC center—the Everglades AHEC—reaches underserved areas within a 10-county region extending from Broward County to rural communities around Lake Okeechobee. Based on the success of the Everglades AHEC, the university was awarded additional funding to develop a Central Florida AHEC, which now serves nine counties and extends from Lake Okeechobee to north of Orlando. By including training programs in community settings, we expose students to the challenges, rewards, and practice opportunities related to working in medically underserved areas. Students have opportunities to work together while learning to provide valuable primary care services to the community.

The Office of Graduate Medical Education
The Dr. Kiran C. Patel College of Osteopathic Medicine recognizes its role in supporting graduate medical education (GME), both as a benefit for its students during their clinical training years and as it benefits our graduates in finding positions upon graduation. Historically, the Consortium for Excellence in Medical Education Osteopathic Postgraduate Training Institute (CEME-OPTI) has been the mechanism the KPCCOM has used in supporting AOA-accredited GME. With the transition to the single accreditation system, KPCCOM has transitioned the work of the CEME-OPTI to the recently established KPCCOM Office of Graduate Medical Education (OGME). Currently, the OGME is affiliated with 23 hospitals/institutions, 77 training programs, and 1,347 current trainees. This alliance of affiliated clinical training sites, linked through electronic networks, collaborates in the areas of teaching, research, and community health, demonstrating a shared commitment to excellence in the education of tomorrow’s physicians.

The KPCCOM Office of Graduate Medical Education is charged with assisting existing graduate medical education
programs and in developing new graduate medical education programs that meet the requirements for accreditation by the Accreditation Council for Graduate Medical Education (ACGME), including ACGME Osteopathic Recognition. KPCOM currently sponsors the following graduate medical education programs:

1. Psychiatry Residency (ACGME-accredited)—Program Director Paul Deci, M.D.
3. Correctional Medicine Fellowship—Program Director Diane Rechtine, M.D.
4. Prosthetic Urology and Sexual Medicine Fellowship—Program Director Edward Geihler, M.D.
5. Allergy and Immunology Fellowship—Program Director Shanaz Fatteh, M.D.

Rural and Urban Underserved Medicine Program

Since its establishment in 1979, the Dr. Kiran C. Patel College of Osteopathic Medicine has been committed to educating students about rural medicine and having them train in underserved communities. The Department of Rural Medicine’s instructional programs have been recognized nationally for helping to meet the health care needs of underserved communities and enhancing the medical skills of our students.

Our third-year medical students train for three months in rural and underserved settings. They are expected to expand their diagnostic and therapeutic skills as well as their patient and community proficiency in relation to addressing multicultural populations. They are expected to expand their diagnostic and therapeutic skills, as well as their proficiency in patient care and community medicine. This rotation also increases the students’ knowledge in providing health care to multicultural populations.

Training sites include community health centers, county health departments, private physicians’ offices, ambulatory care facilities, and leading health care institutions of the Florida Department of Corrections. Additionally, our fourth-year medical students spend an additional four weeks at a self-selected, but approved, site that may bring them beyond the local, state, national, and international boundaries.

The Rural Medicine Training Program provides our students with a unique and enriching experience. A number of our graduates are now clinical directors at the community health centers or have established successful practices in a rural Florida region.

Concurrent Degree and Certificate Programs

The Dr. Kiran C. Patel College of Osteopathic Medicine administers a number of graduate degree and certificate programs.

- Doctor of Philosophy in Family Therapy (Ph.D.)
- Doctor of Marriage and Family Therapy (D.M.F.T.)
- Doctor of Osteopathic Medicine (D.O.)
- Master of Public Health (M.P.H.)
- Master of Science in Biomedical Informatics (M.S.)
- Master of Science in Disaster and Emergency Management (M.S.)
- Master of Science in Family Therapy (M.S.)
- Master of Science in Medical Education (M.S.)
- Master of Science in Nutrition (M.S.)

Graduate Certificate in Emergency Medicine
Graduate Certificate in Family Studies
Graduate Certificate in Functional Nutrition and Herbal Therapy
Graduate Certificate in Health Education
Graduate Certificate in Health Professions Preparation
Graduate Certificate in Medical Informatics
Graduate Certificate in Public Health
Graduate Certificate in Public Health Informatics
Graduate Certificate in Social Medicine
Graduate Certificate in Solution-Focused Coaching

Information about these programs can be found in their respective sections of this catalog.

Students in the D.O. program may enroll in any of the other graduate degree and certificate programs, provided they have completed the first semester of the first year of medical school and are in good academic standing. Continued participation is contingent on maintaining good academic standing in the D.O. program and is at the discretion of the dean of the Dr. Kiran C. Patel College of Osteopathic Medicine.

M.P.H. Dedicated Tuition Reduction

All Dr. Kiran C. Patel College of Osteopathic Medicine students who have completed the first semester of their first year and are currently enrolled in NSU-KPCOM classes and in good academic standing are eligible to receive a tuition reduction for the payment of M.P.H. tuition if they are enrolled in the on-campus...
program option. To apply for the M.P.H. tuition reduction, a brief letter must be submitted to the dean of the Dr. Kiran C. Patel College of Osteopathic Medicine. The student should indicate the reasons for requesting the tuition reduction in the letter. Students who receive the tuition reduction must remain in good standing with the college. Students are eligible for the tuition reduction while they are enrolled in the Dr. Kiran C. Patel College of Osteopathic Medicine. The tuition reduction is not available after graduation, unless the student continues as an intern, resident, or fellow with any of the Nova Southeastern University Dr. Kiran C. Patel College of Osteopathic Medicine affiliated institutions. All tuition reductions require renewal by the Dr. Kiran C. Patel College of Osteopathic Medicine each academic year.

D.O./D.M.D. Dual-Degree Program

In order to address the access to care issue and meet the needs of underserved populations, Nova Southeastern University's (NSU's) College of Dental Medicine and Dr. Kiran C. Patel College of Osteopathic Medicine have structured a curriculum that provides students with an opportunity to receive a D.O. (Doctor of Osteopathic Medicine) and a D.M.D. (Doctor of Dental Medicine) degree. This D.O./D.M.D. Dual-Degree Program is in accord with the missions of both schools. This dual program will prepare health care practitioners to use a totally holistic approach to health care that will address preventive medicine and general dentistry, as well as access to care issues, meeting the needs of rural and underserved populations.

Once students complete this six-year program, they will be qualified for licensure in dentistry and for postgraduate, one-year residencies that are required prior to medical licensure. Only a select number of motivated students who have attained the highest academic standards and embody the spirit of this collaborative initiative will be considered.

Note: Applicants for this program are not currently being considered for the 2021 entering class.
Public Health Program

The Master of Public Health (M.P.H.) Program is an accredited, graduate-level program designed to prepare students to define, critically assess, and resolve public health problems. The program provides training in the theories, concepts, and principles of public health and their application. To meet the rapidly changing needs of health service professionals, the curriculum is structured to accommodate a diversity of backgrounds and individual career goals.

There is a need for public health professionals to address emerging and re-emerging diseases, environmental health concerns, health care reform, health care system, sociopolitical factors affecting our nation’s health, and expansion of health issues that are global in scope. Professionals with the M.P.H. degree may hold positions of responsibility in a variety of settings including health care facilities, county and state health departments, social service agencies, health policy and planning organizations, universities, and community-based health education and health promotion settings, nongovernmental organizations, governmental agencies, international health organizations, and the corporate world. These positions often involve active participation of the M.P.H. graduate in the coordination, planning, development, implementation, and evaluation of health programs and services. Some students pursue further advancement in their graduate education upon completion of the M.P.H. degree program.

Concurrent Degree Programs

Health Professions Division students have an option to pursue the M.P.H. degree concurrently with osteopathic medicine, pharmacy, physician assistant, dental medicine, nursing, optometry, and health science degrees. Schedules will allow students the opportunity to achieve and meet the requirements of both degrees within three to four years. Students must maintain good academic standing in both programs.

Program Vision

The vision of the NSU-KPCOM Department of Public Health is to be the following:

a trusted, academic, public health resource center for students, communities, public health organizations, health care centers, and policymakers dedicated to improved local and global health outcomes and equity

Program Mission

To improve the health of the population through education, research, and service, with emphasis on multicultural and underserved populations.

Goal 1: Instruction

to provide quality education in public health

Goal 2: Scholarship

to contribute to the discovery and application of knowledge in public health

Goal 3: Service

to provide public health leadership and service in the community

Course of Study

The M.P.H. Program offers a general Master of Public Health (M.P.H.) degree, which requires a minimum of 42 credit hours of study. This consists of 27 credit hours of required core courses, including a public health field experience and an integrative learning experience, and a minimum of 15 credit hours of public health elective courses. Coursework may be taken on a full-time or part-time basis. M.P.H. students are required to complete their course of study within five years of matriculation. A full-time student may be able to complete the requirements within two years. The M.P.H. degree may be completed on-site or online. Online courses have both synchronous and asynchronous components. On-site and online classes are offered in the evening, with each class generally scheduled one evening per week. Orientation is required for both online and on-site students prior to matriculation into the program. Students must maintain a grade point average (GPA) of 3.0 to remain in good academic standing. The end of the program includes a field experience and the Integrative Learning Experience course. Elective courses—such as special studies, community health projects, and public health research—are available to students to enhance their public health skills. Graduating students have the opportunity to participate in a commencement exercise in May of each year. An exit survey must be completed prior to graduation.

The schedule of course offerings and other pertinent information about the program is available on the website: nova.edu/ph.

Accreditation and Authorization

The M.P.H. Program is accredited by the Council on Education for Public Health (CEPH) (ceph.org).

Nova Southeastern University is accredited by the Southern Association of Colleges and Schools Commission on Colleges.

Nova Southeastern University is authorized by the Washington Student Achievement Council (WSAC) and meets the requirements and minimum educational standards established for degree-granting institutions under the Degree-Granting

Dr. Kiran C. Patel College of Osteopathic Medicine—Public Health Program 75
Institutions Act. This authorization is subject to periodic review and authorizes Nova Southeastern University to offer specific degree programs. The WSAC may be contacted for a list of currently authorized programs. Authorization by the WSAC does not carry with it an endorsement by the board of the institution or its programs. Any person desiring information about the requirements of the act or the applicability of those requirements to the institution may contact the WSAC at P.O. Box 43430, Olympia, WA 98504-3430.

Admissions Requirements

The M.P.H. program evaluates the overall quality of applicants, including academic achievement, personal motivation, knowledge about the public health profession, health care and life experiences, and recommendations.

Criteria for admission to the M.P.H. degree program are:

• minimum of a bachelor’s degree from a regionally accredited college or university
• cumulative grade point average (GPA) of 3.0 or above on a 4.0 scale (preferred)
• proof of official test scores no more than five years old for one of the following standardized tests (if the applicant does not have a health-related graduate or professional degree or if the applicant has a health-related graduate or professional degree, but is requested to submit official test scores upon evaluation of application): GRE, PCAT, OAT, AHPAT, MCAT, DAT, GMAT, or LSAT
• public health or health care-related experience (desirable, but not required)

Applicants enrolled in another area of study within Nova Southeastern University must:

• be in good academic standing
• provide a letter of recommendation from the dean or program director of the other college or program
• meet the M.P.H. admission requirements
• all application materials must be received in a timely manner to enable the Office of Admissions and the admissions committee to process the application promptly.

Application Procedures

The M.P.H. program processes applications on a year-round basis. Applicants may apply for matriculation into any one of three semesters (fall, winter, or summer), and may contact the Office of Admissions at (954) 262-1101 or 877-640-0218 or access the M.P.H. program website (nova.edu/ph) for exact deadline and start dates.

All application materials should be sent to:

Nova Southeastern University
Enrollment Processing Services
Dr. Kiran C. Patel College of Osteopathic Medicine
M.P.H. Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

Transcripts can be sent electronically from the originating college/university to electronictranscript@nova.edu.

Applicants must provide the following:

• a completed application, along with a $50, nonrefundable application fee (online application at nova.edu/ph/admissions/procedures.html)
• official transcripts of all coursework attempted by the applicant at all colleges and universities

It is the responsibility of the applicant to ensure that arrangements are made for all transcripts to be sent. A final transcript of all the applicant’s work up to the time of matriculation must be forwarded to the Office of Admissions prior to matriculation.

Coursework taken at foreign institutions must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed following:

– World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org

– Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org

– Educational Credential Evaluators, Inc.
  101 West Pleasant Street, Suite 200
  Milwaukee, WI 53212-3963
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University Enrollment Processing Services.

• official score, no more than five years old, for the GRE, PCAT, OAT, AHPAT, MCAT, DAT, GMAT, or LSAT standardized tests taken by the applicant (if the applicant does not hold a health-related graduate or professional degree, or upon request of an applicant with a health-related graduate or professional degree)
• demonstration of English proficiency by any applicant whose native language is not English or who has graduated from a college or university where English is not the primary language, regardless of U.S. residency status

The standardized tests below currently satisfy NSU’s, and this program’s, English requirement for nonnative speakers.

- Test of English as a Foreign Language (TOEFL): score of 213 on the computer-based or 79–80 on the Internet-based test
- International English Language Testing System (IELTS): score of 6.0 on the test module
- GMAT: score of 450
- GRE: score of 306
- Scholastic Assessment Test (SAT): score of at least 500 in the reading section
- American College Test (ACT): score of at least 20 on the verbal section
- Duolingo English Proficiency: score of at least 100

Test results must be sent directly from the testing agency to the center where the applicant applied. Proof of English language competency can also be in the form of successful completion of a degree at an approved U.S. institution of higher education.

• two letters of recommendation—one from a health professional and one from an individual (other than a relative), such as an academic adviser, professor, coworker, or supervisor, who is familiar with the applicant’s character, scholastic aptitude, and work ethic

Applicants may apply for matriculation into any one of three semesters (fall, winter, or summer). Upon receipt of the completed application and required materials, the Committee on Admissions for the NSU-KPCOM Public Health Program will review all applications to this program and make recommendations to the program director. The director submits recommendations on admission to the department chair. The final decision on admission is made by the dean of the college.

Applicants must submit

- a completed application, along with a $50, nonrefundable application fee (online application at nova.edu/ph/admissions/procedures.html)
- official transcripts of all undergraduate, graduate, and professional education
- demonstration of English proficiency by any applicant whose native language is not English or who has graduated from a college or university where English is not the primary language, regardless of U.S. residency status

The standardized tests below currently satisfy NSU’s, and this program’s, English requirement for nonnative speakers.

- Test of English as a Foreign Language (TOEFL): score of 213 on the computer-based or 79–80 on the Internet-based test
- International English Language Testing System (IELTS): score of 6.0 on the test module
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Test results must be sent directly from the testing agency to the center where the applicant applied. Proof of English language competency can also be in the form of successful completion of a degree at an approved U.S. institution of higher education. Coursework taken at foreign institutions must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization. Agencies that can complete this evaluation can be found at nova.edu/internationalstudents/prospective/credentialservices.html.

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University’s Enrollment Processing Services.

Applicants may apply for matriculation into any one of three semesters (fall, winter, or summer). Upon receipt of the completed application and required materials, the Committee on Admissions for the NSU-KPCOM Public Health Program will review all applications to this program and make recommendations to the program director and, subsequently, the dean of the college.
Graduate Certificate in Public Health
The Graduate Certificate in Public Health program is designed to educate students on the fundamental principles, concepts, and skills applied to public health practice. It consists of the following courses, totaling 15 credit hours. The program must be completed within two years of matriculation.

PUH 5430 Epidemiology
3 Credit Hours

PUH 6001 Social and Behavioral Sciences Applied to Health
3 Credit Hours

PUH 5512 Health Policy, Planning, and Management
3 Credit Hours

PUH 5301 Biostatistics
3 Credit Hours

PUH 5220 Environmental and Occupational Health
3 Credit Hours

This certificate will be presented to the student after all program requirements are successfully met. If, after taking classes in the M.P.H. Program, a certificate-seeking student decides to pursue the M.P.H. degree at the time of application, the nondegree-seeking student must provide the following admissions requirements to take classes in the M.P.H. program:

- a completed online application form
- official transcripts
- a nonrefundable application fee of $50

Nondegree-seeking students are limited to a maximum of 12 semester hours of public health program courses. Enrollment in these courses does not guarantee acceptance into the Master of Public Health degree-seeking program. After taking classes in the program as a nondegree-seeking student, the student must submit a complete application to the program to become degree-seeking. The student must also meet all the requirements for admission.

Graduate Certificate in Health Education
The Graduate Certificate in Health Education program is designed to enable the student to learn the fundamental principles, concepts, and skills applied to health education, health promotion, and disease prevention at the graduate level. It consists of the following courses, totaling 15 credit hours, and a capstone session. The program must be completed within two years of matriculation.

PUH 5115 Principles of Health Education
3 Credit Hours

PUH 5431 Community Health Assessment
3 Credit Hours

PUH 5002 Health Promotion and Disease Prevention
3 Credit Hours

PUH 6120 Public Health Program Planning and Evaluation
3 Credit Hours

PUH 5210 Public Health Communications
3 Credit Hours

This certificate will be presented to the student after all program requirements are successfully met. A student who wishes to pursue National Certification (Certified Health Education Specialists) may take 10 additional credits of recommended coursework as a nondegree-seeking student to meet the 25 credits and additional competencies required to be eligible for the national certification examination.

For more information on the graduate certificates in public health and health education, please visit our website (nova.edu/ph).

Nondegree-Seeking Students
A nondegree-seeking student is one who wishes to take a course in the public health program, but does not intend to pursue the Master of Public Health degree at the time of application. The nondegree-seeking student must provide the following admissions requirements to take classes in the M.P.H. program:

- a completed online application form
- official transcripts
- a nonrefundable application fee of $50

Nondegree-seeking students are limited to a maximum of 12 semester hours of public health program courses. Enrollment in these courses does not guarantee acceptance into the Master of Public Health degree-seeking program. After taking classes in the program as a nondegree-seeking student, the student must submit a complete application to the program to become degree-seeking. The student must also meet all the requirements for admission.

Graduate students from other NSU programs who elect to take public health courses may do so with the written consent of the course director. The university reserves the right to modify any requirements on an individual basis as deemed necessary by the dean of the Dr. Kiran C. Patel College of Osteopathic Medicine.

Computer Requirements
It is highly recommended that the student have access to a desktop or laptop consistent with the following:

- a recent generation of Microsoft Windows or Apple OS
- Microsoft Office software to include Word, PowerPoint, and Excel
- headphones, microphone, camera, and videoconferencing capabilities
- Internet broadband access
- surge protection and appropriate back-up options (recommended)

Tablets and smartphones, while very useful, may not be sufficient for all program uses.
Tuition and Fees
Tuition for the M.P.H. Degree Program for 2020–2021 will be posted on our website (nova.edu/ph). Tuition and fees are subject to change without notice. A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually. There is a registration fee of $30 each semester.

Tuition for the Graduate Certificate Programs for 2020–2021 will be posted on our website (nova.edu/ph). An NSU Student Services Fee of $1,500 is required annually. All tuition and fees are subject to change by the board of trustees without notice.

Expenses and Financial Aid
The purpose of the Student Financial Assistance Program at Nova Southeastern University is to help as many qualified students as possible to complete their educational pursuit. Various loans, scholarships, and grants are available to qualified students to help ease the high cost of their education. These financial assistance programs are described in a variety of separate university publications.

Students pursuing the M.P.H. degree should anticipate spending approximately $3,100 per year on books and supplies, as well as $25,000 per year for living expenses in South Florida.

Graduation Requirements
To be eligible for the M.P.H. degree, the student must
- satisfactorily complete, with a grade point average of 3.0 or higher and within five years of matriculation (15 semesters), the course of study required for the M.P.H. degree—a minimum of 42 semester hours of courses (27 hours of required core courses, including the Public Health Field Experience, Integrative Learning Experience, and 15 hours of electives)
- complete an exit survey
- satisfactorily meet all financial and library obligations

Upon satisfactory completion of degree requirements, the student is expected to attend the commencement program, at which time the degree is conferred. Students who do not plan to attend the commencement ceremonies must notify the program office before the established deadline for the commencement application.

Curriculum Outline

<table>
<thead>
<tr>
<th>Core Courses (required)</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PUH 5220 Environmental and Occupational Health</td>
<td>3</td>
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<tr>
<td>PUH 5301 Biostatistics</td>
<td>3</td>
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<tr>
<td>PUH 5430 Epidemiology</td>
<td>3</td>
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<tr>
<td>PUH 5512 Health Policy, Planning, and Management</td>
<td>3</td>
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<tr>
<td>PUH 5520 Legal and Ethical Issues in Public Health</td>
<td>3</td>
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<tr>
<td>PUH 6001 Social and Behavioral Sciences Applied to Health</td>
<td>3</td>
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<td>PUH 6002 Public Health Field Experience</td>
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<tr>
<td>PUH 6604 Research Methods in Public Health</td>
<td>3</td>
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<tr>
<td>PUH 6700 Integrative Learning Experience</td>
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</tbody>
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<table>
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<tr>
<th>Elective Courses</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PUH 5002 Health Promotion and Disease Prevention</td>
<td>3</td>
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<tr>
<td>PUH 5004 Public Health Grant Writing</td>
<td>3</td>
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<tr>
<td>PUH 5009 Public Health Seminar</td>
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<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>PUH 5050</td>
<td>Substance Abuse Prevention and Intervention</td>
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<tr>
<td>PUH 5110</td>
<td>Culture, Ethnicity, and Health</td>
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<tr>
<td>PUH 5111</td>
<td>Public Health Issues of the Elderly</td>
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<tr>
<td>PUH 5112</td>
<td>All-Hazards Preparedness</td>
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<tr>
<td>PUH 5115</td>
<td>Principles of Health Education</td>
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<tr>
<td>PUH 5201</td>
<td>Foundations of Public Health</td>
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<tr>
<td>PUH 5210</td>
<td>Public Health Communications</td>
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<tr>
<td>PUH 5305</td>
<td>Advanced Biostatistics</td>
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<tr>
<td>PUH 5311</td>
<td>Public Health Genomics</td>
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<tr>
<td>PUH 5313</td>
<td>Vaccines and Vaccine-Preventable Diseases</td>
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<td>PUH 5314</td>
<td>Global Health</td>
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<tr>
<td>PUH 5420</td>
<td>Epidemiology of Diseases of Major Public Health Importance</td>
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<tr>
<td>PUH 5431</td>
<td>Community Health Assessment</td>
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<td>PUH 5500</td>
<td>School Health</td>
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<tr>
<td>PUH 5502</td>
<td>Children's Health</td>
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<tr>
<td>PUH 5503</td>
<td>Women's Health</td>
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<td>PUH 5504</td>
<td>Public Health Issues in Child Protection</td>
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<tr>
<td>PUH 5510</td>
<td>Maternal and Child Health</td>
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<tr>
<td>PUH 5513</td>
<td>Public Health Nutrition</td>
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<tr>
<td>PUH 5516</td>
<td>Public Health Informatics</td>
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<tr>
<td>PUH 5802</td>
<td>Epidemiologic Surveillance and Outbreak Investigation</td>
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<tr>
<td>PUH 6008</td>
<td>Public Health Advocacy</td>
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<tr>
<td>PUH 6016</td>
<td>Survey Methods in Public Health</td>
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<tr>
<td>PUH 6017</td>
<td>Special Studies in Public Health</td>
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<tr>
<td>PUH 6022</td>
<td>Community Health Project</td>
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<tr>
<td>PUH 6101</td>
<td>Health Care Organization and Administration</td>
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<tr>
<td>PUH 6120</td>
<td>Public Health Program Planning and Evaluation</td>
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<tr>
<td>PUH 6201</td>
<td>Tropical Diseases</td>
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<tr>
<td>PUH 6521</td>
<td>Budgeting and Accounting for Health Care Organizations</td>
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<tr>
<td>PUH 6522</td>
<td>Strategic Marketing for Health Care Organizations</td>
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<tr>
<td>PUH 6523</td>
<td>Strategic Leadership in Management of Human Resources</td>
</tr>
<tr>
<td>PUH 6608</td>
<td>Public Health Research</td>
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</tbody>
</table>
Course Descriptions

Note: Listed at the end of each entry are lecture hours, laboratory hours, and semester hours. Prerequisites are also listed.

PUH 5002—Health Promotion and Disease Prevention
Students learn health education strategies that can be incorporated into multiple settings, focusing on wellness and preventive interventions. This course addresses individual and social factors as well as behavioral issues, health determinants, and community resources.

PUH 5003—Public Health Seminar
This course provides an overview of public health special lectures. A written report is required following each lecture.

PUH 5004—Public Health Grant Writing
Introduction to the skills of grant writing in public health. Each student will submit a grant as a culminating experience.

PUH 5050—Substance Abuse Prevention and Intervention
This course provides an overview of substance abuse in a public health context, focusing on local, national, and global issues. It will enhance the student’s understanding of current prevention and intervention strategies.

PUH 5110—Culture, Ethnicity, and Health
Introduces students to skills and insights necessary in promoting health in diverse populations. Issues discussed include the need for effective communication, with an understanding of cultural factors and how they impact on preventive efforts, health care status, access to health care, and use and cost of health care services. The course also explores traditional modalities of health maintenance among various populations.

PUH 5111—Public Health Issues of the Elderly
Examines important determinants of morbidity and mortality among the aged population. Emphasizes social, cultural, economic, behavioral, and physical characteristics of importance in the design and development of appropriate prevention efforts directed at the elderly.

PUH 5115—Principles of Health Education
This course provides an overview of the fundamental concepts of health education, contemporary health education philosophy, and the process to become a certified health education specialist.

PUH 5112—All-Hazards Preparedness
Students will review the ecological, sociological, environmental, and general health effects of disasters, natural and man-made. The course will explore the interprofessional roles and responsibilities of professionals, paraprofessionals, and volunteers in all-hazards emergency planning, response, mitigation, and recovery. Students will gain insights into all-hazard preparedness within the health system, community, and state and local agencies.

PUH 5115—Principles of Health Education
This course provides an overview of the fundamental concepts of health education, contemporary health education philosophy, and the process to become a certified health education specialist.

PUH 5201—Foundations of Public Health
This course provides an introduction to the history, concepts, values, principles, and practice of public health. The course suggests the sense of purpose that unites the myriad occupations and tasks in public health practice and provides an orientation to each of the five traditional core disciplines of public health practice.

PUH 5210—Public Health Communications
The course is designed to provide a framework for conducting health communication campaigns, including planning, implementation, and evaluation. It discusses public health communication for media relations/advocacy, social media/health marketing, cross-cultural/diverse audiences, risk/crisis/emergency, research/evaluation, and ethics/law. The course explores the latest public health communication tools, technologies, and strategies.

PUH 5211—Public Health Issues of the Elderly
Examines important determinants of morbidity and mortality among the aged population. Emphasizes social, cultural, economic, behavioral, and physical characteristics of importance in the design and development of appropriate prevention efforts directed at the elderly.

PUH 5220—Environmental and Occupational Health
Investigates environmental and occupational factors that contribute to the development of health problems in industrialized and developing countries. Includes such topics as toxic substances, pests and pesticides, food quality, air and water pollution, solid and hazardous waste disposal, occupational hazards, and injury prevention.

PUH 5301—Biostatistics
This course focuses on the principles and reasoning underlying modern biostatistics and on specific inferential techniques commonly used in public health research. At course completion, students will be able to apply basic inferential methods in research endeavors, and improve their abilities to understand the data analysis of health-related research articles.

PUH 5305—Advanced Biostatistics
This course addresses advanced statistical methodologies for students who want to pursue research in the public health or medical professions. The concepts of regression, correlation, and prediction will provide practical methods to answer clinical/research questions. Three types of regressions (linear, logistic, and time-to-event) are taught. Prerequisite: PUH 5301
PUH 5311—Public Health Genomics
This course addresses the principles and practices of genetics and genomics, as well as the ethical, legal, and social issues of genetics and genomics in public health practice.

PUH 5313—Vaccines and Vaccine-Preventable Diseases
This course addresses the spectrum of vaccine-preventable diseases and vaccines administered routinely to children, adults, and travelers. The benefits and problems associated with vaccinations will be addressed.

PUH 5314—Global Health
This course addresses global health problems and trends translated to the needs and demands of populations, as well as the socioeconomic and political impact on health delivery. The role of international health agencies will also be addressed.

PUH 5420—Epidemiology of Diseases of Major Public Health Importance
In-depth study of the distribution and determinants of specific infectious, chronic, behavioral, and environmentally caused diseases of major public health importance. Prerequisites: PUH 5301, PUH 5430

PUH 5430—Epidemiology
Examines basic principles and methods of modern epidemiology used to assess disease causation and distribution. Students develop conceptual and analytical skills to measure association and risk, conduct epidemiological surveillance, evaluate screening and diagnostic tests, and investigate disease outbreaks and epidemics.

PUH 5431—Community Health Assessment
Community Health Assessment (CHA) is a process of collecting, analyzing, and reviewing public health data to understand community health needs and facilitate planning of community health resources. CHA serves a core function for local health departments and organizations. In this course, students will learn to locate appropriate public health data sources, analyze public health data, and write a community health profiling report.

PUH 5500—School Health
Study of the development and enhancement of school level health education and health service programs that support student health and academic achievement.

PUH 5502—Children’s Health
This course addresses disease and disorders of children of public health significance as well as public health issues in children such as child safety, child abuse, and newborn screening.

PUH 5503—Women’s Health
This course addresses disease and disorders of women of public health significance as well as public health issues of women such as domestic violence and breast cancer.

PUH 5504—Public Health Issues in Child Protection
In this course, students will learn to apply public health planning principles to the creation and refinement of programs that protect children from negative health impacts of abuse and neglect. This includes both follow-up restorative programs for children already identified as abused/neglected and community programs to prevent abuse/neglect before it occurs. Since research knowledge in this field is expected to continue growing, students will become accustomed to adding to their personal knowledge base through critical study of new findings.

PUH 5510—Maternal and Child Health
This course addresses public health issues pertaining to mothers and children. It also addresses programs for prevention, both in the United States and globally, and resources for the programs.

PUH 5512—Health Policy, Planning, and Management
Discusses principles and logic involved in health policy, planning, and management. Addresses history, political, and environmental contexts, and their incorporation into population research.

PUH 5513—Public Health Nutrition
This course will provide students with methods and skills to identify nutrition-related health problems and to plan community-based prevention programs for diverse populations.

PUH 5516—Public Health Informatics
This course focuses on developing the knowledge and skills of systemic application of information, computer science, and technology to public health practice, research, and learning. Students will acquire a basic understanding of informatics in public health practice, and be able to apply the skills of use of some informatics tools in public health practice. Prerequisites: PUH 5301, PUH 5430

PUH 5520—Legal and Ethical Issues in Public Health
This course introduces nonlawyers to the important roles law and ethics play in determining the public’s health. Students develop skills in analyzing political, legislative, and ethical aspects of public health issues.

PUH 5802—Epidemiologic Surveillance and Outbreak Investigation
This course provides a descriptive analysis of basic components and strategies required for the surveillance and investigation of disease outbreaks. Surveillance data collection, analysis, and reporting are emphasized as well as indicators for assessing the effectiveness of such programs. Prerequisites: PUH 5430, PUH 5301
PUH 6001—Social and Behavioral Sciences Applied to Health
Introduces students to the social, cultural, and behavioral foundations of modern public health practice as applied to interventions for disease prevention and health enhancement. Reviews the linkage between public health and other social sciences. Students gain knowledge and awareness of today’s most pressing public health problems and the social and behavioral factors determining them.

PUH 6002—Public Health Field Experience
The Public Health Field Experience is a unique opportunity for graduate students to integrate and apply practical knowledge and skills learned through coursework to a public practice setting. Students must complete at least 200 hours during the academic semester in which they are registered for the experience. This must be documented in the form of a log. There will be scheduled meetings for this course, which is designed to be completed in one semester. Students must complete their work, submit their documents, and give an oral presentation to the course director by the end of the semester they are registered for the Field Experience. Prerequisites: PUH 5430, PUH 5301, PUH 5512, PUH 5220, PUH 6001

PUH 6008—Public Health Advocacy
The course is designed to provide students with the historical and legal background of legislative advocacy. Students will gain the practical skills necessary to succeed in the legislative advocacy field. The goals of this course are to understand how to effectively advocate on behalf of a cause, company, or nonprofit entity; review laws and regulations affecting lobbying and lobbyists; and comprehend the competitive landscape of public policy.

PUH 6016—Survey Methods in Public Health
This course addresses the theory and practice of designing and conducting surveys in public health research and practice. Topics will include survey designs, sampling strategies, data collection methods, interviewing skills, coding, and data analysis. Prerequisites: PUH 5430, PUH 5301

PUH 6017—Special Studies in Public Health
This elective is a guided-study course designed to address a specific area of public health interest to the student that is not specifically or significantly addressed in other courses. The course director and faculty adviser will guide the student to define the objectives of the course and to fulfill the desired expectations. This course is didactic, not original research, or field experience.

PUH 6022—Community Health Project
This course is designed to give the student the opportunity to plan, implement, or evaluate a specific community health initiative. It is an applied experience in collaboration with a field-based site. The project is approved and monitored by the course director.

PUH 6101—Health Care Organization and Administration
Building on knowledge of the basic structure and organization of health systems, this course provides an overview of the application of management concepts to the health care field. A general introduction to the process of management is presented. Particular emphasis is placed on organization, planning, control, quality improvement, and evaluation of health care management. Prerequisite: PUH 5512

PUH 6120—Public Health Program Planning and Evaluation
This course provides students with the knowledge necessary to perform public health program planning, management, and evaluation. Students will critically identify and define a public health need, create a plan for responding to the need, implement and manage the planned intervention, and evaluate the extent to which the intervention effectively addresses the public health need. To accomplish these ends, students will develop and critique both a unique public health program plan and an evaluation plan for the program during the course of the semester.

PUH 6201—Tropical Diseases
This course will address tropical diseases in the world today and their public health significance. Malaria, yellow fever, trypanosomiasis, leishmaniasis, filariasis, dengue fever, malnutrition, diarrheal diseases, and other tropical diseases will be discussed in relation to epidemiology, clinical presentation, and management. The impact of these diseases on global health and economic issues will be discussed.

PUH 6521—Budgeting and Accounting for Health Care Organizations
This course will provide knowledge and skills in various aspects of budgeting and accounting as it applies to health care organizations.

PUH 6522—Strategic Marketing for Health Care Organizations
This course will provide students with knowledge and strategies in marketing as it applies to health care.
**PUH 6523—Strategic Leadership in Management of Human Resources**

This course focuses on the concepts and dynamics of leadership in health care organizations. It emphasizes the interactions and influence processes of leadership to effectively use problem-solving mechanisms in the management of human resources. The student will develop competencies through application of the case study approach in public health practice.

**PUH 6604—Research Methods in Public Health**

Provides an intermediate level review of basic research methodology, concepts, and principles common in public health and epidemiological studies. Issues related to the design, development, and realization of public health studies, including sampling, surveying, data collection, and management as well as the interpretation and reporting of findings are discussed. **Prerequisites:** PUH 5430, PUH 5301

**PUH 6608—Public Health Research**

Students conduct supervised research in any of the major areas of public health. The course director will guide the student to define the project and its objectives. **Prerequisites:** PUH 5301, PUH 5430

**PUH 6700—Integrative Learning Experience**

M.P.H. students will complete the Integrative Learning Experience as the culminating experience in the public health core curriculum. This course presents case studies in various themes of public health practice to demonstrate synthesis of foundational and concentration competencies. Students will integrate the knowledge they have gained and then synthesize and apply problem-solving methodology to analyze public health issues from local, national, and global perspectives. Working in interdisciplinary groups, students will recommend interventions and evaluation methods to address specific problems. **Prerequisites:** PUH 5220, PUH 5301, PUH 5430, PUH 5512, PUH 5520, PUH 6001, PUH 6604
Biomedical Informatics Program

NSU’s Dr. Kiran C. Patel College of Osteopathic Medicine’s Biomedical Informatics Program is designed to train future leaders in the development, dissemination, and evaluation of health information technologies that are utilized by hospitals and health systems, health information technology system vendors, eHealth companies, insurers, pharmaceutical companies, and academic institutions.

With its focus on clinical informatics, the program’s curriculum emphasizes the areas of computer science and its clinical applications, management, and evaluation of information technology in the health care environment.

The Biomedical Informatics Program offers coursework in both on-campus and online formats to enable working professionals to earn a master’s degree or graduate certificates in health informatics without career disruption.

Biomedical informatics is an interdisciplinary field encompassing computer and information sciences, cognitive and decision-making sciences, medicine and epidemiology, telecommunications, business management, education sciences, and a collaboration of a number of other fields. In short, biomedical informatics is the intersection of health care, technology, and people, with the implicit goals of improving the quality and safety of the world’s health care systems while reducing cost.

As terminology continues to evolve along with the field itself, the more broadly encompassing term “biomedical informatics” can generally be broken down into three more distinct levels: bioinformatics, medical informatics, and public health informatics.

At the molecular level, incorporating things such as gene sequencing research and pharmaceutical development, bioinformatics looks to change the way biological data is stored, retrieved, organized, and analyzed, ultimately producing new tools/methods for generating valuable biological knowledge.

Medical informatics, at an individual patient level, can further be divided into a number of more specific areas including nursing informatics, imaging informatics, pharmacy informatics, dental informatics, and consumer health informatics. Medical informatics aims to manage an individual’s health data—including storage, retrieval, sharing, and optimal use—with the goals of providing safer, more efficient, and more affordable health care. Integration of advanced clinical information systems into the health care decision-making process allows health care professionals to accomplish tasks in a more competent and effective manner. Furthermore, this integration affords development of novel tasks. It produces new knowledge and allows providers to begin thinking like epidemiologists in addition to providing patient care.

At a population level, public health informatics aims to apply information technology advances to traditional public health research and practice. Detection, management, and prevention of disease across populations—through the collection and analysis of vital statistics and health data—have the potential to be significantly influenced and advanced through the auspices of evolving information technology.

People who have a degree in biomedical informatics have a wide variety of career opportunities. The type of informatics career options that an individual can pursue is, to some extent, dependent on his or her background and selected area of study. Biomedical informatics trained professionals may become:

- chief medical information officers (CMIOs)
- chief medical officers (CMOs)
- chief information officers (CIOs)
- directors of medical informatics
- chief nursing information officers (CNOIs)
- project managers
- implementation specialists
- project designers
- researchers
- programmers
- clinical systems analysts
- health information technology (HIT) educators and trainers
- HIT consultants
- template writers
- nursing informatics specialists
- account representatives

The following are examples of settings in which they might work:

- hospitals and health systems
- community health centers
- physician practices and clinics
- health care agencies within the federal and state government
- health information technology system vendors
- eHealth companies
• health insurance companies
• pharmaceutical companies
• academic institutions
• consulting services

Concurrent Degree Programs
Health Professions Division students have an option to pursue the M.S. in Biomedical Informatics degree concurrently with osteopathic medicine, pharmacy, physician assistant, dental medicine, optometry, or health science degrees. Schedules will allow students the opportunity to achieve and meet the requirements of both degrees within three to four years. Students must maintain good academic standing in both programs.

Program Vision
The vision of the Nova Southeastern University Dr. Kiran C. Patel College of Osteopathic Medicine’s Biomedical Informatics Program is to graduate students who have acquired the necessary knowledge, skills, and attitudes needed to be successful in future informatics careers. Graduates will be highly sought after and actively recruited by health care organizations.

Program Mission
The mission of the Nova Southeastern University Dr. Kiran C. Patel College of Osteopathic Medicine’s Biomedical Informatics Program is to provide students with an interdisciplinary, skills-based education in biomedical informatics. These graduates will enable health care organizations to maximize the capture and utilization of data to improve patient safety and care and to reduce health care expenditures.

Course of Study—Master of Science in Biomedical Informatics
The Master of Science in Biomedical Informatics (M.S.) Program is designed to prepare students for careers in information management, teaching, and research in academic health centers, other health care institutions and organizations, and the health care computing industry. It has become almost axiomatic that the organization and retrieval of information is essential for the development of new knowledge. The quality of a medical school’s computing and information technology environment will profoundly affect its ability to compete in both education and research. In addition, the quality of the biomedical informatics program will influence a school’s opportunities to collaborate with health organizations such as hospitals, health departments, medical societies, and physicians in remote areas. The major areas included in the M.S. program are computer science and its clinical application in medical informatics, management, and program evaluations of health information technology.

The program provides a course of study leading to the degree of Master of Science in Biomedical Informatics, which will lead to
1. the use of informatics to improve the performance of health care providers and the health care system in order to
   • enhance wellness and disease prevention
   • improve patient outcomes
   • reduce morbidity and mortality
   • reduce medical error and promote patient safety
   • promote cost-effective health care
2. facilitation of the adoption of health information technology
3. a career in health information technology
4. becoming a self-directed lifelong learner

At the end of the course of study leading to the degree of Master of Science in Biomedical Informatics, the graduate will be able to
1. identify the fundamentals of a telecommunication network design
2. develop practical health care applications using popular database management systems
3. evaluate information technology for integration into health care
4. utilize the knowledge, skills, and concepts of health information technology in evidence-based practice
5. apply principles of information security and policy formation
6. assess existing and emerging health information technologies
7. appraise health information exchange system standards
8. analyze project management strategies in health information technology

Course of Study—Graduate Certificate in Medical Informatics
The Medical Informatics Certificate is designed to enable students to acquire the core knowledge that applies to the fundamentals, principles, and practice of medical informatics. This certificate option consists of 18 credits of graduate-level courses that are presented using online learning technology.

If, after taking courses in the certificate program, a certificate-seeking student decides to pursue the M.S. degree, the student must submit a new and complete application to become a
degree-seeking student and must meet all requirements for admission to the M.S. program. Previous coursework taken as a certificate-seeking student does not guarantee acceptance into the M.S. degree-seeking program. If accepted into the degree program, credits with the prefix MI taken as a certificate-seeking student will be automatically applied toward the degree.

Course of Study—Graduate Certificate in Public Health Informatics

The Public Health Informatics Certificate is designed to enable students to acquire the core knowledge that applies to the fundamentals, principles, and practice of public health informatics. This certificate option consists of 18 credits of graduate-level courses that are presented using online technology.

If, after taking courses in the certificate program, a certificate-seeking student decides to pursue the M.S. degree, the student must submit a new and complete application to become a degree-seeking student and must meet all requirements for admission to the M.S. program. Previous coursework taken as a certificate-seeking student does not guarantee acceptance into the M.S. degree-seeking program. If accepted into the degree program, credits with the prefix MI taken as a certificate-seeking student will be automatically applied toward the degree.

Accreditation and Authorization

The Biomedical Informatics program is a participant of the Electronic Campus program of the Southern Regional Education Board (SREB). The SREB certifies that the online programs and courses it approves for this program are in full compliance with its comprehensive set of Principles of Good Practice.

Admissions Requirements

The Biomedical Informatics program evaluates the overall quality of its applicants, looking at academic achievement, personal motivation, knowledge of health care, life experience, and recommendations. Priority will be given to those individuals already holding degrees in the health professions or computer information sciences.

All applicants for admission must
- hold a bachelor’s, master’s, or doctoral degree from a regionally accredited college or university
- demonstrate a background in the language of the biomedical sciences by credentials or work experience
- possess a cumulative grade point average of 3.0 or above on a 4.0 scale (preferred)
- demonstrate competency in the use of computers by credentials or work experience
- demonstrate the ability to clearly communicate in a written manner

A health professions degree is desirable, but not required. Students without prior degrees or work experience in health care and/or information technology may have to take additional prerequisite courses. An applicant may be offered admission as a nondegree-seeking student to provide him or her with the opportunity to demonstrate academic competency. All application material must be received in a timely manner to enable the Office of Admissions and the admissions committee to process the application promptly.

Application Procedures

The Office of Admissions processes applications on a year-round basis. Applicants may apply for matriculation into any one of the three semesters (fall, winter, summer).

To be considered by the admissions committee, all applicants must
- complete the online application
- send the nonrefundable application fee of $50
- provide one signed letter of recommendation on organizational letterhead (recommendation is requested electronically through the online application system)*
- submit official transcripts of all undergraduate, graduate, and professional education

Please mail all supplemental admissions material to

Nova Southeastern University
Enrollment Processing Services
Dr. Kiran C. Patel College of Osteopathic Medicine
Biomedical Informatics Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

Upon receipt of the completed application and required material, the Committee on Admissions will review the application and the applicant’s file and make recommendations to the program director. The director submits his or her recommendation on admission to the dean. The final decision on admission is made by the dean of the Dr. Kiran C. Patel College of Osteopathic Medicine.

Should you have any questions, please email healthinformatics@nova.edu or call 800-356-0026, ext. 21032.

* A recommendation is not required for admission to the graduate certificates in Medical Informatics or Public Health Informatics programs.
Nondegree-Seeking Students

A nondegree-seeking student is one who wishes to take courses in the Biomedical Informatics program, but does not intend to pursue the master’s degree at the time of application. The nondegree-seeking student must provide the following admissions requirements in order to take classes in the Biomedical Informatics program:

- completed online application form
- official transcripts of all undergraduate, graduate, and professional education
- nonrefundable application fee of $50

Nondegree-seeking students are not guaranteed future acceptance into the Master of Science in Biomedical Informatics Program. If, after successfully completing 9 credits as a nondegree-seeking student in good standing, the student wishes to become degree seeking, he or she must apply to the M.S. program as a new student and meet all the requirements for admission. If accepted into the degree program, credits with the prefix MI that were taken as a nondegree-seeking student will be automatically applied toward the degree.

Other Degree Options

An M.S. in Nursing Informatics is offered in conjunction with the Ron and Kathy Assaf College of Nursing. For more information, visit osteopathic.nova.edu/msbi/nursinginformatics.html.

A concurrent Pharm.D./M.S. in Biomedical Informatics option is also available. For more information, visit osteopathic.nova.edu/msbi/pharm.d.m.s.b.i-concurrent-degrees--nsu.html.

International Applicants

International students who wish to be considered for admissions must submit official course-by-course evaluation of all foreign transcripts (Agencies that can complete this evaluation can be found at nova.edu/internationalaffairs/students/prospective/credentialservices.) Applicants whose native language is not English are required to demonstrate English proficiency. One of the standardized tests listed below will currently satisfy the university’s English requirement for nonnative English speakers.

- Test of English as a Foreign Language (TOEFL): score of 213 on the computer-based test or 79–80 on the Internet-based test
- International English Language Testing System (IELTS): score of 6.0 on the test module
- Pearson Test of English—Academic: score of 54
- GMAT: score of 450

Tuition and Fees

Tuition for 2020–2021 will be posted on our website (http://osteopathic.nova.edu/msbi/tuition-fees.html). It is subject to change by the board of trustees without notice. Students taking courses at other NSU schools or colleges may be subject to varying tuition rates. A registration fee of $30 per semester, an NSU Student Services Fee of $1,500 and a Health Professions Division General Access Fee of $145 are required annually for degree- and nondegree-seeking students. Tuition and fees are subject to change without notice.

Transfer of Credits

Applicants or enrollees of the NSU-KPCOM Biomedical Informatics Program may petition for transfer of credits earned from a regionally accredited institution. Degree-seeking students may petition for a maximum of 12 credit hours toward their degree, and certificate-seeking students may petition for a maximum of 6 credit hours toward their certificate. Any exceptions require the written approval of the program director. To be considered for transfer of credit, courses must have been completed less than five years prior to the beginning of the student’s first semester in the program. All courses to be transferred must be substantially equivalent to courses offered in the program, as determined by the program director and appropriate faculty members.

All courses considered for transfer into the program must have been successfully completed with a grade of B (80 percent) or better. Transfer course grades are not calculated toward the student’s grade point average.

An accepted applicant to the program who wishes to receive transfer credit must submit a written request and the appropriate verification documents (e.g., official transcripts, syllabi, and catalogs) to the program director.
Graduation Requirements

To be eligible for the degree or Medical Informatics/Public Health Informatics Graduate Certificates, students must fulfill the following requirements:

- satisfactorily complete, with a grade point average of B (3.0) or higher, within six years of matriculation, the course of study required for the M.S. degree (minimum of 44 semester hours of courses and any required additional courses, if applicable) or graduate certificates (minimum of 18 semester hours of courses and any required additional courses, if applicable)

- satisfactorily meet all university financial and library obligations

Upon satisfactory completion of degree requirements, the student is expected to attend the rehearsal and commencement program, at which time the degree is conferred. Students who do not plan to attend the commencement ceremony must notify the program office before the established deadline.

Curriculum Requirements

The didactic courses will be offered online using NSU's state-of-the-art, web-based distance learning technology, as well as on-site. Students will be required to complete a practicum within the environment in which it is being conducted. Students must have a GPA of at least 3.0 to be eligible to register or participate in practicum work.

Curriculum Outline—Master of Science in Biomedical Informatics

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI 5000 Orientation to the Biomedical Informatics Program</td>
<td>1</td>
</tr>
<tr>
<td>MI 5100 Survey of Biomedical Informatics</td>
<td>3</td>
</tr>
<tr>
<td>MI 5121 Information Systems Project Management in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 5130 Database Systems in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 5152 Information Security in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 5153 Telecommunications and Computer Networking in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 5160 System Analysis and Design for Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 5400 Leadership Management and Organizational Behavior in Informatics</td>
<td>3</td>
</tr>
<tr>
<td>MI 6413 Lean Six Sigma Yellow Belt for Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 6700 Computational Informatics</td>
<td>3</td>
</tr>
<tr>
<td>MI 7000 Biomedical Informatics Project/Practicum</td>
<td>4</td>
</tr>
</tbody>
</table>

Subtotal 32

Elective Courses (12 credits required)

<table>
<thead>
<tr>
<th>Elective Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI 5120 Management Information Systems in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 5180 Human-Computer Interaction in Health Care Settings</td>
<td>3</td>
</tr>
<tr>
<td>MI 5204 Clinical Decision Support Systems</td>
<td>3</td>
</tr>
<tr>
<td>MI 5205 Program Evaluation in Health Information Technology</td>
<td>3</td>
</tr>
<tr>
<td>MI 6401 Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>MI 6403 Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
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<td>-------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>MI 6404</td>
<td>Special Topics in Health Informatics</td>
</tr>
<tr>
<td>MI 6405</td>
<td>Public Health Informatics</td>
</tr>
<tr>
<td>MI 6407</td>
<td>Grant Writing</td>
</tr>
<tr>
<td>MI 6408</td>
<td>Health Policy, Planning, and Management</td>
</tr>
<tr>
<td>MI 6409</td>
<td>Health Services Planning and Evaluation</td>
</tr>
<tr>
<td>MI 6410</td>
<td>Consumer Health Informatics</td>
</tr>
<tr>
<td>MI 6411</td>
<td>Health Information Technology Acquisition and Assessment</td>
</tr>
<tr>
<td>MI 6412</td>
<td>Leadership in Health Information Technology</td>
</tr>
<tr>
<td>MI 6414</td>
<td>Basic Skills for Clinical Analysts</td>
</tr>
<tr>
<td>MI 6415</td>
<td>Information Technologies in Medicine and Telehealth</td>
</tr>
<tr>
<td>MI 6417</td>
<td>Meaningful Use of Electronic Health Record Systems—a NextGen Approach</td>
</tr>
<tr>
<td>MI 6418</td>
<td>App Development for Health Information Technology Projects</td>
</tr>
<tr>
<td>MI 6420</td>
<td>Medical Image Processing and Analysis</td>
</tr>
<tr>
<td>MI 6421</td>
<td>Geographical Information Systems: Fundamentals for Health Care</td>
</tr>
<tr>
<td>MI 6422</td>
<td>Workflows and Process Improvements in Health Care Settings</td>
</tr>
<tr>
<td>MI 6423</td>
<td>Maximizing Talents in the Health Technology Workforce</td>
</tr>
<tr>
<td>MI 6424</td>
<td>Health Care Analytics and Data Visualization I</td>
</tr>
<tr>
<td>MI 6426</td>
<td>Health Care Analytics and Data Visualization II</td>
</tr>
<tr>
<td>MI 6428</td>
<td>Artificial Intelligence for Health Care</td>
</tr>
<tr>
<td>MI 6430</td>
<td>Methods of Health Care Analytics</td>
</tr>
<tr>
<td>MI 6432</td>
<td>Big Data Analysis in Health Care</td>
</tr>
<tr>
<td>MI 6900</td>
<td>Bioinformatics</td>
</tr>
<tr>
<td>MI 8000</td>
<td>Biomedical Informatics Continuing Services</td>
</tr>
</tbody>
</table>

**Total Credits** 44

**Suggested Courses** (These courses are recommended for students who do not have sufficient health care background or computer science knowledge.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI 4100</td>
<td>Medical Terminology</td>
<td>1</td>
</tr>
<tr>
<td>MI 4200</td>
<td>Health Care Organization and Administration</td>
<td>1</td>
</tr>
<tr>
<td>MI 4300</td>
<td>Foundations of Computing in Health Care</td>
<td>1</td>
</tr>
<tr>
<td>MI 4400</td>
<td>Foundations of Software in Health Care</td>
<td>1</td>
</tr>
</tbody>
</table>
Curriculum Outline—Graduate Certificate in Medical Informatics

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI 5100</td>
<td>Survey of Biomedical Informatics</td>
<td>3</td>
</tr>
<tr>
<td>MI 5130</td>
<td>Database Systems in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 5152</td>
<td>Information Security in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 5153</td>
<td>Telecommunications and Computer Networking in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 6413</td>
<td>Lean Six Sigma Yellow Belt for Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 6700</td>
<td>Computational Informatics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 18

Curriculum Outline—Graduate Certificate in Public Health Informatics

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI 5100</td>
<td>Survey of Biomedical Informatics</td>
<td>3</td>
</tr>
<tr>
<td>MI 6401/PUH 5301</td>
<td>Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>MI 6403/PUH 5430</td>
<td>Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>MI 6405/PUH 5516</td>
<td>Public Health Informatics</td>
<td>3</td>
</tr>
<tr>
<td>MI 6421</td>
<td>Geographical Information Systems: Fundamentals for Health Care</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 18

Course Descriptions

MI 4100—Medical Terminology
This self-paced online course provides a basic introduction to medical terminology using the body systems approach. It provides the student with guided practice and assessment of prefixes, suffixes, word roots, and combining forms. It includes vocabulary, definitions, spelling, and pronunciation. A problem-solving approach to learning is the key strategy and focus of this course. (1 credit)

MI 4200—Health Care Organization and Administration
This course provides students with an overview of health care management covering fundamental concepts and theories, including information systems management, operational leadership, strategic leadership, governance, foundations of clinical performance, clinical support services, community health, knowledge management, human resource management, the environment of care management, financial management, and marketing. A common theme of high-performance health care organizations (HCOs) are that they embrace a culture of transformational and evidence-based management. Both are carefully woven throughout the course. Also emphasized are critical management activities, including measures and metrics, benchmarking, negotiated goal setting, and continuous improvement, which are all essential to high-performance HCOs. (1 credit)

MI 4300—Foundations of Computing in Health Care
This course is designed to introduce students to architectures of information systems and the logic used by computers to solve problems. Even though many students consider themselves “tech savvy” due to their prior use of information systems, most students do not have an appreciation of how
computers actually work. In their future roles as biomedical informaticists, they will need to have a deeper understanding of how computers actually operate. This course will provide this deeper understanding of computer systems. (1 credit)

**MI 4400—Foundations of Software in Health Care**

The basic content of the course will be drawn from the IEEE Computer Society’s *Guide to the Software Engineering Book of Knowledge* (SWEBOK) with the addition of specific exposure to programming in the object-oriented and Internet environments. It will focus on developing the knowledge and skills necessary for a biomedical informaticist to participate in the development of informatics systems, including the ability to understand and interact effectively with software development teams in health care environments. It will also give the student experience in actually developing software systems in JAVA, XML, and JSON for health care applications. The student will become knowledgeable about software development life cycles, such as waterfall and Agile (e.g., Scrum) methodologies that are commonly used in health care information technology. Finally, the students will become familiar with the economic issues related to software development/maintenance in health care. (1 credit)

**MI 5000—Orientation to the Biomedical Informatics Program**

This course provides an overview to the biomedical informatics program and technology skills necessary for satisfactory participation in the graduate programs at Nova Southeastern University’s Dr. Kiran C. Patel College of Osteopathic Medicine (KPCOM). Students will be introduced to Canvas, the Office of Student and Alumni Affairs, NSU Financial Aid, the Martin and Gail Press Health Professions Division (HPD) Library, NSU Public Safety, the NSU Bursar’s Office, NSU Student Health Insurance, required Health Insurance Portability and Accountability Act (HIPAA) Training, the Collaborative Institutional Training Initiative (CITI), and the Biomedical Informatics Practicum Project.

Completion of this orientation is required by all students admitted into the Master of Science degree program in biomedical informatics. Students are required to complete MI 5000 concurrently with their first sequence of courses in the program of study, and will be automatically enrolled in the orientation course (online or in-person) during their first term of study. (3 credits)

**MI 5100—Survey of Biomedical Informatics**

This course is an introductory survey of the discipline of biomedical informatics. This course will introduce the student to the use of computers for processing, organizing, retrieving, and utilizing biomedical information at the molecular, biological system, clinical, and health care organization levels through substantial, but not overwhelming, reading assignments. The course is targeted at individuals with varied backgrounds including medical, nursing, pharmacy, administration, and computer science. The course will describe essential concepts in biomedical informatics that are derived from medicine, computer science, and the social sciences. (3 credits)

**MI 5120—Management Information Systems in Health Care**

This course covers major concepts, systems, and methodology in managing health care information systems. Topics will include concepts in system implementation and support, information architecture, IT governance in health care, information systems standards, organizing IT services, strategic planning, IT alignment with the health care facility, and management’s role in major IT initiatives. Initiatives. Topics will include concepts in health care data quality; health care information regulations, laws, and standards; clinical information systems; systems acquisition, implementation, and support; technologies that support health care information systems; security of health care information systems; IT alignment and strategic planning in the health care facility; and management’s role in major IT initiatives. (3 credits)

**MI 5121—Information Systems Project Management in Health Care**

This course introduces the fundamental principles of project management from an information technology (IT) perspective as it applies to health care organizations (HCOs). Critical features of core project management are covered, including integration, scope, time, cost, quality, human resource, communication, risk, and procurement management. Also covered is information technology management related to project management (user requirements, infrastructure, conversion, workflow, security, interface, test, customer, and support management and software configuration). The following areas of change management related to project management will also be covered: realization, sponsorship, transformation, training, and optimization management. Students will explore and learn hands-on skills with project management software assignments and participate in a health care systems implementation, course-long, group project intended to apply these newly developed knowledge and skills in a controlled environment. (3 credits)

**MI 5130—Database Systems in Health Care**

This course covers basic to intermediate knowledge of the concept, the design and the implementation of database applications in health care. Students will study tools and data models for designing databases such as E-R Model and SQL. The course also covers Relational DBMS systems such as SQL Server, Access, Oracle, and mySQL. Database connectivity design (essential in data-driven web development) and database administration will also be introduced. Students will practice designing, developing, and implementing a test relational online health IT database application (myHealth) through a comprehensive project that contains the above topics. (3 credits)
MI 5152—Information Security in Health Care
The course will cover concepts, applications, and techniques of data security in health care systems. Topics include health care industry, regulatory environment, decision making, policy assurance, information management, access control, risks and vulnerabilities management, database security, web security, personnel and physical security issues, and issues of law and privacy. Areas of particular focus include secure health care system design, implementation, data encryption and decryption, attacks, and techniques for responding to security breaches. (3 credits)

MI 5153—Telecommunications and Computer Networking in Health Care
The understanding of telecommunications and networking is imperative for adequate functioning of health care organizations. This is due to the convergence of computing, data management, telecommunications, and the growing applications of information technology in the health care arena and medical facilities. The knowledge of these key areas of information systems also becomes essential for competitive advantage. This course combines the basic technical concepts of data communications, telecommunications, and networking with the health care IT management aspects and practical applications. (3 credits)

MI 5160—System Analysis and Design for Health Care
The need to create effective, new solutions and innovative interventions to deliver quality patient care outside of the traditional medical setting is at the forefront of society today. The basis of this course will be to provide a solid educational foundation for systems design and analysis, as it relates to current and future health care systems. In addition, this course will build upon the fundamental systems design and analysis principles to explore current and future health care systems that will include integration of disparate clinical health care systems, mobile technologies, and a combination of remote-monitoring technology, sensors, and online communications and intelligence to improve patient adherence, engagement, and clinical outcomes. (3 credits)

MI 5180—Human-Computer Interaction in Health Care Settings
The dynamics of human-computer interaction (HCI) directly impacts health care. This course will introduce the student to usable interfaces and the study of social consequences associated with the changing environment due to technology innovation. (3 credits)

MI 5204—Clinical Decision Support Systems
This course introduces students to theoretical, statistical, and practical concepts underlying modern medical decision making. Students will be provided with a review of the multiple methods of knowledge generation for clinical decision support systems (CDSS) and will create their own prototype of CDSS. Current implementations of stand-alone and integrated CDSS will be evaluated. Techniques for planning, management, and evaluation of CDSS implementations will be reviewed. Human factors, including work-flow integration and the ethical, legal and regulatory aspects of CDSS use, will be explored, as applicable to commercial implementations in patient care settings. Future models of health care, supported by CDSS and evidence-based medicine, will be discussed and reviewed. (3 credits)

MI 5205—Program Evaluation in Health Information Technology
This interactive course will introduce students to various evaluation methods for health care informatics systems, projects, and proposals. Students will consider both quantitative and qualitative methods of evaluation as they examine the design and implementation processes. Topics will include why to evaluate health care informatics projects; deciding what to evaluate; deciding when evaluation should occur; quantitative evaluation methods; overview of some descriptive and inferential statistical methods; barriers and facilitators to project implementation; and stakeholders, both internal and external to an organization. (3 credits)

MI 5400—Leadership Management and Organizational Behavior in Informatics
This online course is an introduction to the management of employees in health care organizations (HCOs). Students will gain a working knowledge of how to manage personal, interpersonal, and group processes by having the interpersonal skills to assume responsibility for leading and promoting teamwork among diverse stakeholders. Students will learn to manage individual and group behaviors in improving organizational productivity and performance. Students will be able to apply newly learned organizational skills, developed through experiential- and application-based learning scenarios in the form of case studies, as well as from their home, work, and educational observations and experiences. It is anticipated that this practical learning experience can be transferred to their day-to-day managerial responsibilities. (3 credits)

MI 6401—Biostatistics
This course focuses on the principles and reasoning underlying modern biostatistics and on inferential techniques commonly used in public health research. Students will be able to apply basic inferential methods in research endeavors and improve their abilities to understand the data analysis of health-related research articles. (3 credits)

MI 6403—Epidemiology
This course examines basic principles and methods of modern epidemiology used to assess disease causation and distribution. Students develop conceptual and analytical skills to measure association and risk, conduct epidemiological
surveillance, evaluate screening and diagnostic tests, and investigate disease outbreaks and epidemics. (3 credits)

**MI 6404—Special Topics in Health Care**
This is an elective course designed as a student/self-directed course. In consultation with the chosen adviser/mentor and the course director, the student will determine a focused topic of quasi-independent study, research, or other appropriate learning activity. A final paper or other appropriate document(s) will serve as documentation of having met the mutually agreed upon objectives. (3 credits)

**MI 6405—Public Health Informatics**
Public health informatics is the systematic application of information and computer science and technology to public health practice, research, and learning. This course focuses on developing the knowledge and skills of systemic application of information, computer science, and technology to public health practice. Students will acquire a basic understanding of informatics in public health practice and be able to use some informatics tools in public health practices. (3 credits)

**MI 6407—Grant Writing**
This course provides an introduction to the skills of grant writing in biomedical informatics. Each student will submit a completed grant application as a culminating experience. This course introduces students to grant development and preparation, so they can participate in the process of obtaining public or private funds to support research, education, and/or service projects. Topics will include writing specific aims and hypotheses; research plan significance; methods/approach and innovation; evaluation, time line, and budget; preliminary data, investigator, and human subjects; subcontracts (if necessary); and abstract, facilities/environment, and letters of support. (3 credits)

**MI 6408—Health Policy, Planning, and Management**
This course discusses the principles and logic involved in health policy, planning, and management. It addresses the historical, political, and environmental contexts, and their incorporation into population research. (3 credits)

**MI 6409—Health Services Planning and Evaluation**
This course is an in-depth review of basic planning and evaluation techniques for the implementation of a community health care program. It is designed, and will be taught, employing comparative methodology. The material will be taught using multiple international examples and experiences. The course covers the interdependence between policy and planning and management. It will consist of policy analysis techniques as well as the conceptual framework for the planning and management of health care programs. The course also reviews essential methods for effective planning and evaluation considering the economic, political, epidemiological, demographic, and other components that contribute to the assessment of health needs and resource allocation. (3 credits)

**MI 6410—Consumer Health Informatics**
Consumer Health Informatics is a relatively new application of information technologies in the field of health care that aims to engage and empower consumers to become involved in their health care. This course provides an introduction to, and overview of, consumer health informatics, mobile health (mhealth), and social media applications used in health care. It explores the development of consumers as ePatients and tools such as personal health records (PHRs), as well as the fluid nature of social media in medicine and the emerging area of mobile health (mhealth). Students will learn from a combination of lectures and a hands-on approach of interacting directly with the tools and technologies discussed. (3 credits)

**MI 6411—Health Information Technology Acquisition and Assessment**
This course immerses students in the technical, business, cultural, and organizational dynamics typically encountered during the HIT systems selection and contract-negotiation process. Real-world case studies—replete with dynamic political, financial, and technical roadblocks and opportunities—will be used to introduce the student to skills required to make the best cultural decisions and to negotiate a viable contract. (3 credits)

**MI 6412—Leadership in Health Information Technology**
This course provides the conceptual and technical skills needed in leading health information technology. It is designed to create a profound understanding of leadership at the cognitive and action levels to enable health information leaders to optimize decision making in the workplace. Students review remarkable leaders, organizations, and teams in order to hone their own observation, sense-making, and innovating skills in a health information setting. This leadership course reviews and builds upon the basic knowledge of leadership provided in the organizational behavior course by expanding the scope and depth of the student’s knowledge of leadership theories and conflict management techniques and by developing the student’s self-knowledge of his or her preferred leadership styles. (3 credits)

**MI 6413—Lean Six Sigma Yellow Belt for Health Care**
Lean Six Sigma for Health Care (Yellow Belt) participants will learn the basic philosophy, tools, and techniques to deliver breakthrough business improvements that will reduce waiting times, improve quality, and reduce costs in a health care environment. More specifically, they will learn to apply a comprehensive set of 15–20 Lean Six Sigma process improvement tools by using the PDCA (Plan, Do, Check, Act) problem-solving model. They will learn techniques for both quantitative and qualitative analysis, as well as methods and tools for waste reduction and process enhancement and
MI 6418—App Development for Health Information Technology Projects
This course provides an introduction to iOS Applications (apps) development with an emphasis on health information technology projects. Topics cover iOS development environment setup, the Swift language syntax, Model-View-Controller design patterns, iOS apps lifecycle, GUI implementation, multitouch handling, graphics processing, file handling, SQLite database handling, audio and video processing, multiplatform support for iPhone and iPad, maps displaying, and web service interfacing. (3 credits)

MI 6420—Medical Image Processing and Analysis
This course will provide students with a preliminary understanding of the theory and practice of medical image processing and analysis in health care. Basic concepts and fundamentals of medical image processing and analysis will be described in the course. The application of medical image processing and analysis in biomedical information systems will also be discussed. Students will be introduced to the fundamentals and methodology of medical image processing, image analysis, image compression, and molecular imaging. (3 credits)

MI 6421—Geographical Information Systems: Fundamentals for Health Care
This course will introduce students to geographic information systems (GIS) to map and spatially analyze public health and demographic data. Students will learn the fundamentals of the ArcMap software system and ways to integrate cartography into biomedical informatics practice. Beyond use of GIS for cartography, this course will also examine ethical issues and methods of analyzing demographic and spatial health patterns using GIS and demography analysis methods. The versatility of GIS in a public health setting will be examined and will include exercises involving GIS applications in health marketing, demography, epidemiology, and health care systems. For example, the course will look at how different socioeconomic groups use urban spaces differently in terms of transportation and how these differences in navigation impact contact points for health marketing. Other issues covered in the class will be the ethics of GIS, manipulation of data, sources of data, and understanding some commonly used public health datasets such as the YRBS, BRFSS, and U.S. Census. (3 credits)

MI 6422—Workflows and Process Improvement in Health Care Settings
The course will introduce the clinical workflow analysis as a method of choice to improve clinical processes in health care delivery systems. Students will review the primary objectives for process improvement in clinical health care: outcome quality (including patient safety) and the development of health information technology (HIT) to support the Electronic Health Record (EHR) with initiatives showing a significant impact on clinical workflows, such as meaningful use. Students will define the functional components of the health care activities and learn to map on a flowchart the standard symbols used to represent all tasks and steps, decision points, resources, and outcomes of the clinical workflow. Students will apply the tools of workflow analysis by assessing a workflow in a health care setting using graphical representations of the workflow phases (current state, desired state), and process defects identification.
and classification. The course will introduce the quantitative measures of workflow improvement used in Lean Six Sigma. Students will formalize a proposal for an intervention aimed at the modification and optimization of a clinical workflow. (3 credits)

MI 6423—Maximizing Talents in the Health Technology Workforce

In the ever-changing world of information and global economic competition, it is crucial that individuals and organizations understand their personal and group talents. Today’s educational, health care, and institutional structures lack leadership and cutting-edge thinking. By applying strength-based leadership practices, one comes to understand his or her own, as well as the group’s, strengths and talents and is able to apply these practices in daily work, as well as in leadership roles. The course will produce a personal understanding of individual, as well as group personality/strengths and how these evolve and affect performance in individuals. Students will develop a better self-awareness of what strengths they possess and how this affects personal and work performance. It demonstrates how leaders continue to grow, if this is a chosen career path, and how they develop each of the group’s talents to maximize the performance of the team and organization. The Affordable Care Act will be incorporated and students will discover what individual and organizational talents must be used to improve patient care in the future when utilizing technology. (3 credits)

MI 6424—Health Care Analytics and Data Visualization I

The course will expose students to health care “big data” focused on current needs—such as population health, outcome reporting, clinical decision support, physician quality measurement, and various other measures (including CMS initiatives like meaningful use and Medicare and payer-quality reporting requirements). The course will use current real-world problem scenarios where data analytics and visualization can be applied to successfully report on and solve various problems prevalent in today’s value-based payer model. The student will learn how to do large-scale data mining and the infrastructures needed to support the various system designs such as Hadoop ecosystems and Hadoop-based tools. The student will be exposed to the application of predictive analytics specific to health care with an understanding of using data to help deliver quality and safe patient care and providing data-driven methods of improving care. The course will expose students to real-time data analytics where data is collected and reported on around the clock and to mobile data acquisition and analysis coming from various local and remote devices. It will also introduce students to data visualization methods that will teach them how to communicate analytical insights to both technical and nontechnical audiences. (3 credits)

MI 6426—Health Care Analytics and Data Visualization II

This course is a continuation of MI 6424 (Health Care Analytics and Data Visualization I). The course will expose students to health care “big” data focused on current needs such as population health, outcome reporting, clinical decision support, physician quality measurement, and various other measures (including CMS initiatives like meaningful use and Medicare and payer-quality reporting requirements). The course will use current, real-world problem scenarios where data analytics and visualization can be applied to successfully report on and solve various problem prevalent in today’s value-based payer model. The student will learn how to do large-scale data mining and the infrastructures needed to support the various system designs such as Hadoop ecosystems and Hadoop-based tools. The student will be exposed to the application of predictive analytics specific to health care with an understanding of using data to help deliver quality and safe patient care and providing data-driven methods of improving care. The course will expose students to real-time data analytics where data is collected and reported on around the clock and to mobile data acquisition and analysis coming from various local and remote devices. It will also introduce students to data visualization methods that will teach them how to communicate analytical insights to both technical and nontechnical audiences. (3 credits)

MI 6428—Artificial Intelligence for Health Care

This advanced cognitive engineering systems course will expand upon introductory topics presented as part of the clinical decision support, database management, and analytics courses to take a deeper dive into data science and artificial intelligence algorithms, with specific application to such medical specialties as oncology, cardiology, pulmonology, radiology, neurology, and psychology. It will provide students with skills necessary to undertake programmatic statistical analysis of complex patient information data sets; to apply unsupervised learning techniques that will enhance outcomes of the predictive and prescriptive analytics methods; to use supervised learning methods that represent evidence-based guidelines and detect medical fraud; to process and exchange structured and unstructured clinical data; to compare and analyze graphs (i.e., ECHO) and images (i.e., MRI/X-Ray); and to apply natural language processing techniques to ingest and analyze clinical data. Students will learn how to choose among various AI methods; integrate clinical data and algorithms; translate research applications into clinical practice; and perform longitudinal data analysis using primary sources of clinical data, such as electronic medical records, lab information systems, and imaging databases. Participants will combine research methods with real-world evidence to discover new ways of approaching drug performance and pharmacological surveillance through real-time aggregation and monitoring of health care provider databases. (3 credits)
**MI 6430—Methods of Health Care Analytics**
This course will introduce students to a variety of mathematical techniques that are commonly used in health care analytics and biomedical informatics. The emphasis will be on developing an understanding of the methods, their uses, and their limitations. Mathematical rigor would not be emphasized, but instead, an understanding of the meaning and uses of the techniques. The instruction would also include teaching a mathematical mindset to the students that will allow them to extend their knowledge and understanding to further areas as needed in their future endeavors. *(3 credits)*

**MI 6432—Big Data Analysis in Health Care**
This course provides a comprehensive and rigorous introduction to big data analytics in health care. It will describe the hardware/software infrastructures that are used today for big data (e.g., Hadoop, Hive) and the implications of these infrastructures for the accurate and efficient analysis of big data for health care applications. Students will learn the mathematical, statistical, artificial intelligence, and modeling techniques that have been developed for analysis of big data, especially for health care applications. Also, it will describe the visualization techniques that are useful for displaying big data analysis results for meaningful interpretation of the results by humans. It will use current, real-world problems involving big data analytics in health care, including the Big Data to Knowledge (BD2K) initiative of the National Institutes of Health. Students will gain experience in applying the techniques of big data analytics to health care problems. *(3 credits)*

**MI 6700—Computational Informatics**
This course will provide an introductory, hands-on experience for life science researchers in bioinformatics using R and Bioconductor. Emphasis will be placed on accessing, formatting, and visualizing genomics data. Most analyses will deal with “little” data (no mapping or assembly of short reads), but some techniques to work with “big” data (e.g., BAM files) will be covered. Lecture and lab will both be held in a computer lab, so lecture will be hands-on. Working in small groups is encouraged. *(3 credits)*

**MI 6900—Bioinformatics**
This course introduces the concepts and practice of bioinformatics. Topics of discussion include biological databases, sequence alignment, gene and protein structure prediction, molecular phylogenetics, genomics, and proteomics. This is a hands-on, skill-based class. Students will develop basic skills in the collection and presentation of bioinformatics data, as well as the rudiments of programming in a scripting language. *(3 credits)*

**MI 7000—Biomedical Informatics Project/Practicum**
This is a required course for all M.S. students. The practicum allows the student to select an area of interest in which to apply the theories, concepts, knowledge, and skills gained during the didactic courses in a real-world setting. The student will work under the supervision of a site-based preceptor and an NSU-based faculty adviser.

The student is expected to acquire skills and experiences in the application of basic biomedical informatics concepts and specialty knowledge to the solution of health information technology (HIT) problems. Students will be actively involved in the development, implementation, or evaluation of an informatics-based application or project.

A specific set of measurable learning objectives and deliverables will be determined by the student, the site preceptor, and the NSU-based faculty adviser. These learning objectives must be approved by the course director. The student’s area of interest would be determined at an earlier point in the program or by the needs of the precepting organization.

The practicum is evaluated by completion of an ePortfolio. The ePortfolio is an evidence-based digital format method used by the program to assess the quality and quantity of learning gained from a student practicum experience. The ePortfolio is standardized in its structure and format, yet individualized in its content for each student. Overall, the ePortfolio is goal-driven documentation of professional growth and achieved competencies during the practicum. The ePortfolio combines self-reflection, instructor assessments, and documentation supplied by students (evidence/samples) to document what they learned/produced. It is used to help students prepare for career transition/development. *(4 credits)*

Students are responsible for finding their own practicum site. Once a site is located, the program office will facilitate a legal affiliation agreement between the site and the program. Some practicum sites may require background checks, drug screening, and immunization records. Students are responsible for any associated costs.

**MI 8000—Biomedical Informatics Continuing Services**
This is an individualized course. *(1 credit)*
Disaster and Emergency Management Program

Program Overview

The Master of Science degree in Disaster and Emergency Management (M.S.) in the Dr. Kiran C. Patel College of Osteopathic Medicine is an interprofessional degree designed to provide students with the theoretical knowledge and applied skills to be part of the rapidly growing, interdisciplinary field of disaster and emergency management. It will allow students from a variety of disciplines to specialize in one of several concentrations (all of which have a community research practicum at the local, regional, state, federal, or international level as a key component). The program is available online and will incorporate interactive and individual, synchronous activities, including live, online class sessions. In addition, all students in the program will be required to participate in a final presentation at the conclusion of their studies. The concentrations for the Master of Science degree include maritime safety and security, cybersecurity, criminal justice, public health, environmental hazards, and fire administration. Distinct concentrations will allow the students to apply the principles of emergency management to these areas of particular interest and need.

The M.S. in Disaster and Emergency Management is designed to provide students with knowledge and skills, along with basic research application in the field that will help them acquire the competencies as outlined by the FEMA Emergency Management Higher Education Program and will prepare them to work in an all-hazards preparedness environment. Disaster management is a critical challenge and responsibility of government, businesses, educational institutions, nonprofit organizations, and health care agencies and institutions. Response to disasters begins long before the disaster occurs, involving pre-disaster planning, mid-disaster operations, and post-disaster recovery and reconstruction. A successful response can only be carried out through the coordinated efforts of all levels of government, the public and private sector stakeholders, and nongovernmental organizations, as well as the involvement of faith-based organizations.

The program will help meet the need for trained emergency management professionals at local, state, national, and international levels. The Master of Science in Disaster and Emergency Management not only develops the skills in leadership needed, but facilitates students in gaining specialized training in emergency management and disaster response related to: 1) maritime safety and security, 2) cybersecurity, 3) criminal justice, 4) public health, 5) environmental hazards, and/or 6) fire administration. With the increased threat of terrorism, law enforcement and public health personnel need additional training in the areas of response and recovery and fire fighters need additional skills to oversee their departments in this new landscape. As the threats of cyber-theft, cyber-crime, cyber-fraud, and cyber-warfare continue to increase, computer and IT professionals need additional training in protecting our nation’s assets and infrastructure. In addition, as the incidents of piracy on the high seas continue to grow and the potential for terrorists to attack our ports becomes more imminent, maritime security has become a high priority. As natural hazards continue to increase, environmental and meteorological experts are being called upon more and more for their input related to these disasters.

This degree program fits the mission of NSU in that it provides an “accessible distance learning” program while “fostering intellectual inquiry, leadership, and commitment to community through engagement of students” by providing an online curriculum that is convenient, but also offers ample student and faculty member engagement. The program fosters community involvement by requiring a community research capstone project. The curriculum also supports the mission of the Dr. Kiran C. Patel College of Osteopathic Medicine for “producing compassionate and ethical lifelong learners and advocating for the health and welfare of diverse patient populations” through its specialty concentration in public health, while the overarching goal of the degree to prepare communities to be more prepared and resilient to disasters serves the overall general health and welfare of all.

Program Objectives

By creating a cadre of individuals who interact with the public and private sectors, the program in disaster and emergency management can help to create an environment in which all-hazards initiatives include preparedness, mitigation, response, and recovery as the standard. Students who graduate from this program will achieve the following program objectives:

• provide leadership skills to individuals entering the field of emergency management and disaster response

• demonstrate leadership skills in planning for and responding to disaster and emergency situations (both natural and man made)

• identify, describe, and respond to the types of threats and risks associated with natural and man-made disasters

• demonstrate the skills to conduct a comprehensive vulnerability risk assessment at the community, county, state, and national levels

• demonstrate knowledge and skills of available tools and resources for disaster and emergency planning and response
• analyze the disaster process and differentiate disaster response actions, including recovery operations, from routine emergency operations
• exhibit competencies for disaster mitigation, response, and recovery at the individual, community, state, and federal levels
• demonstrate the knowledge and skills necessary to build resilience post-disaster in a variety of disaster settings
• enter the field of emergency management and be leaders within this discipline

Course of Study
The M.S. program consists of six core courses (18 credits hours) which include: 1) an introductory course in all-hazards preparedness; 2) applied research methods; 3) disaster planning and evaluation; 4) a course in management and leadership; 5) a course covering different types of potential hazards, threats, and impacts to a community; and 6) a community research practicum. Along with these core requirements, the student can choose one of several concentrations, or choose to pursue a more generalized educational program in disaster and emergency management.

If one of the six concentrations is chosen, it requires four courses (12 credit hours) from a list of courses related to that chosen concentration. To complete the degree, an additional two courses (6 credit hours) will be taken from any electives throughout the curriculum. These includes additional management and leadership courses, threats/hazards/impacts courses, general electives, or electives from any one of the six areas of concentration. If a more generalized program of study is desired, the student must take six courses (18 credit hours), in addition to the required courses, from any part of the curriculum. These may include additional management and leadership courses, threats/hazards/impacts courses, general electives, or any of the concentration electives. All students also have the option of choosing up to two courses (6 credit hours) from a preapproved selection of courses from the Master of Science in National Security Affairs and International Relations, a partner degree program offered by the College of Arts, Humanities, and Social Sciences. These credits would substitute for general electives in the M.S. DEM program of study.

In order to analyze the broad spectrum of hazardous events and to appropriately assess and employ the large volume and rapidly evolving literature in this field, all students are required to take an applied research course, an introductory course in all-hazards preparedness, and a course in writing and analyzing different types of disaster plans, as well as the practicum in their chosen specialization concentration. In addition to the four courses required for all students, each student must take a core of 3 credit hours from the Management and Leadership cluster and 3 credit hours from the Threats, Hazards, and Impacts cluster.

Realizing that disaster and emergency management often crosses the boundaries of interests, as well as the professional lines of homeland security and other disciplines, students in the program will be able to take courses from related programs at NSU, such as conflict resolution or national security affairs, as a substitute for up to 6 general elective credit hours (with permission of the adviser).

Accreditation
The program has been approved by the Southern Association of Colleges and Schools.

Admissions Requirements
The Master of Science in Disaster and Emergency Management program evaluates the overall quality of its applicants, including academic achievement, life experience, recommendations, knowledge of the field of emergency management, and personal motivation.

Though other criteria will be used to assess the overall quality of the applicant, the applicant must have
• a bachelor’s, master’s, doctoral, or terminal professional degree from a regionally accredited college or university or from a college or university accredited Distance Education and Training Council (DETC) Accrediting Commission
• a cumulative, overall grade point average (GPA) of 3.0 or above on a 4.0 scale from all institutions attended
• the ability to express himself or herself in writing through a written statement submitted with the application
• two letters of recommendation from college or university instructors, employers, work colleagues, etc.

Any applicant who has graduated from a college or university in another country where English is not the primary language, regardless of United States residency status, must obtain a minimum score of 550 on the written, 213 on the computerized, or 79–80 on the Internet-based TOEFL, a score of 54 on the Pearson Test of English—Academic, a score of 6.0 on the IELTS, or a score of at least 100 on the Duolingo English. An official set of scores must be sent directly from the testing service to NSU’s EPS.

GRE, MAT, or other professional program entrance exams (e.g., MCAT, LSAT, etc.) scores are preferred from all applicants except those who currently have a terminal degree (e.g., Ph.D., D.M.D., D.V.M., J.D., or D.O.) or those who already have a master’s degree from a regionally accredited U.S. university or college or from a college or university accredited by the Distance Education and Training Council (DETC) Accrediting Commission.
Commission. An applicant who does not provide a graduate or professional program entrance exam score will be required to attain a grade of B or higher in his or her first 9 credit hours in order to continue in the program.

**Application Procedures**
The M.S. in Disaster and Emergency Management program accepts applications year-round. Applicants may apply for matriculation into any one of three semesters (fall, winter, or summer).

For an application to be considered by the admissions committee, applicants must submit

- the online application found at [https://webSTAR.nova.edu/pls/PROD/bwskalog.P_DisploginNon](https://webSTAR.nova.edu/pls/PROD/bwskalog.P_DisploginNon) (Payment of a nonrefundable application fee of $50 is required to complete your application.)
- official transcripts of all coursework attempted by the applicant from all colleges and universities attended, including undergraduate, graduate, and professional education
- evidence of graduate or professional entrance exam scores no more than seven years old, if applicable
- two letters of recommendation from college or university instructors, employers, work colleagues, etc.
- a written statement

Please call 800-356-0026, ext. 21030, or visit our website ([osteopathic.nova.edu/msdem](osteopathic.nova.edu/msdem)) for further information.

**Nondegree-Seeking Students**
A nondegree-seeking student is one who wishes to take courses in the M.S. in Disaster and Emergency Management (DEM) program, but does not wish to pursue the master’s degree at the time of application. A limit of 15 credit hours will be allowed. The nondegree-seeking student must provide the following admissions requirements in order to take courses in the program:

- a completed online application form
- a nonrefundable application fee of $50
- official transcripts of all undergraduate, graduate, and professional education

If, after taking courses in the M.S. DEM program, a nondegree-seeking student chooses to pursue the degree, the student must submit a new and complete application to the program to become a degree-seeking student and must meet all requirements for admission into the degree program. Previous coursework as a nondegree-seeking student does not guarantee acceptance into the degree program. If accepted into the program as a degree-seeking student, previous coursework may be eligible for transfer toward the degree.

Graduate students from other NSU programs who elect to take courses in the degree program may do so with written approval of the degree program director.

**Tuition and Fees**
Tuition for 2020–2021 will be posted on our website ([osteopathic.nova.edu/msdem](osteopathic.nova.edu/msdem)). Courses with the MMIS or NSAM designation are offered at tuition rates determined by the college or program through which the courses are offered. A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually. All tuition and fees are subject to change by the board of trustees without notice. There is a registration fee of $30 each semester.

Program discounts are available to full-time law enforcement officers, fire fighters, emergency service personnel, and government disaster response personnel. Program discounts are also available for active duty military personnel and veterans. Please contact the program adviser for more information.

**Graduation Requirements**
In order for students to graduate and receive the M.S. in Disaster and Emergency Management degree, they must complete 36 credit hours from the list of courses outlined in this document. In addition, a cumulative grade point average of 3.0 must be attained. In lieu of a comprehensive exam or thesis, students must successfully complete a practicum in which they must receive a grade of C or better. Students will be required to present the findings and/or results of their practicums at the end of their program to faculty members.
Curriculum Outline

Core Courses (18 credit hours)

Required Courses (12 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM 5050</td>
<td>Bioterrorism and All-Hazards Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEM 5055</td>
<td>Disaster Planning and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6010</td>
<td>Practicum in Selected Track</td>
<td>3</td>
</tr>
</tbody>
</table>

Management and Leadership Cluster (3 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM 5010</td>
<td>Leadership and Organizational Behavior for Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEM 5020</td>
<td>Preparedness, Planning, Mitigation, and Continuity Management</td>
<td>3</td>
</tr>
<tr>
<td>DEM 5030</td>
<td>Executive Leadership and Administration</td>
<td>3</td>
</tr>
<tr>
<td>DEM 5040</td>
<td>Security Management in a Global Society</td>
<td>3</td>
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</tbody>
</table>

Threats, Hazards, and Impacts Cluster (3 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM 5060</td>
<td>Environmental Hazards in Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEM 5070</td>
<td>Risk Assessment and Mitigation</td>
<td>3</td>
</tr>
<tr>
<td>DEM 5080</td>
<td>Agroterrorism and Food System Disasters</td>
<td>3</td>
</tr>
<tr>
<td>DEM 5090</td>
<td>Weapons of Mass Threat and Communicable Diseases</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses (18 credit hours)

(Students must take four courses from the chosen concentration, if one was selected, plus two additional courses selected from the entire curriculum.)

General Electives (12 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>DEM 6120</td>
<td>Psychosocial Dimensions of Disaster</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6130</td>
<td>Risk and Crisis Communications</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6150</td>
<td>Grant Writing for Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6160</td>
<td>Leadership Topics in Disaster and Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6170</td>
<td>Elective Practicum</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6180</td>
<td>Exercise Design</td>
<td>3</td>
</tr>
</tbody>
</table>
### Maritime Safety and Security Concentration Electives (12 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM 6210</td>
<td>Introduction to Maritime Safety</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6220</td>
<td>Maritime Safety and Security Leadership</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6230</td>
<td>Maritime Safety for the Cruise and Yachting Industries</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6240</td>
<td>Concepts in Shipboard Safety Management</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6250</td>
<td>History of Maritime Disasters</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6260</td>
<td>Maritime Environmental Responsibilities</td>
<td>3</td>
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### Cybersecurity Concentration Electives (12 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM 6310</td>
<td>Introduction to Cybersecurity</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6320</td>
<td>Information Security and Protection</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6330</td>
<td>Cybersecurity and Constitutional Issues</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6340</td>
<td>Cyber Vulnerability</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6350</td>
<td>Data Mining</td>
<td>3</td>
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</table>

### Criminal Justice Concentration Electives (12 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>DEM 6423</td>
<td>Interagency Disaster Communication</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6424</td>
<td>Community Disaster Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6404</td>
<td>Community Planning, Response, and Recovery for Families and Children</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6410</td>
<td>Emergency Preparedness Public Policy and Law</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6440</td>
<td>Conflict Management in Times of Crisis</td>
<td>3</td>
</tr>
</tbody>
</table>

### Public Health Concentration Electives (12 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>DEM 6500</td>
<td>Epidemiology of Disasters</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6510</td>
<td>Public Health Issues in Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6141</td>
<td>Social Vulnerability: Implications in the Disaster Cycle</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6165</td>
<td>Healthcare Emergency Management</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5201</td>
<td>Foundations of Public Health</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5301</td>
<td>Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5314</td>
<td>Global Health</td>
<td>3</td>
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</tbody>
</table>

### Environmental Hazards Concentration Electives (12 credit hours)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>DEM 5060</td>
<td>Environmental Hazards in Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEM 5080</td>
<td>Agroterrorism and Food System Disasters</td>
<td>3</td>
</tr>
<tr>
<td>DEM 6260</td>
<td>Maritime Environmental Responsibilities</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5220</td>
<td>Environmental and Occupational Health</td>
<td>3</td>
</tr>
</tbody>
</table>
Course Descriptions

The main purpose of this course is to introduce students to quantitative and qualitative methods for conducting meaningful inquiry and research. They will gain an overview of research intent and design, methodology and technique, format and presentation, and data management and analysis informed by commonly used statistical methods. The course will develop each student’s ability to use this knowledge to become more effective as disaster and emergency management leaders. (3 credit hours)

**DEM 5050/PUH 5112/CJI 6121/HCP 6101/GERO 5050—Bioterrorism and All-Hazards Preparedness**
This course will define the interdisciplinary roles and responsibilities of professionals, paraprofessionals, and volunteers in all-hazards emergency planning, response, mitigation, and recovery. (3 credit hours)

**DEM 5055—Disaster Planning and Evaluation**
This course will address a critical component required of all emergency managers—that of developing and evaluating plans for disasters and community events on both large and small scales. The fundamental components of different types of plans, as well as required FEMA forms for planning and reporting, will be covered. Students will learn to prioritize planning efforts by assessing current strengths, needs, gaps, assets, and infrastructure capabilities, allowing them to integrate and coordinate efforts among government agencies and multi-jurisdictional efforts. Students will develop part of a plan as their final project. **Prerequisite:** DEM 5050 (3 credit hours)

**DEM 6010—Practicum**
This is a culminating capstone experience for all M.S. students. With faculty member approval, students will select a community-based project for a practicum in an emergency preparedness site or facility. The student is expected to acquire skills and experience in the application of emergency preparedness. (3 credit hours)

**Management and Leadership Cluster Core Courses**

**DEM 5010—Leadership and Organizational Behavior for Emergency Preparedness**
The application of effective leadership techniques and behaviors that influence them are a valued skillset that emergency preparedness professionals use to mobilize human resources. Understanding and responding to organizational behavior is a challenge that emergency managers routinely face. This course provides students with an understanding of various leadership and organizational theories in the context of emergency preparedness. Students will examine and develop a range of skills in a number of areas including the use of 21st-century management theories and practice, group dynamics, leadership and influence, conflict management, and the dynamics of positional power and authority. Students will acquire these skills through experiential learning, observation, and practice while learning practical strategies for their application for personal and professional growth in the emergency preparedness discipline. (3 credit hours)

**DEM 5020—Preparedness, Planning, Mitigation, and Continuity Management**
This course provides the student with an understanding of the techniques for in-house or on-site planning as well as community planning. Planning will be addressed from its position in the overall philosophy of comprehensive emergency management. Regulatory requirements for planning will be covered. Sample plans will be developed. (3 credit hours)
DEM 5030—Executive Leadership and Administration
Topics covered in this course include program planning and management, financial planning and management, managing information, managing people and time, personality types, leadership styles, decision-making skills, team-building skills and group dynamics, community-building skills, intergovernmental relationships, negotiating skills, communications skills, emergency preparedness ethics, and professionalism. (3 credit hours)

DEM 5040—Security Management in a Global Society
This course will examine security challenges and responses that face a global society including airport, maritime, rail, and auto safety. This course will provide students with the opportunity to investigate security management in other countries in order to make a comparison to U.S. security management systems. (3 credit hours)

Threats, Hazards, and Impacts Cluster
Core Courses
DEM 5060—Environmental Hazards in Emergency Preparedness
This course will provide a basic understanding of the variety of environmental hazards that can be associated with a variety of disasters and emergencies. Topics to be addressed include types of hazardous materials, their storage and transportation, hazardous waste, and a variety of physical and mechanical environmental hazards. Basic standards and regulations will be examined. Students will learn how to develop in-house and on-site emergency response contingency plans. (3 credit hours)

DEM 5070—Risk Assessment and Mitigation
The student will review the key concepts, methods, and practices of modern risk management through a detailed exploration and evaluation of hazard identification, vulnerability assessment, and risk analysis. Legal and political risk factors will be addressed. (3 credit hours)

DEM 5080—Agroterrorism and Food System Disasters
This course will introduce the student to the dangers and impacts of terrorist attacks against agricultural or food industry targets. The student will learn about potential targets, detection systems, vulnerability assessment, planning, and recovery. (3 credit hours)

DEM 5090/CJI 6122/HCP 6102—Weapons of Mass Threat and Communicable Diseases
This course will provide students with an understanding of pandemic influenza and other communicable diseases. Students will also be introduced to potential chemical, biological, radiological, nuclear, and explosive weapons and will learn the expectations of preparations and responses to a pandemic or CBRNE event. Prerequisite: DEM 5050/PUH 5112/CJI 6121 (3 credit hours)

General Electives
DEM 6120—Psychosocial Dimensions of Disaster
This course will focus on the psychological and behavioral health and psychological impacts of emergencies, disasters, and terrorism on survivors, responders, and communities. Topics will include identification and management of impacts and reactions, mental health systems and resources, Psychological First Aid (PFA), and considerations for vulnerable populations. (3 credit hours)

DEM 6130—Risk and Crisis Communication
Students will be exposed to the strategies and methodologies in the exchange of information among stakeholders about the nature, magnitude, significance, or control of a risk. The course will focus on helping students to build trust and explain complexities to individuals and groups when emergencies arise. (3 credit hours)

DEM 6150—Grant Writing for Emergency Preparedness
This course is an introduction to the skills needed to write a grant in the field of emergency preparedness. Each student will submit a grant as a culminating experience. (3 credit hours)

DEM 6160—Leadership Topics in Disaster and Emergency Preparedness
This is a didactic course in a specific area of interest in emergency preparedness and disaster management. Each leadership topic course will have a different DEM course number. Examples of courses include: The Use of Social Media in Disasters, Disasters Without Borders, and Ideological Views and Precepts of Terrorism. (3 credit hours)

DEM 6170—Elective Practicum
With faculty member approval, students will be allowed to select an additional community-based project for a practicum in an emergency preparedness facility. The facility and the area of focus for the project will be different from those selected for the required practicum. The student is expected to become familiar with a different area of emergency preparedness and develop additional skills from those developed in the required practicum in their chosen track. (1–3 credit hours)

DEM 6180—Exercise Design
Exercise design is much like scripting a play to make sure all of the players perform the correct actions and make the right decisions at the appropriate time. In this course, students will learn what comprises the various types of exercises (tabletop, functional, and full-scale) and explore the design process following a step-by-step process (needs assessment, scope,
In this course, students will learn how to address safety issues and improve safety awareness. This course will address the safety issues specific to the cruise and yachting industries. Topics will include keeping threats away from the vessel and protecting passengers’ lives and well-being. Prerequisite: DEM 6210 (3 credit hours)

DEM 6230—Maritime Security for the Cruise Line and Yachting Industries
This course will address the safety issues specific to the cruise and yachting industries. Topics will include keeping threats away from the vessel and protecting passengers’ lives and well-being. Prerequisite: DEM 6210 (3 credit hours)

DEM 6240—Concepts in Shipboard Safety Management
In this course, students will learn how to address safety issues such as medical emergencies, oil spills, fires, and collisions while underway or at dockside. Students will also learn to develop a contingency plan for a vessel, taking into consideration such things as geographical area of operation, environmental conditions, and the proximity or suitability of both onshore and offshore facilities. (3 credit hours)

DEM 6250—History of Maritime Disasters
This course will provide a historical understanding of the development of the maritime industry and will include topics such as piracy, commerce, naval warfare, and improvement in naval architecture. (3 credit hours)

DEM 6260—Maritime Environmental Responsibilities
This course introduces environmental politics and policy and examines the process through which environmental policy is generated. This course will also examine the stress placed on the marine environment by global growth, economic development, and modernization. (3 credit hours)

Cybersecurity Concentration Electives
(Note: This concentration will be facilitated in partnership with NSU’s College of Engineering and Computing.)

DEM 6310—Introduction to Cybersecurity
This course introduces students to the wide range of modern communications technologies. Use of these technologies by government and business entities for intelligence gathering, their limitations, and their vulnerabilities are presented to students. An overview of the history of computer hacking is covered. Additionally, a brief overview of law and policy concerning cyber communications are discussed, beginning with the National Security Act of 1947. (3 credit hours)

DEM 6320—Information Security and Protection
This course prepares students to assess the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation and maintenance of security devices, systems, and procedures. Reviews of past hacking, criminal, and terrorist (state and nonstate) attacks on information networks are a component of this course. (3 credit hours)

DEM 6330—Cybersecurity and Constitutional Issues
This course discusses telecommunications law and policy as it applies to the rapidly evolving technologies and capabilities of the Internet, telecommunications, satellites, and imagery systems available for commercial and government exploitation. The legal implications of a global Internet, recourses available to law enforcement, treaties, etc. are reviewed from an international perspective—including processes by which international cooperation is gained to deal with cyber threats. (3 credit hours)

DEM 6340—Cyber Vulnerability
Students discuss at length the reliability and vulnerability of computer-based technologies, biometrics, and security technologies. Included are case analyses of external (hacking) and internal (man-in-the-middle) attacks on government and private communications systems. (3 credit hours)

DEM 6350—Data Mining
This is a course in statistics particularly geared to pattern analysis, information continuity, and data recovery. Inferential and descriptive techniques for decision analysis are included. This course uses a variety of data bases associated with business, census, terrorism, and crime statistics from which students conduct research projects. Personal computers with fundamental software programs such as Excel, SPSS, or SAS are necessary for students to complete this course. (3 credit hours)
Criminal Justice Concentration Electives
(Note: This concentration will be facilitated in partnership with NSU’s College of Arts, Humanities, and Social Sciences.)

DEM 6423/CJI 6123—Interagency Disaster Communication
This course will examine concepts and principles of communication among the many agencies involved in disaster response and recovery. Topics such as the principles and organizational structure of the Incident Command System (ICS) and the National Incident Management System (NIMS) will be explored. Additional topics will include the principles of successful communication, the application of communication principles to all phases of the disaster cycle, mutual aid agreements, memoranda of understanding/agreement, the use of social media in disaster communications, and the role of the public information officer (PIO). Students will develop a communications annex plan as part of the course. (3 credit hours)

DEM 6424/CJI 6124—Community Disaster Preparedness
This course will emphasize “disaster-resistant communities” and will provide information on preparing and developing partnerships within the community. Regardless of the nature of the incident, intentional or unintentional, emergency services personnel may be charged with enforcing public health orders, securing contaminated areas or health facilities, providing protection and support for the transportation and dispensing of assets from the national stockpiles, and controlling civil unrest. Resources may be overwhelmed and the ability to respond will depend on preparation and partnerships within the community. (3 credit hours)

DEM 6404/HCP 6104—Community Planning, Response, and Recovery for Families and Children
This course is designed to address interdisciplinary roles in preparation and post-disaster community health among families and children. The course will focus on the impact of a disaster on health and family, dissemination of health information, and guides to family emergency planning. Topics will include best practice methods and evaluations of the impact of disaster on health and family, dissemination of health information, guides to family emergency planning, and avenues for public health and safety disciplines to interface with health management organizations. (3 credit hours)

DEM 6410/HCP 6103—Emergency Preparedness Public Policy and Law
This course will address relevant state and federal statutes that affect emergency preparedness. Students will explore the legal implications of mitigation and preparedness efforts and will also become familiar with legal resources available for future reference and research. (3 credit hours)

DEM 6440—Conflict Management in Times of Crisis
This course addresses one of the core competencies required of leaders in times of disasters and emergencies—namely, conflict management. Conflict is inevitable in times of crisis, and this course addresses conflict styles, conflict management techniques, communication skills that contribute to effective conflict resolution, and how to bring a strategic approach to managing conflict to support disaster response and recovery. (3 credit hours)

Public Health Concentration Electives
(Note: This concentration will be facilitated in partnership with the Public Health Program at NSU’s Dr. Kiran C. Patel College of Osteopathic Medicine)

DEM 6500—Epidemiology of Disasters
This course will examine the fundamentals of epidemiology, including basic concepts in epidemiology concerning the distribution and determinants of disease frequency in human populations and their investigation. Using a case-based approach, students will use the basic principles and methods of epidemiological investigation to assess the short-term and long-term effects of disasters and to predict consequences of future disasters. This course will address topic areas including basic demography, measures of disease frequency, disease screening and surveillance, descriptive and analytical study design, and sources of error in investigations. (3 credit hours)

DEM 6510—Public Health Issues in Disaster and Emergency Preparedness
This course will explore the pervasive views about public health in the emergency and disaster prevention, response, and recovery environment. The course will emphasize the importance of the integration of public health in the development of effective emergency response contingencies for disasters. (3 credit hours)

DEM 6141 Social Vulnerability: Implications in the Disaster Cycle
This course will identify the at-risk and vulnerable populations and discuss how each of these groups is affected in times of disaster. In addition, the course will address the special needs and emergency response efforts that must be considered for each of these groups. (3 credit hours)

DEM 6165 Healthcare Emergency Management
This course will provide an awareness of how Incident Command (ICS) is utilized in Healthcare, and orientate students to their roles and responsibilities as future healthcare leaders in evaluating the effectiveness in utilizing ICS in both non-emergency, and emergency scenarios. This course will introduce you to multiple scenarios in which ICS was utilized during a healthcare crises through the use of both case studies and established emergency management principals. Students
will be encouraged to discuss these responses and examine how our current Incident Command System could have improved upon the outcome of those incidents. (3 credit hours)

**PUH 5201—Foundations of Public Health**
This course provides an introduction to the history, concepts, values, principles, and practice of public health. The course suggests the sense of purpose that unites the myriad occupations and tasks in public health practice and provides an orientation to each of the five traditional core disciplines of public health practice. (3 credit hours)

**PUH 5301—Biostatistics**
This course focuses on the principles and reasoning underlying modern biostatistics and on specific inferential techniques commonly used in public health research. At course completion, students will be able to apply basic inferential methods in research endeavors and improve their abilities to understand the data analysis of health-related research articles. (3 credit hours)

**PUH 5314—Global Health**
This course addresses global health problems and trends translated to the needs and demands of populations, as well as the socioeconomic and political impact on health delivery. The role of international health agencies will also be addressed. (3 credit hours)

**Environmental Hazards Concentration Electives**

**DEM 5060—Environmental Hazards in Emergency Preparedness**
This course will provide a basic understanding of the variety of environmental hazards that can be associated with a variety of disasters and emergencies. Topics to be addressed include types of hazardous materials, their storage and transportation, hazardous waste, and a variety of physical and mechanical environmental hazards. Basic standards and regulations will be examined. Students will learn how to develop in-house and on-site emergency response contingency plans. (3 credit hours)

**DEM 5080—Agroterrorism and Food System Disasters**
This course will introduce the student to the dangers and impacts of terrorist attacks against agricultural or food industry targets. The student will learn about potential targets, detection systems, vulnerability assessment, planning, and recovery. (3 credit hours)

**DEM 6260—Maritime Environmental Responsibilities**
This course introduces environmental politics and policy and examines the process through which environmental policy is generated. This course will also examine the stress placed on the marine environment by global growth, economic development, and modernization. (3 credit hours)

**PUH 5220—Environmental and Occupational Health**
This course investigates environmental and occupational factors that contribute to the development of health problems in industrialized and developing countries. It includes such topics as toxic substances, pests and pesticides, food quality, air and water pollution, solid and hazardous waste disposal, occupational hazards, and injury prevention. (3 credit hours)

**Fire Administration Concentration Electives**

**DEM 5030—Executive Leadership and Administration**
Topics covered in the course include program planning and management, financial planning and management, managing information, managing people and time, personality types, leadership styles, decision-making skills, team-building skills, intergovernmental relationships, negotiating skills, communication skills, emergency preparedness ethics, and professionalism. (3 credit hours)

**DEM 6610—Fire Service Operations**
This course will explore the role of the fire department as a part of the emergency services and response community, as well as the greater community, during a disaster. The concept of risk-based decision-making for a more effective response during disasters or multiple casualty incidents will be addressed. Incident priorities, strategies, and tactics as they relate to preparedness, planning, and incident management, as well as de-escalation of the response, will also be discussed. (3 credit hours)

**DEM 6423/CJI 6123—Interagency Disaster Communication**
This course will examine concepts and principles of communication among the many agencies involved in disaster response and recovery. Topics such as the principles and organizational structure of the Incident Command System (ICS) and the National Incident Management System (NIMS) will be explored. Additional topics will include the principles of successful communication, the application of communication principles to all phases of the disaster cycle, mutual aid agreements, memoranda of understanding/agreement, the use of social media in disaster communications, and the role of the public information officer (PIO). Students will develop a communications annex plan as part of the course. (3 credit hours)
DEM 6424/CJI 6124—Community Disaster Preparedness
This course will emphasize “disaster-resistant communities” and will provide information on preparing and developing partnerships within the community. Regardless of the nature of the incident, intentional or unintentional, emergency services personnel may be charged with enforcing public health orders, securing contaminated areas or health facilities, providing protection and support for the transportation and dispensing of assets from the national stockpiles, and controlling civil unrest. Resources may be overwhelmed and the ability to respond will depend on preparation and partnerships within the community. (3 credit hours)

DEM 6410—Emergency Preparedness
Public Policy and Law
This course will address relevant state and federal statutes that affect emergency preparedness. Students will explore the legal implications of mitigation and preparedness efforts and will also become familiar with legal resources available for future reference and research. (3 credit hours)

DEM 6440—Conflict Management in Times of Crisis
This course addresses one of the core competencies required of leaders in times of disasters and emergencies—namely, conflict management. Conflict is inevitable in times of crisis, and this course addresses conflict styles, conflict-management techniques, communication skills that contribute to effective conflict resolution, and how to bring a strategic approach to managing conflict to support disaster response and recovery. (3 credit hours)

Interprofessional Electives
• MI 6421—Geographic Information Systems
• MI 6405—Public Health Informatics
• NSAM 5001—Current Historical Issues in National Security Affairs*
• NSAM 5002—Terrorists and Terrorism: Theory and Practice*
• NSAM 5003—National Intelligence Collection and Analysis: Theory and Practice*

*NSAM courses are offered at tuition rates designated by the NSAM Program.
Graduate Certificate in Social Medicine Program

The Graduate Certificate in Social Medicine will target medical residents, directors of medical education, residency program directors or anyone with an interest in learning more about global/social medicine. Over the past 15 years, there has been a growing national and international trend toward developing frameworks for defining, applying, teaching, and measuring the competency of a physician. Many organizations have developed criteria to define and measure competency. The Certificate in Social Medicine is designed to address these needs and enhance the experiences for residents to achieve program competencies. Residents will obtain additional information from this graduate-level program, which helps to achieve competency in several elements. Program directors and directors of medical education completing this certificate can impart their expertise to the residents.

Admissions Requirements

The Graduate Certificate in Social Medicine evaluates the overall quality of applicants, including academic achievement, personal motivation, knowledge about health care, and life experiences. Criteria for admission to the Graduate Certificate in Social Medicine are as follows:

- The applicant must hold a bachelor’s, master’s, or doctoral degree from a regionally accredited college or university.
- A cumulative grade point average (GPA) of 3.0 or above, on a 4.0 scale, is preferred.
- Applicants enrolled in another area of study within Nova Southeastern University must be in good academic standing, must provide a letter of recommendation from the dean or program director of the other college or program, and must meet the Graduate Certificate in Social Medicine admission requirements.
- All application materials must be received in a timely manner to enable the Office of Admissions and the admissions committee to process the application promptly.

Health care-related experience is desirable, but not required. If the applicant does not hold a health-related graduate or professional degree, he or she must supply evidence of having taken the GRE, PCAT, OAT, AHPAT, MCAT, DAT, GMAT, or LSAT. Applicants’ scores from these standardized tests must be no more than five years old. Applicants with health-related graduate or professional degrees may be required to submit official test scores upon evaluation of their applications.

Tuition and Fees

Tuition for 2020-2021 will be posted on our website (osteopathic.nova.edu/masters). A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $500 per semester for two or more courses and $250 per semester for one course, not to exceed $1,500 annually, is also required. All tuition and fees are subject to change by the board of trustees without notice.

Curriculum Outline

Students will complete a total of five courses of 3 credits each for a total of 15 credits.

Public Health Concentration (choose one for 3 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUH 5512</td>
<td>Health Policy Planning and Management</td>
</tr>
<tr>
<td>PUH 5430</td>
<td>Epidemiology</td>
</tr>
<tr>
<td>PUH 5301</td>
<td>Biostatistics</td>
</tr>
<tr>
<td>PUH 6120</td>
<td>Public Health Program Planning and Evaluation</td>
</tr>
</tbody>
</table>
Biomedical Informatics Concentration (choose one for 3 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI 5200</td>
<td>Survey of Medical Informatics</td>
</tr>
<tr>
<td>MI 5120</td>
<td>Management Information Systems in Health Care</td>
</tr>
<tr>
<td>MI 6405</td>
<td>Public Health Informatics</td>
</tr>
<tr>
<td>MI 6415</td>
<td>Information Technologies in Medicine and Telehealth</td>
</tr>
<tr>
<td>MI 6416</td>
<td>Lean Six Sigma for Health Care</td>
</tr>
</tbody>
</table>

Disaster and Emergency Management Concentration (choose one for 3 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM 6424</td>
<td>Community Disaster Preparedness</td>
</tr>
<tr>
<td>DEM 6404</td>
<td>Community Planning, Response, and Recovery for Families and Children</td>
</tr>
<tr>
<td>PUH 5201</td>
<td>Foundations of Public Health</td>
</tr>
<tr>
<td>DEM 6510</td>
<td>Public Health Issues in Disaster and Emergency Preparedness</td>
</tr>
<tr>
<td>DEM 6500</td>
<td>Epidemiology of Disasters</td>
</tr>
</tbody>
</table>

Elective (choose a second course from any of the previous concentrations for 3 credits)

Global Health Experience (complete all requirements listed below for 3 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUH 5314</td>
<td>Global Health</td>
</tr>
</tbody>
</table>

- complete 30 hours of approved community service
- participate in one NSU-COM medical outreach program

At the completion of the Graduate Certificate in Social Medicine program, students will have completed course offerings that may be applied to a master’s degree in one of the following three programs. Students will be advised as to which courses are accepted in the respective programs.

- Master of Public Health
- Master of Science in Biomedical Informatics
- Master of Science in Disaster and Emergency Management

Students must follow the application process for the respective chosen program, but the credits earned for the courses taken in earning the certificate will be transferred to the degree program.
Medical Education Program

Education is at a crossroads. Physicians and other health professionals are sought after to serve as educators in their respective professions. While they have strong recognition as experts in their clinical discipline, typically, they have little or no formal training in the educational process. Today’s students no longer merely watch, listen, and memorize information. Those medical professionals who choose to teach in the health professions must be guided by new innovations and contemporary technology in order to better understand how people learn.

It is important for educators in the health care professions to facilitate the learning process. Graduates of health programs should learn to connect and integrate multiple forms of reasoning (critical and creative thinking) and types of knowledge (formal and case-based) in order to provide the best patient care. Faculty members should be prepared to integrate formal knowledge and concepts fundamental to professional practice in a manner that is relevant to students and residents in a clinical context.

To this end, the Nova Southeastern University Dr. Kiran C. Patel College of Osteopathic Medicine has developed a Master of Science in Medical Education program. This 30-credit-hour, online degree program is designed to help health professionals enhance their professional education and teaching skills, as well as expand their ability to facilitate the learning process of students and residents in a variety of clinical teaching environments. The program is composed of 3-credit-hour courses and includes

- assessment and evaluation
- educational methodologies
- research
- technology in education
- learning styles

The rich, interprofessional platform of NSU’s Dr. Kiran C. Patel College of Osteopathic Medicine and Health Professions Division provides an excellent environment for this degree program, as it parallels the interprofessional delivery model of patient-care settings. The program incorporates the most recent educational technologies into a robust, 10-course program designed to be completed in one to two years; however, students have a maximum of six years to complete it.

Faculty members for the Master of Science in Medical Education program are recognized scholars and educators from NSU, as well as other major universities. They are carefully selected on the basis of their subject expertise, teaching abilities, and professional involvement. Most importantly, they are united in their desire to educate and to motivate students to use what they learn in the program to inspire others.

Master of Science in Medical Education program graduates may serve in a variety of educational roles in both university and hospital settings. These include residency program directors, department chairs, assistant deans, associate deans, designated institutional officers, and directors of medical education. The program provides graduates with an educational framework to pursue academic leadership positions. It also strengthens credentials for academic promotion.

Course of Study

The course of study was designed to develop professional educators with the knowledge and skills to lead in a dynamic and changing health care system. The program includes completion of the 10 required courses identified in the curriculum. Students are expected to demonstrate the application of content knowledge to their specific clinical profession and engage in robust dialogues with other health care professionals. To be eligible for the M.S. in Medical Education degree, students must satisfactorily complete the minimum 30 credit hours of coursework required, with a grade point average of 3.0 (B) or higher, within six years of matriculation.

Program Learning Objectives

The participant in the Master of Science in Medical Education Program will be able to

- demonstrate the ability to employ multiple methods to facilitate learning in a variety of health profession education settings
- design learning opportunities that incorporate the use of multiple forms of current and evolving technologies
- employ assessment strategies to determine the degree to which learners have achieved specified education and training outcomes
- identify and employ multiple learning principles in the provision of a broad range of instructional activities
- demonstrate the ability to design and conduct research and engage in scholarly activities in health professions education
- provide leadership in a health education setting using the knowledge of organizational structure and effective communication
Admissions Requirements

• The applicant must hold a bachelor’s, master’s, or doctoral degree from a regionally accredited college or university.

• A cumulative grade point average (GPA) of 3.0 or above, on a 4.0 scale, is preferred.

• Health care- and/or education-related experience is desirable, but not required.

• Applicants enrolled in another area of study within Nova Southeastern University must provide a letter of recommendation from the dean or program director of the other college or program, and must meet the M.S. in Medical Education admissions requirements.

• All application materials must be received in a timely manner to enable the Office of Admissions and the admissions committee to process the application promptly.

The applicant must participate in an interview, if one is offered. Once the application is complete, the Committee on Admissions will decide whether the application is competitive and warrants an invitation for a personal interview. Interviews are conducted by faculty members and are by invitation only. An invitation to interview is not a guarantee of admission. Once a decision has been made, notification is sent via email to the address on file.

Application Procedures
The Office of Admissions processes applications on a year-round basis. Students are admitted to begin studies during the fall, winter, or summer semesters. To be considered for admission, all applicants must

• submit a completed online application with a nonrefundable application fee of $50

• submit official transcripts of undergraduate, graduate, and professional education

• provide one letter of recommendation from a professional reference

All application materials should be sent to
Nova Southeastern University
Enrollment Processing Services (EPS)
Dr. Kiran C. Patel College of Osteopathic Medicine
Medical Ed. Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

Upon receipt of the completed application and required materials, the Admissions Committee will review the applicant’s file and make recommendations to the program director. The director submits recommendations for admission to the dean. The final decision on admission is made by the dean of the Dr. Kiran C. Patel College of Osteopathic Medicine.

Tuition and Fees
Tuition for 2020–2021 will be posted on our website (osteopathic.nova.edu/msme). A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually. All tuition and fees are subject to change by the board of trustees without notice. There is a registration fee of $30 each semester.

Transfer of Credits
Applicants or enrollees of the NSU-KPCOM Master of Science in Medical Education program may petition for a transfer of a maximum of 6 credit hours toward their degree from a regionally accredited institution for degree-seeking students. Any exceptions require the written approval of the program director. To be considered for transfer of credit, courses must have been completed less than three years prior to the beginning of the student’s first semester in the program. All courses to be transferred must be substantially equivalent to courses offered in the program, as determined by the program director and appropriate faculty members. All courses considered for transfer into the program must have been successfully completed with a grade of B (80 percent) or better. An accepted applicant to the program who wishes to receive transfer credit must submit a written request and the appropriate verification documents (e.g., official transcripts, syllabi, and catalogs) to the program director.
Graduation Requirements

To be eligible for the Master of Science in Medical Education degree, students must fulfill the following requirements:

- satisfactorily complete, with a grade point average of B (3.0) or higher, within six years of matriculation, the course of study required for the M.S. (minimum of 30 credit hours of coursework)

- satisfactorily meet all university financial and library obligations.

Curriculum Requirements

To develop a comprehensive Master of Science in Medical Education Program at NSU-KPCOM, a curriculum has been developed that includes teaching and learning, technology, curriculum development, assessment and measurement, research, and leadership. The didactic courses will be offered online using NSU's state-of-the-art, web-based distance learning technology, as well as on-site resources.

Curriculum Outline

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MED 0600 Teaching Medical and Other Health Professions Students in a Diverse Learning Environment</td>
<td>3</td>
</tr>
<tr>
<td>MED 0620 Technology Resources for Health Professions Education</td>
<td>3</td>
</tr>
<tr>
<td>MED 0630 Effective Instruction Strategies in Health Professions Education</td>
<td>3</td>
</tr>
<tr>
<td>MED 0640 Assessment and Measurement in Health Professions Education</td>
<td>3</td>
</tr>
<tr>
<td>MED 0650 Research in Health Professions Education</td>
<td>3</td>
</tr>
<tr>
<td>MED 0660 Transformative Leadership and Organizational Change in Health Professions Education</td>
<td>3</td>
</tr>
<tr>
<td>MED 0670 Instructional Design and Presentation for Health Educators</td>
<td>3</td>
</tr>
<tr>
<td>MED 0690 Professional Ethics and Health Law</td>
<td>3</td>
</tr>
<tr>
<td>MED 0700 Foundations of Mentoring for Health Educators</td>
<td>3</td>
</tr>
<tr>
<td>MED 0710 Effective Interpersonal Communication and Collaboration in a Health Professions Environment</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 30

Course Descriptions

MED 0600—Teaching Medical and Other Health Professions Students in a Diverse Learning Environment

This course will assist the participants in adapting instruction in their medical area of expertise to the ways in which their individual students learn best. Research in the field of education suggests that students’ academic performance improves when instructors match their instructional strategies to students’ learning styles. The practicum will include guidelines for identifying students’ learning preferences and identifying instructional strategies and environments to address these preferences. (3 credit hours)

MED 0620—Technology Resources for Health Professions Education

This course will help the student become familiar with current and emerging technologies used to deliver or facilitate instruction. Participants will learn about the various computer technologies used in the classroom as well as other environments where health professions students learn. They will also become familiar with various online resources appropriate to the health professions education process. Experiences in emerging technologies—such as robotic
simulation, gaming, and virtual world tools—will be used to create instructional modules within respective health career fields. (3 credit hours)

**MED 0630—Effective Instruction Strategies in Health Professions Education**
This course is designed to assist faculty members in the improvement of their teaching skills in formal, informal, and nontraditional settings. Topics addressed include theories, principles, and practices associated with effective education and learning in higher education. Course activities and assignments are designed to encourage participants to develop skills and abilities that enhance the teaching and learning processes. The course will also explore the diversity of student populations within health care education and find practical solutions to current problems. (3 credit hours)

**MED 0640—Assessment and Measurement in Health Professions Education**
This course is designed to address the need for health services professionals to understand the principles, use, and applications of assessment and evaluation of learning. The course examines traditional and alternative views of assessment and evaluation, with attention given to the creation of assessment plans, documents, and systems, as well as to the development of assessment instruments to be used to ascertain levels of student understanding. (3 credit hours)

**MED 0650—Research in Health Professions Education**
This course will provide an introduction and experience in research methodologies employed in social science research. This project-based course focuses on social science and health professions education research design, scientific method, developing a hypothesis, and conceptualizing and operationalizing variables. The course will also provide an introduction to the four main social scientific research methods: available data, survey research, experiments, and field research. The course will culminate with a final research project that will allow the student to demonstrate mastery of a scientific research protocol and the ability to obtain grant support for a research project. (3 credit hours)

**MED 0660—Transformative Leadership and Organizational Change in Health Professions Education**
This course will teach learners effective strategies how to appropriately motivate and influence to create change in their organization. Instruction includes an introduction to the organizational structure of academic health professions programs, institutional effectiveness, educational policy development, and leadership assessment. (3 credit hours)

**MED 0670—Instructional Design and Presentation for Health Educators**
This course is designed to give students the knowledge and skills to create dynamic learning environments. Topics include effective speaking, multidimensional approaches to instruction, purposeful use of technology, and creative presentation design. (3 credit hours)

**MED 0690—Professional Ethics and Health Law**
This course will examine the importance of professional ethics in health professions education. Students will be introduced to common ethical dilemmas faced by health care practitioners. Topics, such as patient privacy, advance directives, and informed consent, will be addressed in the context of health care laws. (3 credit hours)

**MED 0700—Foundations of Mentoring for Health Educators**
This course will allow students to develop the skills necessary to serve as a mentor and/or adviser to health professions students. It will examine the role of health professionals as educators, while exploring topics such as clinical preceptorship, remediation, facilitating and supporting effective learning, and creating sound mentor-mentee relationships. (3 credit hours)

**MED 0710—Effective Interpersonal Communication and Collaboration in a Health Professions Environment**
In this course, students will explore the importance of effective communication, specific to learning and clinical environments, including the roles of gender and culture, concepts of verbal and nonverbal expression, conflict resolution, and active listening. (3 credit hours)
Nutrition Program

The Dr. Kiran C. Patel College of Osteopathic Medicine (KPCOM) offers an innovative Master of Science (M.S.) degree in Nutrition in response to the growing demand for qualified nutrition experts who are prepared at a mastery level. Ongoing changes in the American health care system have increased demand for wellness and preventative services, which include nutrition in almost all areas of practice. Nutrition assessment and intervention for chronic diseases are important components of health care reform mandates. NSU’s program is designed to further the education of those who want to integrate nutrition into other health professions and complement the academic preparation for those who wish to enter the field of nutrition and dietetics.

This 30-credit-hour, online degree program incorporates technology and tools in distance learning through synchronous meetings and self-directed activities to maximize the student’s experience in the courses. The generalist curriculum offers a wide variety of topics, so that students may customize their program of study or select concentrations in several areas to further specialize. In addition, all students are encouraged to spend time on campus for orientation and at the end of the program to present their final projects and to participate in graduation ceremonies.

The rich, interprofessional platform of NSU’s Dr. Kiran C. Patel College of Osteopathic Medicine and Health Professions Division provides an excellent environment for this degree program. Optimizing the nutritional status and well-being of clients is an integral part of the practice of medicine and other health professions. Elective courses are open to students from other related programs, such as osteopathic medicine, public health, and biomedical informatics.

This degree program is intended to provide a strong educational foundation in human nutrition, applied sciences, and health promotion for health care practitioners, and to prepare nutritionists and dietitians to work in a variety of settings at the mastery level of practice. Some of the settings where our students find jobs include hospitals, long-term care facilities, physician offices/private clinics, outpatient care centers, schools and universities, home health, corporations, athletic training centers or gyms, health departments, food production centers and plants, health care insurance companies, and private consulting businesses. The job outlook for appropriately trained dietitians and nutritionists is better than the average for other health-related disciplines. With the aging of America and the growth worldwide of people over age 65, nutritionists also play a key role in senior health, positive aging, preventative care, and managing chronic disease.

According to the U.S. Bureau of Labor Statistics (2019), employment in the nutrition field is expected to increase 8 percent during the next seven years. Job growth is primarily expected in the areas of wellness, prevention of disease with diet and foods, and greater integration of nutrition practice into primary care. Career outlooks incorporate a variety of specialties and settings.

The M.S. in Nutrition degree will meet the future standards of practice for Registered Dietitian Nutritionists, which take effect in 2024 and require a minimum level of preparation with a master’s degree in nutrition or similar field. Those applicants seeking eligibility for entry-level practice should consider the Professional Practice Concentration (74 credit hours). This is a coordinated graduate degree program, providing about 1,200 hours in supervised experiential learning, that has been approved by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) to prepare registered dietitian nutritionists. Please consult local licensing and scope of practice laws to determine what training and credentials are required in the intended state of practice.

Possible career options include:

- health educator or school nutritionist
- nutrition and culinary entrepreneur
- nutrition consultant over the life cycle
- specialized clinical dietitian/nutritionist
- health/lifestyle coach or consultant
- college instructor
- corporate wellness educator
- employee health and wellness coordinator
- media and communications specialist
- personal trainer/health and fitness instructor

The M.S. in Nutrition is approved by the Board of Certified Nutrition Specialists (BCNS) to fulfill all the current academic requirements for the Certified Nutrition Specialist (CNS) credential. The BCNS requires a graduate degree in the field of nutrition from a regionally accredited university, specific coursework, and 1,000 hours of supervised practice experience. The BCNS reviews each candidate individually—including descriptions of current courses being taken, transcripts, and experience—to determine eligibility. To learn more about becoming a CNS, visit https://theana.org/certify/CNScandidate.

The program may also provide a source of continuing graduate education for students from the athletic training, exercise...
science, nutrition practice, and physical education programs. The M.S. in Nutrition provides an excellent interprofessional graduate degree for students in other health professions, such as medicine, dentistry, optometry, or pharmacy.

Course of Study
The curriculum is designed so that all students receive a 21-credit-hour core in the fundamentals of nutrition. Included in those requirements, all students complete a culminating capstone project on an original individual research topic or community-based impact idea for implementation. Both involve the basic components or research—collecting data and translating information into a meaningful idea that advances the state of nutrition practice. Students select electives to a generalist program of study or can declare concentrations in sports nutrition, community nutrition, functional nutrition and herbal therapy, nutrition research, or professional practice. As the requirements for the Professional Practice Concentration are highly prescribed, please see the dedicated section to this option for full details. Most students take one or two courses each term. All students must complete the program within six years from the date of matriculation. A full-time graduate course of study is 6 credit hours per term for at least the fall and winter semesters.

Program Mission
The Mission of the Master of Science in Nutrition is to develop a cadre of interprofessional leaders who integrate and promote the role of nutrition in a dynamic and changing society.

Program Goals
1. Prepare graduates who demonstrate critical thinking skills and the ability to solve problems in the nutritional sciences.
2. Prepare graduates who formulate and communicate nutrition information using effective strategies, advocacy, and integrated systems of care.
3. Prepare graduates who apply concepts of social influence, cultural competence, and environmental dimensions of nutrition within the community.
4. Prepare graduates who promote health and wellbeing throughout the life course by applying knowledge of human metabolism and nutrient functions, assessment techniques, and emerging evidence to inform practice.

Admissions Requirements
The Master of Science in Nutrition program evaluates the overall quality of its applicants, looking at academic achievement, personal motivation, knowledge of health care, profession-related experience, and recommendation.

Specific criteria for admission are as follows:
• The applicant must hold a bachelor’s, master’s, doctoral, or terminal professional degree from a regionally accredited college or university (international applicants must provide evidence of institutional approval or acceptance).
• A cumulative overall grade point average (GPA) of 3.0 or above, from all institutions attended and/or graduated from, on a 4.0 scale (or equivalent) is preferred.
• One letter of recommendation is required. Applicants will be assessed on key areas such as leadership skills, interpersonal skills, stress management, etc. The letter may be submitted by an instructor from the applicant’s institution of higher learning or from an employer or work colleague who is not a relative or spouse.
• The applicant must show the ability to clearly express himself or herself in writing, as demonstrated by a written statement submitted in the application to the program.

Prerequisites
Prospective applicants must show satisfactory completion (a grade of C or higher) of at least one semester of each of the following courses, taken at a regionally accredited college or university:
- anatomy and physiology (or equivalent course approved by program director)
- biology
- organic chemistry

Completion of one semester course of biochemistry is preferred, but not required. All prospective applicants are invited to contact the program office to develop a plan for entry into the program.

In addition to the above requirements, prospective applicants to the Professional Practice Concentration (ACEND Accreditation) must also have satisfactory completion (a grade of C or higher) of at least one semester of each of the following courses, taken at a regionally accredited college or university:
- general chemistry
- human nutrition
- microbiology
- statistics

University policy will be followed in terms of acceptance of transfer credits (refer to Transfer of Credits section).
Application Procedures

The Office of Admissions processes applications on a year-round basis. Students are admitted on a rolling basis each term. To be considered by the admissions committee, all applicants must

• complete the online application
• send the nonrefundable application fee of $50
• provide one letter of recommendation (Additional letters of recommendation may be considered, especially if they represent a candidate’s abilities to succeed in a graduate academic program.)
• submit official transcripts of all undergraduate, graduate, and professional education

Coursework taken at foreign institutions must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization. Agencies that can complete this evaluation can be found by going to the website at nova.edu/internationalstudents/prospective/creditservices.html.

Applicants to the Professional Practice Concentration must also complete a successful interview. Application to the program does not guarantee an invitation to interview or acceptance.

Please mail all supplemental admissions material to

Nova Southeastern University
Enrollment Processing Services (EPS)
Dr. Kiran C. Patel College of Osteopathic Medicine
Nutrition Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

Upon receipt of the completed application and required materials, the Committee on Admissions will review the application and the applicant’s file and make recommendations to the program director. The director will submit his or her recommendation on admission to the dean. The final decision on admission is made by the dean of NSU-KPCOM. Should you have any questions, please call (954) 262-1850.

Professional Practice Concentration

The Master of Science in Nutrition degree can meet the future standards of practice for registered dietitian nutritionists that take effect in 2024 and require a minimum level of preparation with a master’s degree in nutrition or a similar field. Those applicants seeking eligibility for entry-level practice should consider the Professional Practice Concentration (74 credit hours). This is a coordinated graduate degree program, providing about 1,200 hours in supervised experiential learning, approved by the Accreditation Council for Education in Nutrition and Dietetics (ACEND)® to prepare registered dietitian nutritionists. Please consult local licensing and scope of practice laws to determine what training and credentials are required in the intended state of practice. Refer to the curriculum outline for details.

Certified Nutrition Specialists

The M.S. in Nutrition degree is approved to meet the educational requirements to qualify for the credential of Certified Nutrition Specialist (CNS). The Board of Certified Nutrition Specialists (BCNS) requires a graduate degree in the field of nutrition from a regionally accredited university, specific coursework, and 1,000 hours of supervised practice experience. The BCNS reviews each candidate individually—including descriptions of current courses being taken, transcripts, and experience—to determine eligibility. This program may provide up to 300 hours of supervised practice experience, depending on courses taken. Interested candidates should work with an academic adviser to determine the best options to meet individual goals.

Nondegree-Seeking Students

A nondegree-seeking student is one who wishes to take courses in the Master of Science in Nutrition program, but does not intend to pursue the master’s degree at the time of application. This short-term status is a beneficial option to attend classes within the program as an exploratory step or engage with the program faculty members and students while the nondegree-seeking student prepares final prerequisites to move forward with the full degree plan. The nondegree-seeking student must provide the following admissions requirements in order to take classes in the Master of Science in Nutrition program:

• a completed online application form
• a nonrefundable application fee of $50
• official transcripts of all undergraduate, graduate, and professional education

Nondegree-seeking students are not guaranteed future acceptance into the Master of Science in Nutrition program. If, after taking classes in the program as a nondegree-seeking student, the student wishes to become degree seeking, he or she must apply to the Master of Science in Nutrition program as a new student and meet all the requirements for admission. If accepted into the degree program, credits with the prefix NUT that were taken as a nondegree-seeking student will be automatically applied toward the degree. Nondegree seeking students can enroll only in a maximum of four courses or 12 credit hours.
International Applicants

International students who wish to be considered for admissions must submit official course-by-course evaluations of all foreign transcripts. (Agencies that can complete this evaluation can be found at nova.edu/internationalaffairs/students/prospective/credentialservices.) Applicants whose native language is not English are required to demonstrate English proficiency. The standardized tests listed below currently satisfy the university’s English requirement for nonnative English speakers.

- Test of English as a Foreign Language (TOEFL): score of 213 on the computer-based test or 79–80 on the Internet-based test
- International English Language Testing System (IELTS): score of 6.0 on the test module
- Pearson Test of English—Academic: score of 54
- GMAT: score of 450
- GRE: score of 1000 (old format) or score of 306 (new format)
- Scholastic Assessment Test (SAT): score of at least 500 in the reading section
- American College Test (ACT): score of at least 20 on the verbal section
- Duolingo English Proficiency: score of at least 100

Test results must be sent directly from the testing agency to the center you applied to. Proof of English language competency can also be in the form of successful completion of a degree at an approved U.S. institution of higher education.

Transfer of Credits

Applicants or enrollees of the Master of Science in Nutrition program may petition for a transfer of a maximum of 6 credit hours toward their degree from a regionally accredited institution for degree-seeking students. To be considered for transfer of credit, courses must have been completed less than three years prior to the beginning of the student’s first semester in the program and can’t apply to the degree conferral of any other academic program. All courses to be transferred must be substantially equivalent to courses offered in the program, as determined by the program director and appropriate faculty members. All courses considered for transfer into the program must have been successfully completed with a grade of B (80 percent) or better. Transfer course grades are not calculated toward the student’s grade point average. An accepted applicant to the program who wishes to receive transfer credit must submit a written request and the appropriate verification documents (e.g., official transcripts, syllabi, and catalogs) to the program director.

Graduation Requirements

To be eligible for the Master of Science in Nutrition degree, students must fulfill the following requirements:

- satisfactorily complete, with a grade point average of B (3.0) or higher, within seven years of matriculation, the course of study required for the Master of Science in Nutrition degree (minimum of 30 credit hours of courses and any required additional courses, if applicable) or graduate certificates (minimum of 15 credit hours of courses and any required additional courses, if applicable, dependent on the specific certificate granted)
- satisfactorily meet all university financial and library obligations

Upon satisfactory completion of degree requirements, the student is expected to attend the rehearsal and spring commencement program, at which time the degree is conferred. Students in the program are required to visit the NSU campus twice during their course of study, once at the beginning of the program and once at the end to present their research/special project and to participate in graduation.
Curriculum Requirements
To develop a comprehensive Master of Science in Nutrition program, a curriculum has been developed that includes education and communication, interprofessional care, research, and nutrition leadership. The didactic courses will be offered online using synchronous meetings hosted by faculty members (using NSU’s web-based learning management system), as well as on-site. Courses will incorporate the most recent technologies, such as webinars, class polling, video capture, and other interactive modalities.

Curriculum outlines of the general program and specific concentrations are provided in the next section.

The Master of Science in Nutrition Professional Practice Concentration has been granted Candidacy by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) as the only pathway by which candidates are qualified to become registered dietitian nutritionists.

The Board of Certified Nutrition Specialists (BCNS) has approved a general degree program to meet the educational requirements to qualify for the credential of Certified Nutrition Specialist (CNS).

Graduate Certificate in Functional Nutrition and Herbal Therapy
The Graduate Certificate in Functional Nutrition and Herbal Therapy is designed for practicing health professionals to understand the tenets of herbal and functional nutrition in a systems-based approach. The program’s courses will highlight functionality of body systems, etiology of diseases, toxic reactions of herbs, interactions with medications, herbal therapy for special populations, dietary approaches to imbalances in the body, and the roles of health care professionals in educating patients on using herbal supplements safely. Graduates will gain additional practice competencies and skills to integrate valuable information into the care of patients.

Criteria for admission are as follows:
• The applicant must hold a bachelor’s degree or higher from a regionally accredited college or university.
• A cumulative grade point average (GPA) of 3.0 or above on a scale of 4.0 is preferred.
• The applicant must be a practicing health-related professional or enrolled with qualifying credentials within a professional program.

Applicants must provide the following:
• a completed application form
• official transcripts
• a nonrefundable application fee of $50
• one letter of recommendation (professional)

Curriculum
This certificate option consists of 15 credit hours of graduate-level courses.

Students must successfully complete the following four courses:
NUT 5075 Advanced Practice Principles of Functional Nutrition 3.0 Credit Hours
NUT 5200 Nutritional Biochemistry 3.0 Credit Hours
NUT 5305 Clinical Approach to Functional Nutrition 1: Gastrointestinal Systems 3.0 Credit Hours
NUT 5315 Clinical Approach to Functional Nutrition 2: Endocrine, Immune and Nervous Systems 3.0 Credit Hours
NUT 5325 Clinical Approach to Functional Nutrition 3: Cardiovascular and Musculoskeletal Systems 3.0 Credit Hours

If, after taking courses in the certificate program, a certificate-seeking student decides to pursue the Master of Science in Nutrition degree, the student must submit a new and complete application to become a degree-seeking student and meet all of the degree program requirements.

For more information on the graduate certificate in functional nutrition and herbal therapy, please visit our website (osteopathic.nova.edu/ms-nutrition/functional-nutrition-herbal-therapy.html)
## Curriculum Outline

### Required Courses (21 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUT 5025</td>
<td>Nutrition Across the Life Span</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5120</td>
<td>Nutrition Advocacy and Interprofessional Leadership</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5200</td>
<td>Nutritional Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6105</td>
<td>Wellness and Healthy Weight</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6400</td>
<td>Nutritional Assessment and Medical Nutrition Therapy</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6450</td>
<td>Advanced Concepts in Nutrition Science</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6805</td>
<td>Applied Nutrition Capstone</td>
<td>3</td>
</tr>
</tbody>
</table>

Nutrition concentrations are outlined below.

### Community Nutrition Concentration Requirements

(four required courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUT 5100</td>
<td>World Culture, Food, and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5110</td>
<td>Foundations of Community Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5400</td>
<td>Psychology of Eating</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5430</td>
<td>Epidemiology</td>
<td>3</td>
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</tbody>
</table>

### Functional Nutrition and Herbal Therapy Concentration Requirements

(four required courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUT 5075</td>
<td>Advanced Practice Principles of Functional Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5200</td>
<td>Nutritional Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5305</td>
<td>Clinical Approach to Functional Nutrition 1: GI Systems</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5315</td>
<td>Clinical Approach to Functional Nutrition 2: Endocrine, Immune and Nervous Systems</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5325</td>
<td>Clinical Approach to Functional Nutrition 3: Nervous, Cardiovascular and Musculoskeletal Systems</td>
<td>3</td>
</tr>
</tbody>
</table>
### Nutrition Research Concentration Requirements

<table>
<thead>
<tr>
<th>Required Courses (12 credit hours)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUH 5430 Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6200 Evidence-Based Outcomes in Nutrition Research</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6800 Special Project I</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6801 Special Project II</td>
<td>3</td>
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</table>

### Professional Practice Concentration

(All courses listed below are required)

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUT 5000 Foundations of Professional Practice in Nutrition and Dietetics</td>
<td>2</td>
</tr>
<tr>
<td>NUT 5025 Nutrition Across the Life Span</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5075 Advanced Practice Principles of Functional Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5100 World Culture, Food, and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5110 Foundations of Community Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5131 Counseling and Communications Lab</td>
<td>2</td>
</tr>
<tr>
<td>NUT 5170 Management of Food and Nutrition Systems</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6105 Wellness and Healthy Weight</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6150 Culinary Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>NUT 6151 Applied Culinary Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>NUT 6500 Advanced Medical Nutrition Therapy</td>
<td>3</td>
</tr>
<tr>
<td>NUT 7000 Professional Seminar</td>
<td>2</td>
</tr>
<tr>
<td>NUT 8000 Comprehensive Exam</td>
<td>1</td>
</tr>
<tr>
<td>NUT 8001 Nutrition Practicum I</td>
<td>5</td>
</tr>
<tr>
<td>NUT 8002 Nutrition Practicum II</td>
<td>8</td>
</tr>
<tr>
<td>NUT 8003 Nutrition Practicum III</td>
<td>8</td>
</tr>
</tbody>
</table>
### Sport Nutrition Concentration Requirements

(four required courses)

<table>
<thead>
<tr>
<th>Required Courses (12 credit hours)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUT 5050 Nutrition and Exercise Performance</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5060 Strength and Conditioning for Nutrition Professionals</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6700 Advanced Sports Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6750 Dietary and Sports Supplements</td>
<td>3</td>
</tr>
</tbody>
</table>

### Nutrition Elective Courses

<table>
<thead>
<tr>
<th>Elective Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MED 0630 Effective Instruction Strategies for Health Professions Education</td>
<td>3</td>
</tr>
<tr>
<td>MED 0710 Effective Interpersonal Communication and Collaboration in the Health Professions Environment</td>
<td>3</td>
</tr>
<tr>
<td>MI 5100 Survey of Biomedical Informatics</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5025 Nutrition Across the Life Span</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5040 Functional Foods in Society Today</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5050 Nutrition and Exercise Performance</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5060 Strength and Conditioning for Nutrition Professionals</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5075 Advanced Practice Principles of Functional Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5100 World Culture, Food, and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5110 Foundations of Community Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5305 Clinical Approach to Functional Nutrition 1: GI Systems</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5315 Clinical Approach to Functional Nutrition 2: Endocrine, Immune and Nervous Systems</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5325 Clinical Approach to Functional Nutrition 3: Nervous, Cardiovascular and Musculoskeletal Systems</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5400 Psychology of Eating</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5700 Vegetarian and Plant-Based Eating Patterns</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6105 Wellness and Healthy Weight</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6750 Dietary and Sports Supplements</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6900 Current Topics in Nutrition (offered as necessary or on demand as new topics arise)</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5430 Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5513 Public Health Nutrition</td>
<td>3</td>
</tr>
</tbody>
</table>
Course Descriptions

NUT 5000—Foundations of Professional Practice in Nutrition and Dietetics
This course introduces foundations and applications of the career practice of registered dietitian nutritionists. Graduate students will explore standards of practice, ethics of the profession, continuing competence, and medical/legal aspects as a general orientation to the profession. Restricted to Professional Practice Concentration students. (2 credit hours)

NUT 5025—Nutrition Across the Life Span
This course will present the fundamentals of normal nutrition from preconception to mature age. Special attention is given to clinical and nutritional interventions that apply to each part of the life cycle. In addition to the essential nutrition concepts, physiological principles, and nutritional recommendations, students will apply practical concepts at each stage in development, with particular emphasis on cultural differences and individual requirements through case studies. (3 credit hours)

NUT 5040—Functional Foods in Society Today
This course will examine food components and substances with physiological activity of interest in society today other than macronutrients and micronutrients. Students will be able to define and describe metabolic and health promotion roles and apply accurate information. (3 credit hours)

NUT 5050—Nutrition and Exercise Performance
This course will provide the graduate student with the knowledge and skills to perform nutrition assessments and education targeted towards the athlete and the active individual. Students will develop nutritional plans taking into account the effects of acute and chronic exercise on nutrients and exercise performance. Students will develop skills to conduct clinical, biochemical, and physical measures beneficial to individualized sports nutrition assessment. (3 credit hours)

NUT 5060—Strength and Conditioning for Nutrition Professionals
This course is designed to provide students with the scientific knowledge and practical skills to train various active populations for the primary goal of improving performance. Specifically, students will learn to conduct sport-specific testing sessions, design and implement safe and effective strength training and conditioning programs, and provide guidance regarding nutrition and injury prevention relative to strength and conditioning. The course is designed to enhance the student’s current level of knowledge of the material required to prepare for either the Certified Strength and Conditioning Specialist or Certified Personal Trainer exams sponsored by the National Strength and Conditioning Association. (3 credit hours)

NUT 5075—Advanced Practice Principles of Functional Nutrition
This course will review the role of vitamins, minerals and nutrients within the biochemistry and physiology of the human body and translate it to the functionality of body systems and the etiology of diseases. Grounded in a food first approach to healing, this course presents the fundamental concepts of functional nutrition practice, including biochemical individuality, environmental factors, physiological functions and imbalances, triggers and mediators, clinical imbalances, detoxification, and the interplay of mind/ body and spirit as it relates to health. (3 credit hours)

NUT 5100—World Culture, Food, and Nutrition
Experience foods from various cultures and explore the many issues surrounding food and culture—including faith and religion, history, economic status, the economy, and geography—and how they impact the food patterns from various countries around the world, as well as within the United States with a focus on population health. Students will examine how the major factors that affect food customs around the world can also influence what you choose to eat from day to day and, ultimately, impact health. (3 credit hours)

NUT 5110—Foundations of Community Nutrition
This course will provide students with the principles and practices needed to identify community nutrition issues and problems, as well as how to develop interprofessional nutrition strategies and programs to alleviate and/or reduce the problems and challenges and achieve positive health outcomes. The course explores the role of public health nutrition in the 21st century from a local, national, and global perspective. (3 credit hours)

NUT 5120—Nutrition Advocacy and Interprofessional Leadership
Effective nutrition leaders are committed to improving the nation’s health and advancing the practice through research, education, and advocacy. This course will explore broad concepts of nutrition policy and related issues in the United States, highlighting capacity-building strategies, problem-solving techniques, nutrition interventions, and competencies of interprofessional leadership. (3 credit hours)

NUT 5131—Nutrition Counseling and Communication Lab
Students apply course concepts from Nutrition Counseling into practical skills for client-centered nutrition care. Experiential learning and supervised practice offer students the opportunity to apply skills, knowledge, and techniques to gain required competencies within the Professional Practice Concentration. Restricted to Professional Practice Concentration students. (2 credit hours)
NUT 5170—Management of Food and Nutrition Systems
This course will cover the comprehensive aspects of food services systems, including menu planning, safety and sanitation, financial guidelines, and business attributes. Regulatory, risk management and legislative impact are also included, as well as managing human resources to meet organizational goals. Students use current research and best demonstrated practices to deliver effective outcomes. Restricted to Professional Practice Concentration students. (3 credit hours)

NUT 5200—Nutritional Biochemistry
This course will provide students with an in-depth understanding of the metabolic pathways and control processes relevant to the digestion and assimilation of foods. The major biological roles of micronutrients—vitamins and minerals—will be explored. The importance of genetics in nutrition and dietary selection will be covered in the course. The biochemical bases for dietary selection and nutritional advice will be outlined. (3 credit hours)

NUT 5305—Clinical Approach to Functional Nutrition 1: GI Systems
This course will review the physiological functions and biochemical pathways of the gastrointestinal system, liver, gallbladder and pancreas and relate those to principles of functional nutrition and appropriate interventions. This course will explore various functional and integrative modalities to remediate dysfunction with a focus on a food-first nutrition protocol. Clinical techniques to optimize GI function to promote vibrancy will be addressed. Case studies provide application-based learning to integrate the course concepts. (3 Credit Hours)

NUT 5315—Clinical Approach to Functional Nutrition 2: Endocrine, Immune and Nervous Systems
This course will review the physiological functions and biochemical pathways of the endocrine, nervous and immune systems relating from a functional perspective. This course will explore various functional and integrative modalities to remediate dysfunction of those systems with a focus on a food-first nutrition protocol. Communication systems including cytokines, neurotransmitters, hormones and endocannabinoids are highlighted. Techniques to promote optimal health and vibrancy will be addressed. Case studies provide application-based learning to integrate the course concepts. (3 Credit Hours)

NUT 5325—Clinical Approach to Functional Nutrition 3: Nervous, Cardiovascular and Musculoskeletal Systems
This course will review the physiological functions and biochemical pathways of the cardiovascular, urinary and musculoskeletal systems and relate it to principles of functional nutrition and appropriate interventions. The needs of special populations are also included. This course will explore various functional and integrative modalities to remediate dysfunction with a focus on a food-first nutrition protocol. Clinical techniques to optimize the nervous, cardiovascular, urinary and musculoskeletal systems will be addressed. Case studies provide application-based learning to integrate the course concepts. (3 Credit Hours)

NUT 5400—Psychology of Eating
This online course will explore the psychology of eating—what’s behind what we eat, why we eat, and what motivates us to choose the foods we do. Students will identify major triggers in the cycle of emotional eating and overeating and discover how several different biochemicals and neurotransmitters play a role in influencing food intake. They will learn to complete and analyze a self-assessment that will help clients examine how mood and various triggers impact what we choose to eat. The course will examine the epidemic of obesity and its psychological impact on our nation. (3 credit hours)

NUT 5700—Vegetarian and Plant-Based Eating Patterns
This course will focus on the global approach to nutrition through the use of plant-based eating patterns. Concepts surrounding health benefits, agriculture, and the environment will be explored. Students will investigate and apply topics related to the dietary practices and the promotion of a healthy nutritional lifestyle. (3 credit hours)

NUT 6105—Wellness and Healthy Weight
This course integrates foundational sciences with the principles and practice of nutrition in wellness applications. Topics covered include the seven dimensions of wellness, health-related fitness, and weight management. In addition, the course will survey basic pathologies related to weight and chronic conditions in the context of health and wellness promotion across the life cycle. (3 credit hours)

NUT 6151—Applied Culinary Nutrition Lab
Students apply course concepts from Culinary Nutrition into practical skills for using foods to meet a variety of nutritional goals. Experiential learning and supervised practice come as workshop-type meetings scheduled during the semester. Restricted to Professional Practice Concentration students. (2 credit hours)
NUT 6400—Nutritional Assessment and Medical Nutrition Therapy

This course will provide graduate students with clinical and community levels of nutritional assessment using five parameters in the actual assessment (with knowledge of medial nutrition therapy in selected individuals). Students will have an in-depth exploration of the role of nutrition in health care with an emphasis on primary care, interprofessional care, and the medical home concept.

Upon completion of this course, students will possess mastery knowledge of diverse methodologies required for robust human nutritional research and will be able to understand the key concepts of this rapidly advancing field. Students will use methods of analysis in nutrition research that will include biobanks, genetics, and food-related behaviors. This course will also review animal and cellular models in translational research. (3 credit hours)

NUT 6450—Advanced Concepts in Nutrition Science

This course will prepare students to navigate current trends in research related to nutritional sciences and build upon biochemical foundations to understand emerging changes and apply them in nutrition practice. (3 credit hours)

NUT 6500—Advanced Medical Nutrition Therapy

The area of clinical nutrition practice has become highly advanced and specialized. Nutrition care process provides the framework for this course, which deals with topics related to client services, including advanced forms of nutrition support, complex medical nutrition therapies, and chronic conditions that have a strong nutritional component in treatment. Restricted to Professional Practice Concentration students. (3 credit hours)

NUT 6700—Advanced Sports Nutrition

This course is an advanced study of nutrition as a tool to enhance athletic performance using food as the optimal fuel. The course will investigate the macronutrients, micronutrients, body composition, and medical nutrition therapy for active individuals, athletes, and special groups. Body composition and the appropriate use of equations to determine energy needs will be studied in depth. (3 credit hours)

NUT 6750—Dietary and Sports Supplements

This course will provide an in-depth analysis of the various sport and dietary supplements on the market and explore the essential role of vitamins and minerals in the human diet as they relate to health, health promotion, physical activity, exercise performance, illness, and disease prevention. Governmental regulation of the dietary supplement industry will be explored. (3 credit hours)

NUT 6800—Special Project I

This is the first course in a series of two required courses for all students in the M.S. in Nutrition Program. This is a practice-based research and culminating experience that provides a bridge between academic preparation and professional practice. The project allows the student to apply the knowledge, attitudes, and skills learned in the core and elective program courses under the supervision and guidance of a faculty mentor. (3 credit hours)

NUT 6801—Special Project II

This is the second course in a series of two required courses for all students in the M.S. in Nutrition Program. This is a practice-based research and culminating experience that provides a bridge between academic preparation and professional practice. The project allows the student to apply the knowledge, attitudes, and skills learned in the core and elective program courses under the supervision and guidance of a faculty mentor. (3 credit hours)

NUT 6805—Applied Nutrition Capstone

This course will provide students with a culminating experience that is project-based to integrate concepts learned in the program. (3 credit hours)

NUT 6900—Current Topics in Nutrition

Current topics are presented and explored in detail. Information and focus of course will vary as the field of nutrition changes. Specific learning objectives will be designated on the course syllabus when this course is offered. (3 credit hours)

NUT 7000—Professional Seminar in Nutrition and Dietetics

This course will expose students within the Professional Practice Concentration to career leadership opportunities and responsibilities. Students will demonstrate professional competencies related to supervised practice in the field as they prepare for the final stages of the program. Restricted to Professional Practice Concentration students. (3 credit hours)

NUT 8000—Comprehensive Exam

This course is reserved for students within the Professional Practice Concentration as they approach the final stages of the program. Students will be required to demonstrate professional competencies through written and practical assessments. Restricted to Professional Practice Concentration students. (1 credit hour)
NUT 8001—Nutrition Practicum I
This course is reserved for students within the Professional Practice Concentration to provide required, supervised practice in community settings. Students will apply practice competencies in the principles of foundational knowledge, community, and public health nutrition. Restricted to Professional Practice Concentration students. (5 credit hours)

NUT 8002—Nutrition Practicum II
This course is reserved for students within the Professional Practice Concentration to provide supervised practice in community settings. Students will apply practice competencies in the principles of foundational knowledge, client/patient services, food systems management, business, and evidence-informed practice. Restricted to Professional Practice Concentration students. (8 credit hours)

NUT 8003—Nutrition Practicum III
This course is reserved for students within the Professional Practice Concentration to provide supervised practice in community settings. Students will apply practice competencies in the principles of foundational knowledge, client/patient services, food systems management, business, and evidence-informed practice. Restricted to Professional Practice Concentration students. (8 credit hours)

For cross-listed electives course descriptions in Biomedical Informatics, Medical Education, and Public Health programs, please see corresponding sections.
The Graduate Certificate in Emergency Medicine Program in the Dr. Kiran C. Patel College of Osteopathic Medicine will provide students with the knowledge and critical thinking skills necessary in emergency medicine. The Graduate Certificate in Emergency Medicine is for physician assistants and advanced registered nurse practitioners who are interested in obtaining specialized education in emergency medicine to prepare them for a position in a high-activity emergency department.

The Graduate Certificate in Emergency Medicine Program at Nova Southeastern University will provide students with a chance to gain additional knowledge of emergency medicine in an online curriculum. This program, however, is unique in that it will provide didactic coursework remotely, but will also require one-time, on-site clinical skills training. This certificate program is targeting advanced practitioners who are currently employed, but seeking additional coursework in emergency medicine to make them more marketable for a position in an emergency department. Completing this program does not make nurse practitioners eligible to sit for the Emergency NP Certification exam.

Course of Study
The Graduate Certificate in Emergency Medicine Program consists of six core courses (18 credit hours).

Admissions Requirements
The Graduate Certificate in Emergency Medicine evaluates the overall quality of applicants, including academic achievement, personal motivation, knowledge about health care, life experiences, and recommendations. Criteria for admissions to the program are as follows:

• The applicant must be a graduate of an accredited university with a minimum of a Bachelor of Science in Physician Assistant Studies or a Master of Science in Nursing.
• The applicant must have a minimum grade point average of 2.5.
• The applicant must have an active PA-C or A.P.R.N. license in good standing.
• The applicant must submit two letters of recommendation from a health care professional.

International Applicants
Any applicant who has graduated from a college or university in another country where English is not the primary language, regardless of United States residency status, is required to demonstrate English proficiency. The applicants must obtain a minimum score from one of the testing services listed following.

• Test of English as a Foreign Language (TOEFL): 550 on the written, 213 on the computer-based, or 79–80 on the Internet-based test
• Pearson Test of English—Academic: 54
• International English Language Testing System (IELTS): 6.0 on the test module
• Duolingo English Proficiency: at least 100

An official set of test scores must be sent directly from the testing agency to NSU's Enrollment Processing Services.

Nova Southeastern University
Enrollment Processing Services (EPS)
Dr. Kiran C. Patel College of Osteopathic Medicine
Graduate Certificate in Emergency Medicine Program
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

Tuition and Fees
Tuition for 2020–2021 will be posted on our website (nova.edu/emcertificate). A Health Professions Division General Access Fee of $145 is required each year. There is a registration fee of $30 each semester. An NSU Student Services Fee of $1,500 is also required annually. All tuition and fees are subject to change by the board of trustees without notice.

Graduation Requirements
In order for students to complete the certificate program they must complete all six courses. An average of 3.0 must be attained.
## Curriculum Outline

### Required Courses (18 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMED 3001</td>
<td>Cardiovascular and Hematologic Emergencies</td>
<td>3</td>
</tr>
<tr>
<td>EMED 3002</td>
<td>Neurologic, Infectious Disease, and Pediatric Emergencies</td>
<td>3</td>
</tr>
<tr>
<td>EMED 3003</td>
<td>OB/GYN, Ophthalmological, ENT, and Psychiatric Emergencies</td>
<td>3</td>
</tr>
<tr>
<td>EMED 3004</td>
<td>Trauma, Nontraumatic Musculoskeletal Disorders, Abdominal, and Chest Emergencies</td>
<td>3</td>
</tr>
<tr>
<td>EMED 3005</td>
<td>Environmental, Toxicological, and Dermatological Emergencies</td>
<td>3</td>
</tr>
<tr>
<td>EMED 3006</td>
<td>Renal/Urogenital, Metabolic, and Immunologic Emergencies</td>
<td>3</td>
</tr>
</tbody>
</table>

### Course Descriptions

**EMED 3001—Cardiovascular and Hematologic Emergencies**
This course will review cardiovascular and hematologic emergencies. It will give the student the understanding on how to diagnose and treat cardiovascular and hematologic emergencies. *(3 credit hours)*

**EMED 3002—Neurologic, Infectious Disease, and Pediatric Emergencies**
This course will review neurologic, infectious disease, and pediatric emergencies. The student will be able to recognize these disorders, order the proper tests, and treat these disease processes. *(3 credit hours)*

**EMED 3003—OB/GYN, Ophthalmological, ENT, and Psychiatric Emergencies**
This course will review the OB/GYN, ophthalmological, ENT, and psychiatric emergencies. The student will be able to recognize, order the appropriate tests, and treat these emergencies. *(3 credit hours)*

**EMED 3004—Trauma, Nontraumatic Musculoskeletal Disorders, Abdominal, and Chest Emergencies**
This course will review trauma, nontraumatic musculoskeletal disorders, abdominal, and chest emergencies. The student will be able to recognize and treat the relevant disorders. *(3 credit hours)*

**EMED 3005—Environmental, Toxicological, and Dermatological Emergencies**
This course will review environmental, toxicological, and dermatological emergencies. The student will be able to recognize and treat these emergencies. *(3 credit hours)*

**EMED 3006 Renal/Urogenital, Metabolic, and Immunologic Emergencies**
This course will review renal/urogenital, metabolic, and immunologic emergencies. The student will learn how to identify and treat these emergencies. *(3 credit hours)*
Graduate Certificate in Health Professions Preparation

NSU's Dr. Kiran C. Patel College of Osteopathic Medicine (KPCOM) Graduate Certificate in Health Professions Preparation (CHPP) is an accredited, graduate-level certificate program designed to prepare pre-health students for direct matriculation into NSU's Doctor of Osteopathic Medicine Program or other health-related professional programs. The program provides training in the basic sciences foundational to careers in the medical professions and is taught at the graduate level to ensure that students who complete the program are prepared to excel in the medical curriculum that they will encounter in medical school. Ongoing changes in the American health care system and national demographic changes have led to a national shortage of physicians. NSU's CHPP program is designed to further the scientific foundation of those who wish to address this societal need and complement their undergraduate academic preparation to foster an ability to excel in the medical curriculum, as well as better engage in cocurricular experiences that lead to a well-rounded medical student experience.

This 18-credit-hour degree program incorporates technology and supplemental resources designed to enhance synchronous and asynchronous learning to maximize student retention of material covered in each course. All students are welcomed on campus and are intermixed with the newest class of medical students in activities such as orientation, wellness lunches, and in other student services-sponsored activities. Students in the CHPP program are required to meet twice a week with their instructors on campus and will move through the two-semester program as one cohort. Students who complete the program with no professional or behavioral issues, a cumulative MCAT of 500 or higher, and a GPA of 3.6 or higher are guaranteed acceptance into KPCOM's Doctor of Osteopathic Medicine Program. Students who complete the program with no professional or behavioral issues, a cumulative MCAT of 500 or higher, and a GPA between 3.3 and 3.59 are guaranteed an interview at KPCOM's Doctor of Osteopathic Medicine Program.

Program Goals

The CHPP program enrolls high-quality students who are committed to providing competent and compassionate care and who fell slightly below the academic level of KPCOM's admitted candidates during the last admissions cycle.

It offers these students the opportunity to demonstrate the academic qualities necessary to be admitted into the KPCOM Doctor of Osteopathic Medicine Program by completing a one-year, full-time academic program that is structured to provide the academic foundation necessary to be successful in the osteopathic medical school curriculum.

Program Objectives

- Assist students in developing academic proficiency in a variety of basic science subjects including biochemistry, genetics, physiology, anatomy, immunology, and microbiology.
- Implement a flipped classroom curriculum that offers students the ability to deeply engage with each subject and refine their ability to self-regulate the pace of their learning and study methods prior to matriculating into medical school.
- Allow students the opportunity to be taught by basic science faculty members at KPCOM who will facilitate and guide their experiences in the flipped classroom.
- Develop opportunities for students to engage with an osteopathic medical education via KPCOM's programs, students, and staff members to ease the transition into medical school.
- Develop students who are articulate and culturally competent health professionals able to work with individuals throughout the life span and from varied backgrounds through coursework, advising, and campus engagement.

Admissions Requirements

The Graduate Certificate in Health Professions Preparation Program evaluates the overall quality of its applicants, looking at academic achievement, personal motivation, knowledge of health care and osteopathic medicine, profession-related experiences, and recommendations.

Specific criteria for admission are as follows:

- The applicant must have a current NSU CHPP (postbaccalaureate) application, must have previously applied to the current cycle of the D.O. program, and must have an American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS) application on file from the current D.O. cycle or have completed a PostBac Centralized Application Service (PostBacCAS) application.
- The applicant must submit official transcripts of all coursework, including that still in progress (even if applicant has previously submitted a service application).
- The applicant must submit official MCAT (medical) scores. The scores cannot be older than three years. Official MCAT scores are acceptable if submitted as part of a service application or through AACOMAS. MCAT scores sent by applicant can be validated with a verification code.
• Three letters of recommendation must be submitted according to AACOMAS or PostBacCAS procedures. If applicant has been out of school for at least two years, applicant must contact an admissions counselor.
  – two from science professors and one from a nonscience professor
  OR
  – one from a preprofessional committee
• The applicant must participate in a personal interview.

Prerequisites
Prior to matriculation, applicants must
• have a B.A. or B.S. degree from a regionally accredited university
• complete a minimum of 8 semester hours with a grade of C (2.0 GPA) or higher in each of the following
  – biology with lab
  – general chemistry with lab
  – organic chemistry with lab
  – general physics with lab
• complete a minimum of 6 semester hours in English, with at least 3 semester hours in composition, with a grade of C (2.0 GPA) or higher
• complete a minimum of 3 semester hours with a grade of C (2.0 GPA) or higher in biochemistry
• have a minimum cumulative GPA of 3.0 on a 4.0 scale
• have a minimum cumulative MCAT of 498 or higher

Application Procedures
The college participates in the American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS) and PostBacCAS for the receipt and processing of applications. AACOMAS and PostBacCAS take no part in the selection of students.

Applicants should submit applications electronically through AACOMAS Online interactive, web-based applications at aacom.org or postbaccas.liaisoncas.org.

The following steps are necessary to the primary application process.
1. The applicant must submit the following materials to AACOMAS by January 15:
   • completed AACOMAS application
   • official transcripts from the registrars of all colleges or universities attended, mailed directly to AACOMAS by the college or university
   • a letter of recommendation from the preprofessional committee, or, if such a committee does not exist, then three letters of evaluation—two from science professors and one from a nonscience professor
   • a letter of recommendation from a physician
   • MCAT scores (must be no more than three years old prior to the date the application is submitted)

2. The applicant must submit the following to the college by March 1:
   • a secondary application, which will be sent to the applicant by the college upon receipt of the AACOMAS or PostBacCAS application
   • NSU CHPP (postbaccalaureate) application
   • a nonrefundable application fee of $50

A personal interview is a part of the admission process; however, being interviewed is not a guarantee of admission. Not all applicants will be granted an interview. Those selected for an interview will be notified of the date and time of such interview by the Office of Admissions.

Notice of acceptance will be on a rolling or periodic schedule; therefore, early completion of the application is in the best interest of the applicant because of the limited number of spaces available in each class.

After acceptance, final and official documents and requirements must be received by the Office of Admissions within 90 days following the start of the first term. If these final and official documents are not received, or other requirements are not met by that time, the student will not be able to continue enrollment.

Tuition and Fees
Tuition and fees for the CHPP program for 2020–2021 will be posted on our website (osteopathic.nova.edu). All tuition and fees are subject to change by the board of trustees without notice. Students enrolling in the CHPP program are eligible for financial aid.

Technology Requirements
Students are required to own an Apple iPad® with a minimum of 2GB RAM and 128 GB of storage from any of the following lines: iPad Pro (1st Generation), iPad (2017), iPad Mini 4 (4th Generation Mini), and iPad Air 2 (6th Generation). As part of the curriculum, students will develop medical research skills, hone and refine information management skills, and be exposed
to medical informatics and advanced immersive learning technologies. Students have access to a variety of computer educational resources and course material, including

- Canvas courses, including SharkMedia recordings
- examinations via ExamSoft
- electronic textbooks through the NSU bookstore and NSU libraries
- interactive learning via Turning Point®
- immersive medical simulation experience (basic and 3-D advanced immersive learning and gaming)
- web modules
- Lecturio
- academic/board review materials

A campus-wide wireless network exists to provide students with electronic access anywhere on campus. It includes audiovisual, holographic, and videoconferencing capabilities for efficient, two-way communication during classes and when engaging in remote learning.

**Transfer of Credit**

The Graduate Certificate in Health Professions Preparation Program does not accept the transfer of credit from any other program within NSU or from other colleges or universities.

**Graduation Requirements**

To be eligible for NSU's Graduate Certificate in Health Professions Preparation, the student must

- satisfactorily complete all coursework with a grade point average of 3.0 or higher
- complete an exit survey
- satisfactorily meet all financial and library obligations

**Curriculum Outline**

This is a full-time graduate program of study with 18 total credits over two semesters.

**Required Courses—Class of 2021**

**Semester 1 (9 credit hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PBC 9101</td>
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<td>PBC 9201</td>
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<td>PBC 9400</td>
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<tr>
<td>PBC 9501</td>
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**Semester 2 (9 credit hours)**

<table>
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<tr>
<th>Course</th>
<th>Credit Hours</th>
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<td>PBC 9202</td>
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<td>PBC 9600</td>
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<td>PBC 9700</td>
<td>2</td>
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<tr>
<td>PBC 9502</td>
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Course Descriptions

PBC 9101—Anatomy I
This course explores the structures and functions of the human body. Topics covered will include upper extremity, lower extremity, thorax, and abdomen. (2 credit hours)

PBC 9201—Physiology I
This course provides a review of high-yield concepts and processes in human physiology. Topics covered will include general principles of physiology, musculoskeletal, cardiac, respiratory, and gastrointestinal physiology. (2 credit hours)

PBC 9300—Genetics
This course covers a variety of related fields, such as Mendelian genetics, molecular genetics, and medical genetics. The study of human genetics can help to find answers to questions regarding the inheritance and development of different phenotypes. The understanding of how genomic variations contribute to disease susceptibility and development will offer perspective to guide diagnostics and prognostics as well as lay the background for novel therapeutic approaches. (2 credit hours)

PBC 9400—Biochemistry
This course focuses on human metabolism, energy flow, and related abnormalities. It aids the development of critical thinking and understanding of biological processes, including enzyme kinetics and metabolism of nucleotides, carbohydrates, and lipids, as well as common diseases associated with dysregulation of such pathways. (2 credit hours)

PBC 9501—Strategies for Academic Success I
This course introduces students to a variety of personal management tools and strategies to enhance learning, including self-reflection and self-evaluation, goal setting, learning style assessment, study plan development, and effective time and stress management strategies. (2 credit hours)

PBC 9102—Anatomy II
This course introduces students to the structure of the various organ systems of the human body. Students are introduced to how biochemistry and molecular biology affect the underlying structure of cells and tissues and organs in these organ systems. Structural components of systems—such as the endocrine, cardiovascular, respiratory, immune, lymphatic, urinary, and reproductive systems—will be covered, with high-yield components emphasized. (2 credit hours)

PBC 9202—Physiology II
This class offers a review of high-yield concepts and processes in human physiology. Topics covered will include endocrine, reproductive, renal, and vascular systems, and neurophysiology. (2 credit hours)

PBC 9600—Microbiology
This course will introduce students to the field of medical microbiology and its clinical implications. Topics covered will include the general characteristics of microbes, virology, bacteriology, mycology, parasitology, and pharmacological/antimicrobial agents. It will focus on infectious microbes and the clinical consequences of infection. (2 credit hours)

PBC 9700—Immunology
The course introduces adaptive and innate immune systems, the characteristics of various common pathogens, and how the immune system protects you from such invading organisms. Students learn the detailed structures of antibodies and related immunoglobulin receptors, the characteristics and functions of the different antibody classes, and the mechanisms for producing such antibodies. Following basic B cell function, they will learn the structure of both MHC proteins and T cell receptors and respective sources of variation based on recombination. Students will learn how immune cells attack pathogens, with emphasis on the mechanism of inducing apoptosis, as well as Antibody Directed Cell-mediated Cytotoxicity. The course will also cover inflammatory response and mechanisms of tolerance. Students will learn about autoimmune diseases as well as hypersensitivity reactions, which include allergy and anaphylaxis. They will also learn about transplant rejection and the methods for testing compatibility. (2 credit hours)

PBC 9502—Strategies for Academic Success II
This course is designed to provide the opportunity for students to develop the additional skills necessary to be effective and successful students in the postbaccalaureate environment. It explores communication skills, critical thinking and problem-solving, effective study skills, test-taking strategies, and the mindfulness and professionalism needed to succeed in medical school. (2 credit hours)
Family Therapy Programs

Our family therapy programs uphold professional standards in the field. The master's degree program requires a bachelor's degree for admission. At the master's degree-level, students develop clinical excellence and prepare for careers as licensed marriage and family therapists. Students are prepared to assume professional positions in private practice, employee assistance programs, managed care and health care organizations, child care and school settings, family service agencies, faith-based settings, and other clinical settings. There are two doctoral programs, both of which require a master's degree for admission. The Doctor of Philosophy (Ph.D.) in Family Therapy Program strives to develop students who are prepared for scholarly leadership in the field of marriage and family therapy. The emphasis is on research, supervision, teaching, and advanced clinical practice. The Doctor of Marriage and Family Therapy (D.M.F.T.) Program prepares students for advanced clinical practice and supervision. Students in both doctoral programs are trained for leadership positions directing clinical programs, in private practice, and providing training and supervision.

Programs Available

The following family therapy programs are offered at the Dr. Kiran C. Patel College of Osteopathic Medicine (KPCOM):

- Doctor of Philosophy in Family Therapy
- Doctor of Marriage and Family Therapy
- Master of Science in Family Therapy
- Bachelor of Science in Health and Wellness Coaching
- Bachelor of Science in Human Development and Family Studies
- Undergraduate Minor in Health and Wellness Coaching

Note: For information on all undergraduate programs, please go to the Undergraduate Student Catalog at nova.edu/undergraduatestudies/academic-catalog.html.

The following concentrations are offered by the Department of Family Therapy for students currently enrolled in one of the graduate degree programs:

- Equine-Assisted Family Therapy
- Medical Family Therapy
- Solution-Focused Coaching

The following graduate certificates are offered by the Department of Family Therapy for nondegree-seeking students who are not enrolled in one of the graduate degree programs:

- Graduate Certificate in Family Studies
- Graduate Certificate in Solution-Focused Coaching

Vision

The vision of NSU's Dr. Kiran C. Patel College of Osteopathic Medicine's Family Therapy Department is to embrace a systemic/relational paradigm while providing clinical training to support community needs, including those of culturally and sexually diverse and marginalized groups. The master's degree program in family therapy trains students to become competent marriage and family therapists with the ability to work systemically with all populations. The doctoral family therapy programs train master's degree-level clinicians to become advanced leaders and scholars in the field of marriage and family therapy.

Mission

The mission of the Nova Southeastern University Dr. Kiran C. Patel College of Osteopathic Medicine's Family Therapy Department is to educate and develop students committed to clinical research and scholarly practices in the field of marriage and family therapy. Graduates of the M.S. program are prepared to serve the community as ethical and professional practitioners focusing on the relational strengths and resources of clients with an appreciation and respect for cultural and sexual diversity and inclusion. The doctoral family therapy programs develop advanced leaders and scholars in the field of marriage and family therapy. Graduates of the Ph.D. program meet the above-stated goal of the M.S. program, while also developing additional strengths in research, teaching, and clinical supervision. Graduates of the D.M.F.T. program meet the above-stated goal of the M.S. program, while also developing strengths in advanced clinical practice and supervision.

Course of Study

Students are considered to be full-time if they complete 6 credit hours each semester. It is recommended that students follow the Course of Study/Degree Plan for their program. A student on financial aid considering completing less than the scheduled credit hours in any given semester/term should discuss this with a financial aid office prior to the time of registration.

Master's Degree Program

Students must complete their program within five years from the date of first enrollment. This means that students are expected to graduate with the Master of Science degree within this time period.

Doctoral Degree Programs

Students must complete their program within seven years from the date of first enrollment. This means that students are
expected to graduate with the D.M.F.T. or Ph.D. degree within this time period.

In order to remain an active and matriculated student, registration is required in every semester until the completion of degree requirements, unless a leave of absence has been granted. Failure to remain in continuous registration will be deemed the student’s formal withdrawal from the program. All other program, center, and university requirements will be in effect.

**Master’s Degree en Route**

Students enrolled in the Ph.D. in Family Therapy, and D.M.F.T. degree programs oftentimes complete master’s degree-level core courses to achieve readiness to begin doctoral-level courses. In doing so, these students may complete the requirements for an M.S. degree in Family Therapy and may be eligible to request, be considered for, and be awarded a master’s degree. For a master’s degree to be awarded to a doctoral student, the student must be in good academic standing; have maintained a minimum cumulative GPA of 3.5; have remained actively enrolled; and must have requested, in writing, to be evaluated for this “Granting of a Master’s degree” provision.

**Graduate Certificate in Family Studies**

Students who are enrolled in a master’s or doctoral degree program in the Department of Family Therapy (DFT), but are unable to complete the program, may be eligible to request, be considered for, and be awarded a Graduate Certificate in Family Studies. Students must be in good academic standing, actively enrolled, and have a minimum cumulative GPA of 3.0.

The program director and department chair will review each student request to determine if the requirements set forth are met. A decision will be made and communicated, in writing, by the program chair. If approved, the student will be eligible to submit a degree application. All NSU degrees are awarded by the Nova Southeastern University Board of Trustees, upon the recommendation of the faculty.

**Accreditation and Authorization**

The M.S. and the Ph.D. programs are fully accredited by the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE) of the American Association for Marriage and Family Therapy (AAMFT). The AAMFT is located at 112 South Alfred Street, Alexandria, VA, 22314-3061. coamfte.org/coamfte

**Admissions Requirements—Degree Programs**

The family therapy programs evaluate the overall quality of applicants, including academic achievement, personal motivation, knowledge about the family therapy profession and health care, life experiences, and recommendations.

Criteria for admission to the M.S. in Family Therapy degree program are

- a minimum of a bachelor’s degree from a regionally accredited college or university
- a minimum cumulative grade point average (GPA) of 3.0 on a 4.0 scale in the last 60 semester hours of undergraduate coursework
- a master’s degree from a different field with an overall cumulative GPA of 3.0 or better
- a total score of 300 or higher on the combined verbal and quantitative sections of the Graduate Record Exam (GRE), taken within the past five years

Criteria for admission to the Ph.D. in Family Therapy or the D.M.F.T. degree programs are

- a master’s degree from a regionally accredited institution
- a GPA of 3.5 or better for applicant’s master’s degree
- a total score of 300 or higher on the combined verbal and quantitative sections of the GRE, taken within the past five years

**Application Procedures—Degree Programs**

Applicants may apply for the doctoral programs in the fall term. They may apply for the M.S. program in either the summer or the fall term. Applicants may contact the Office of Admissions at (954) 262-1101 or 877-640-0218 or access the family therapy program website (osteopathic.nova.edu/ft) for exact deadline and start dates.

All application materials should be sent to

Nova Southeastern University
Enrollment Processing Services
Dr. Kiran C. Patel College of Osteopathic Medicine
Family Therapy Admissions
3301 College Avenue, P.O. Box 29900
Fort Lauderdale, FL 33329-9905

Transcripts can be sent electronically from the originating college/university to electronictranscript@nova.edu.

All applicants must provide the following:

- a completed application, along with a $50, nonrefundable application fee (online application at apply.nova.edu)
- official transcripts of all coursework attempted by the applicant at all colleges and universities
Dr. Kiran C. Patel College of Osteopathic Medicine—Family Therapy Programs

• two academic or professional letters of recommendation (three letters for a doctoral program) written in the past year
• a résumé or curriculum vitae
• a sample of academic writing, either
  – a copy of an academic paper
  – a piece of professional writing
• a personal statement (admission essay) that
  – is minimum 500 words
  – explains why applicant is interested in the family therapy program being applied to
  – explains the applicant’s professional goals
  – provides an assessment of the applicant’s ability to manage the challenges of graduate school
  – includes any other information applicant would like to provide
• a demonstration of English proficiency (any applicant whose native language is not English or who has graduated from a college or university where English is not the primary language, regardless of U.S. residency status)

The standardized tests below currently satisfy NSU’s, and this program’s, English requirement for nonnative speakers. For a full list of English proficiency tests that are accepted by the university, please visit the website for NSU’s Office of International Affairs at nova.edu/internationalaffairs/students/prospective/language_proficiency.html.

– Test of English as a Foreign Language (TOEFL): score of 213 on the computer-based or 79–80 on the Internet-based test
– International English Language Testing System (IELTS): score of 6.0
– Duolingo English Proficiency: score of at least 100

It is the responsibility of the applicant to ensure that arrangements are made for all transcripts to be sent. A final transcript of all the applicant’s work up to the time of matriculation must be forwarded to the Office of Admissions prior to matriculation.

Coursework taken at foreign institutions must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below:

World Education Services, Inc.
Bowling Green Station
P.O. Box 5087
New York, NY 10274-5087
(212) 966-6311 • wes.org

Josef Silny & Associates, Inc.,
International Education Consultants
7101 SW 102 Avenue
Miami, FL 33173
(305) 273-1616 • (305) 273-1338 fax
info@jsilny.org • jsilny.org

Educational Credential Evaluators, Inc.
101 West Pleasant Street, Suite 200
Milwaukee, WI 53212-3963
(414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University Enrollment Processing Services.

Applicants are carefully selected based on knowledge of systemic theory as it relates to various approaches of family therapy, level of prior clinical experience, evidence of commitment to advanced graduate training in the social sciences, interpersonal style, prior graduate GPA, and professional English writing skills. Once the application is complete, the Committee on Admissions decides whether the application is competitive and warrants an invitation for a personal interview. Interviews are conducted by faculty members and are by invitation only. An invitation to interview is not a guarantee of admission. At any time during the review process, applicants may check their status online via the application portal. Once a decision has been made, notification is sent via email to the applicant’s address on file.

Admissions Requirements /Application Procedures—Graduate Certificate Programs

The applicant must be nondegree seeking and have a minimum of a bachelor’s degree from a regionally accredited college or university. Preference will be given to applicants with an undergraduate cumulative GPA of 3.0 or above on a 4.0 scale.

Applicants must provide the following admissions requirements to take classes in the family therapy program:

• a completed application, along with a $50, nonrefundable application fee
• official transcripts from all schools attended and/or agency evaluation of a foreign degree (must show evidence of a bachelor’s degree from a regionally accredited institution)
• a minimum grade point average (GPA) of 3.0 in the last 60 semester hours of undergraduate coursework or a master’s degree with an overall GPA of 3.0 or better on a 4.0 scale
• one academic or professional letter of recommendation
• a résumé or curriculum vitae
• a sample of academic writing, either
  – a copy of an academic paper
  – a piece of professional writing
• a personal statement (admission essay) that
  – is minimum 500 words
  – explains why applicant is interested in the family therapy
certification program being applied to
  – explains the applicant’s professional goals
  – provides an assessment of the applicant’s ability to
    manage the challenges of graduate school
  – includes any other information applicant would like
to provide
• a demonstration of English proficiency (any applicant
  whose native language is not English or who has graduated
  from a college or university where English is not the primary
  language, regardless of U.S. residency status)

The standardized tests below currently satisfy NSU’s, and
this program’s, English requirement for nonnative speakers.
For a full list of English proficiency tests that are accepted
by the university, please visit the website for NSU’s Office
of International Affairs at nova.edu/internationalaffairs
/students/prospective/language_proficiency.html.

– Test of English as a Foreign Language (TOEFL): score of
  213 on the computer-based or 79–80 on the Internet-
based test
– International English Language Testing System (IELTS):
  score of 6.0
– Duolingo English Proficiency: score of at least 100

Application for nondegree status by students holding a
bachelor’s degree or higher will be considered by the Committee
on Admissions through a review of the required records. An
interview with the program director may be required.

Graduate Certificate in Family Studies

The Graduate Certificate in Family Studies is offered for
nondegree-seeking applicants who are not enrolled in any
of the department’s graduate programs. It is designed to
train individuals who want to work with families in a variety
of contexts, including as educators, community organizers,
legal professionals, child care workers, or EAP counselors.
Human relations professionals and business managers or
supervisors, among many others, would also benefit from the
application of systemic family principles to their efforts. This
program takes advantage of NSU-KPCOM’s unique access to
a multidisciplinary faculty, incorporating coursework in peace
studies, violence prevention, consultation, school systems, and
business systems. Our multidisciplinary approach prepares
students to apply knowledge about family systems directly to
their work environment and demands. The curriculum includes
coursework on systemic thinking in family studies, topics in
human and family systems development, gender issues,
sexuality issues, violence in the family, and diversity issues.

Curriculum Requirements

The Graduate Certificate in Family Studies is a 24-credit-hour
program (eight courses). Students who decide to continue their
studies in family therapy may be able to apply some of these
credit hours toward the M.S. in Family Therapy, the D.M.F.T.,
or the Ph.D. in Family Therapy, if accepted into one of those
programs. Students may enroll full or part time, taking 3 to
9 credit hours per term. Students can expect to complete the
certificate program in 10–15 months, depending on the pace
of study. Summer attendance is required. Coursework includes

SFTM 5310 Introduction to Systems Theories
SFTM 5311 Substance Abuse/Addiction and Critical Issues in
Systems Theory
SFTM 5320 Introduction to Marital and Family Therapy
SFTM 5350 Research in Marital and Family Therapy
SFTM 6320 Assessment in Marital and Family Therapy
SFTM 6331 Diversity and Psychosocial Issues
SFTM 6332 Human Sexuality and Gender

Elective

Note: Electives are available, depending on student needs to
fulfill the certificate requirements.

This certificate will be presented to the student after all program
requirements are successfully met. If, after taking classes in the
Department of Family Therapy, a certificate-seeking student
decides to pursue a degree in family therapy, the student must
submit a new and complete application to the program to become
a degree-seeking student and must meet all the requirements
for admission to the specific family therapy degree program
applied to. Previous coursework taken may be transferable if
performance equals or exceeds the grade of B in the course.

Graduate Certificate in Solution-Focused Coaching

The Graduate Certificate in Solution-Focused Coaching is
offered by the Department of Family Therapy for nondegree-
seeking applicants who are not enrolled in any of the
department’s graduate programs. Coaching, as an alternative
to psychotherapy, is a growing field. According to the Canadian
newspaper The National Post, personal coaching (which includes
life coaching, career coaching, college coaching, and health and
wellness coaching) is the second fastest growing profession in
Canada, second only to information technology. Here in the United States, the profession has also seen considerable growth. NSU’s family therapy program is nationally and internationally known for expertise in solution-focused therapy, which is an excellent fit with the brief, goal-oriented nature of personal coaching. This certificate is offered to those seeking a career as professional personal coaches.

**Curriculum Requirements**

The Graduate Certificate in Solution-Focused Coaching is a 15-credit-hour program (five courses). Students who decide to continue their studies may be able to apply some of these credit hours toward the M.S. in Family Therapy, the D.M.F.T., or the Ph.D. in Family Therapy, if accepted into one of those programs. Coursework includes:

- SFTM 5310 Introduction to Systems Theories
- SFTM 6333 Theories of Personality and Psychopathology
- SFTM 5335 Human Development Across the Life Cycle
- SFTM 5357 Developing a Private Practice in Coaching and Therapy
- SFTM 5358 Solution-Focused Coaching

This certificate will be presented to the student after all program requirements are successfully met. If, after taking classes in the Department of Family Therapy, a certificate-seeking student decides to pursue a degree in family therapy, the student must submit a new and complete application to the program to become a degree-seeking student and must meet all the requirements for admission to the specific family therapy degree program applied to. Previous coursework taken may be transferable if performance equals or exceeds the grade of B in the course.

**Nondegree-Seeking Students**

A nondegree-seeking student is one who wishes to take a course in the Department of Family Therapy, but does not intend to pursue a degree in family therapy at the time of application. Enrollment in the courses does not guarantee acceptance into a family therapy degree-seeking program. After taking classes in the program as a nondegree-seeking student, the student must submit a new and complete application to the program to become degree-seeking. The student must also meet all the requirements for admission to the specific family therapy degree program applied to. Graduate students from other NSU programs who elect to take family therapy courses may do so with the written consent of the program director. The university reserves the right to modify any requirements on an individual basis as deemed necessary by the dean of the Dr. Kiran C. Patel College of Osteopathic Medicine. The college reserves the right to require the student’s withdrawal at any time the college deems it necessary to safeguard its standards of scholarship, conduct, and compliance with the regulations, or for such other reason as deemed appropriate. The student, by his or her act of matriculation, concedes the college this right.

**Computer Requirements**

It is highly recommended that students have access to a desktop or laptop consistent with the following:

- a recent generation of Microsoft Windows or Apple OS
- a version of Microsoft Office software that includes Word and PowerPoint
- headphones, a microphone, a camera, and access to online platforms (such as Zoom and Canvas)
- Internet broadband access
- surge protection and appropriate back-up options (recommended)

Tablets and smartphones, while very useful, may not be sufficient for all program uses.

**Tuition and Fees**

Tuition for the family therapy degree programs for 2020–2021 will be posted on our website at osteopathic.nova.edu/masters/tuition.html (for master’s degrees) and osteopathic.nova.edu/doctoral/tuition.html (for doctoral degrees). A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually. There is a registration fee of $30 each semester.

Tuition for the Graduate Certificate Programs for 2020–2021 will be posted on our website at osteopathic.nova.edu/masters/tuition.html. An NSU Student Services Fee of $1,500 is required annually.

All tuition and fees are subject to change by NSU’s Board of Trustees without notice.

**Expenses and Financial Aid**

The purpose of the Student Financial Assistance Program at Nova Southeastern University is to help as many qualified students as possible to complete their educational pursuit. Various loans, scholarships, and grants are available to qualified students to help ease the high cost of their education. These financial assistance programs are described in a variety of separate university publications and on NSU’s Office of Student Financial Assistance (OSFA) website at nova.edu/financialaid.

**Transfer of Credits**

Credit hours may be accepted for transfer into the Ph.D., D.M.F.T., and M.S. programs. These must be graduate courses...
taken at regionally accredited colleges or universities. All courses to be transferred must be substantially equivalent to courses taught in the program to which the student is applying. Each applicant’s submissions will be reviewed on an individual basis.

Transfer credits need to be submitted upon admission to a program and prior to the development of degree plans. Requests for transfer of credit must be completed before the end of the student’s first term. Requests for transfer of credit received after the completion of the student’s first term will not be accepted.

To be considered for transfer of credit, students must submit an Application for Transfer of Credit, available online, for the program to which they are applying. The application must be supported with a catalog course description and the syllabus that documents the content of each course. No more than two courses may be used to establish equivalence with a single NSU course. Approved transfer credit from a single course completed at a prior institution may be applied to only one NSU course; transfer credit from a single course may not be applied across multiple NSU courses. To be considered for transfer of credit, courses must have been completed less than seven years prior to the beginning of the student’s first term. Also, course grades for any transfer of credit request must be a B or higher.

Courses approved for transfer of credit are recorded on the student’s NSU transcript.

Coursework submitted from a foreign institution will be evaluated for equivalency in accordance with accreditation standards.

Maximum Number of Transfer Credits Accepted, by Program
- Doctor of Philosophy in Family Therapy: up to 12
- Doctor of Marriage and Family Therapy: up to 12
- Master of Science in Family Therapy: 9

Graduation Requirements

Doctoral Programs
Students must comply with the following requirements in order to graduate with their doctoral degrees in family therapy:
- Pass all coursework with a 3.5 cumulative GPA or above. Nothing lower than a C is permitted. Only one C is allowed.
- Earn required credits indicated in the degree plan. NSU’s D.M.F.T. and Ph.D. are variable credit programs. The D.M.F.T. program is 75–108 credits and the Ph.D. program is 81–114 credits. This depends on the student’s educational background.
- Pass, or show evidence of having passed, the Legal, Ethical, and Professional Issues in Marriage and Family Therapy course with a B or better.
- Pass the Clinical Portfolio Examination.
- Successfully complete an internship in three consecutive terms (Ph.D. program only).
- Successfully defend their dissertation or Applied Clinical Project.
- Accumulate 1,000 direct client contact hours (minimum of 400 relational) in conjunction with 200 hours of supervision by a qualified supervisor, according to the specification in the practicum manual.
- Participate in three annual reviews.
- Comply with remediation plans, as specified, if necessary.
- Maintain continuous ethical/professional conduct throughout the program, following the HIPAA guidelines, the AAMFT Code of Ethics, and the conduct guidelines indicated in the Florida Statutes Chapter 491, the NSU Student Handbook, and the KPCOM Student Handbook.
- Complete the submission process of the final dissertation or Applied Clinical Project in PDF format.
- Apply for and receive degree conferral.
- Complete all requirements above within the stated time limit of the program.

M.S. Program
Students must comply with the following requirements in order to graduate with their M.S. in Family Therapy:
- Pass all coursework with a 3.0 cumulative GPA or above. Nothing lower than a C is permitted. Only one C is allowed.
- Earn a minimum of 60 credit hours for the M.S. program.
- Pass, or show evidence of having passed, the Legal, Ethical and Professional Issues in Marriage and Family Therapy course with a B or better.
- Successfully complete an internship in three consecutive terms.
- Accumulate 500 direct client contact hours (minimum of 200 relational) in conjunction with 100 hours of supervision by a qualified supervisor, according to the specification in the practicum manual.
- Comply with remediation plans, as specified, if necessary.
- Maintain continuous ethical/professional conduct throughout the program, following the HIPAA guidelines, the AAMFT Code of Ethics, and the conduct guidelines indicated in the Florida Statutes Chapter 491, the NSU Student Handbook, and the KPCOM Student Handbook.
- Apply for and receive degree conferral.
- Complete all requirements above within the stated time limit of the program.
**Curriculum Outlines**

**Doctor of Philosophy (Ph.D.) in Family Therapy**
The Ph.D. in Family Therapy curriculum includes the following:

**Pathway Courses**
The Ph.D. in Family Therapy program is a variable credit program (81–114 credit hours). Upon admission, an individualized degree plan is formulated for each student based on the student’s academic background. Students may transfer up to 12 credits from non-NSU programs, if appropriate and approved by the curriculum committee.

<table>
<thead>
<tr>
<th>Pathway Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFTD 5006</td>
<td>Introduction to Systems Theories 3</td>
</tr>
<tr>
<td>SFTD 5007</td>
<td>Research in Marital and Family Therapy 3</td>
</tr>
<tr>
<td>SFTD 5008</td>
<td>Introduction to Marital and Family Therapy 3</td>
</tr>
<tr>
<td>SFTD 5009</td>
<td>Theories of Marital and Family Therapy 3</td>
</tr>
<tr>
<td>SFTD 5045</td>
<td>Group Psychotherapy 3</td>
</tr>
<tr>
<td>SFTD 5046</td>
<td>Human Development Across the Life Cycle 3</td>
</tr>
<tr>
<td>SFTD 5300</td>
<td>Legal, Ethical, and Professional Issues 3</td>
</tr>
<tr>
<td>SFTD 6520</td>
<td>Diversity and Psychosocial Issues 3</td>
</tr>
<tr>
<td>SFTD 7301</td>
<td>Assessment in Marital and Family Therapy 3</td>
</tr>
<tr>
<td>SFTD 7302</td>
<td>Theories of Personality and Psychopathology 3</td>
</tr>
<tr>
<td>SFTD 7311</td>
<td>Human Sexuality and Gender 3</td>
</tr>
</tbody>
</table>

**Core Curriculum**
The Ph.D. in Family Therapy core curriculum includes the following:

<table>
<thead>
<tr>
<th>Required Core Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFTD 5001</td>
<td>Doctoral Seminar I 1</td>
</tr>
<tr>
<td>SFTD 5002</td>
<td>Doctoral Seminar II 1</td>
</tr>
<tr>
<td>SFTD 5003</td>
<td>Doctoral Seminar III 1</td>
</tr>
<tr>
<td>SFTD 5004</td>
<td>Reading/Writing/Editing for Doctoral Scholars 3</td>
</tr>
<tr>
<td>SFTD 5010</td>
<td>Systemic Family Therapy I 3</td>
</tr>
<tr>
<td>SFTD 5020</td>
<td>Systemic Family Therapy II 3</td>
</tr>
<tr>
<td>SFTD 5030</td>
<td>Systemic Family Therapy III 3</td>
</tr>
<tr>
<td>SFTD 5040</td>
<td>Systemic Family Therapy IV 3</td>
</tr>
<tr>
<td>SFTD 5110</td>
<td>Language Systems 3</td>
</tr>
<tr>
<td>SFTD 5120</td>
<td>Thinking Systems 3</td>
</tr>
<tr>
<td>SFTD 5410</td>
<td>Quantitative Research I 3</td>
</tr>
<tr>
<td>SFTD 6321</td>
<td>Fundamentals of Teaching Marriage and Family Therapy 3</td>
</tr>
<tr>
<td>SFTD 6325</td>
<td>Fundamentals of Supervision in Marriage and Family Therapy 3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
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</tr>
<tr>
<td>SFTD 6410</td>
<td>Quantitative Research II</td>
</tr>
<tr>
<td>SFTD 6430</td>
<td>Qualitative Research I</td>
</tr>
<tr>
<td>SFTD 7350</td>
<td>Qualitative Research II</td>
</tr>
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<td>Elective</td>
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</tbody>
</table>

### Practicum/Internship/Dissertation Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFTD 6200</td>
<td>Internal Practicum</td>
<td>12</td>
</tr>
<tr>
<td>SFTD 6320</td>
<td>Supervision Practicum</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 6900</td>
<td>Dissertation</td>
<td>9</td>
</tr>
<tr>
<td>SFTD 7360</td>
<td>Teaching Practicum</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 7410</td>
<td>Clinical Internship</td>
<td>9</td>
</tr>
</tbody>
</table>

### Electives (3 credit hours)

Select one course from the following elective courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSHC 5000</td>
<td>Family Systems Health Care I</td>
<td>3</td>
</tr>
<tr>
<td>FSHC 5010</td>
<td>Family Systems Health Care II: Grief and Loss</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 5036</td>
<td>Infant Mental Health</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 5037</td>
<td>Suicide Prevention and Crisis Intervention</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 5038</td>
<td>Military Families</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 5039</td>
<td>Collaborative Divorce</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 5050</td>
<td>Family Play Therapy</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 5311</td>
<td>Substance Abuse/Addictions and Critical Issues</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 5355</td>
<td>Introduction to Equine-Assisted Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 5361</td>
<td>Developing a Private Practice in Coaching and Therapy</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 5362</td>
<td>Solution-Focused Coaching</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 5363</td>
<td>Advanced Equine-Assisted Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 5365</td>
<td>Advanced Addictions Treatment</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 5367</td>
<td>Family Therapy and Applied Behavior Analysis</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 6110</td>
<td>Systems Application in the Life Cycle of Aging</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 6120</td>
<td>Relationships in Aging</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 6130</td>
<td>Caregiving in the Family</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 6140</td>
<td>Grief and Loss in Aging</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 6530</td>
<td>Organizational Systems and Consultation</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 6550</td>
<td>International Perspectives in Counseling and Therapy</td>
<td>3</td>
</tr>
<tr>
<td>SFTD 6590</td>
<td>Advanced Bowen Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

*See course schedule for a list of elective options, as elective courses may vary.
Internal Practicums, Teaching, and Supervision

- Internal Practicum: Four terms of enrollment in internal clinical practicums at the Brief Therapy Institute, the program’s on-campus clinical facility, are required. Teams of students (maximum of six) meet weekly with a faculty supervisor to work with live, community-referred clients. Cases are supervised throughout the calendar year. Students may choose a flexible practicum during their fourth practicum if one is available. It is provided for students to see cases independently at the clinic. The faculty supervisor must approve this independent placement and students must continue to obtain supervision during this time.

- Teaching: One course in the fundamentals of teaching is required. Additionally, students will register for a teaching practicum that offers them the opportunity to practice skills learned in that class. Student must be in good academic standing to be eligible to register for the course.

- Supervision: One course in the fundamentals of supervision of family therapy clinicians is required. Additionally, students will register for a supervision practicum that offers them the opportunity to practice skills learned in that class. Students must be in good academic standing to be eligible to register for the course.

Doctor of Marriage and Family Therapy

The D.M.F.T. curriculum includes the following:

Pathway Courses

The D.M.F.T. program is a variable credit program (75–108 credit hours). Upon admission, an individualized degree plan is formulated for each student based on the student’s academic background. Students may transfer up to 12 credits from non-NSU programs, if appropriate and approved by the curriculum committee.

Pathway Courses

<table>
<thead>
<tr>
<th>Pathway Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMFT 5006 Introduction to Systems Theories</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5007 Research in Marital and Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5008 Introduction to Marital and Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5009 Theories of Marital and Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 6558 Couples Therapy: Theory and Application</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5046 Human Development Across the Life Cycle</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5300 Legal, Ethical, and Professional Issues in Marriage and Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 6520 Diversity and Psychosocial Issues</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 7301 Assessment in Marital and Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 7302 Theories of Personality and Psychopathology</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 7311 Human Sexuality and Gender</td>
<td>3</td>
</tr>
</tbody>
</table>

Core Curriculum

The D.M.F.T. core curriculum includes the following:

Required Core Courses

<table>
<thead>
<tr>
<th>Required Core Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMFT 5001 Doctoral Seminar I</td>
<td>1</td>
</tr>
<tr>
<td>DMFT 5002 Doctoral Seminar II</td>
<td>1</td>
</tr>
<tr>
<td>DMFT 5003 Doctoral Seminar III</td>
<td>1</td>
</tr>
<tr>
<td>DMFT 5004 Reading/Writing/Editing for Doctoral Scholars</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5010 Systemic Family Therapy I</td>
<td>3</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
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</tr>
<tr>
<td>DMFT 5020</td>
<td>Systemic Family Therapy II</td>
</tr>
<tr>
<td>DMFT 5030</td>
<td>Systemic Family Therapy III</td>
</tr>
<tr>
<td>DMFT 5130</td>
<td>Crisis Management</td>
</tr>
<tr>
<td>DMFT 5340</td>
<td>Grant Writing for Funding Opportunities</td>
</tr>
<tr>
<td>DMFT 6325</td>
<td>Fundamentals of Supervision in Marriage and Family Therapy</td>
</tr>
<tr>
<td>DMFT 6400</td>
<td>Evidence-Based Research Methods</td>
</tr>
<tr>
<td>DMFT 6410</td>
<td>Qualitative Action Research</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

**Practicum/Applied Clinical Project Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMFT 6200</td>
<td>Internal Practicum</td>
<td>12</td>
</tr>
<tr>
<td>DMFT 6210</td>
<td>Clinical Practicum</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 6300</td>
<td>External Practicum</td>
<td>6</td>
</tr>
<tr>
<td>DMFT 6320</td>
<td>Supervisions Practicum</td>
<td>6</td>
</tr>
<tr>
<td>DMFT 6950</td>
<td>Applied Clinical Project</td>
<td>9</td>
</tr>
</tbody>
</table>

Note: 1,000 clinical hours and 200 supervised hours are required to complete the program.

**Electives (12 credit hours)**

Select four courses from the following elective courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMFT 5036</td>
<td>Infant Mental Health</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5037</td>
<td>Suicide Prevention and Crisis Intervention</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5038</td>
<td>Military Families</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5039</td>
<td>Collaborative Divorce</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5040</td>
<td>Systemic Family Therapy IV</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5045</td>
<td>Group Psychotherapy</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5050</td>
<td>Family Play Therapy</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5110</td>
<td>Language Systems</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5120</td>
<td>Thinking Systems</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5311</td>
<td>Substance Abuse/Addictions and Critical Issues</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5355</td>
<td>Introduction to Equine-Assisted Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5361</td>
<td>Developing a Private Practice in Coaching and Therapy</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5362</td>
<td>Solution-Focused Coaching</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5363</td>
<td>Advanced Equine-Assisted Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5365</td>
<td>Advanced Addictions Treatment</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5367</td>
<td>Family Therapy and Applied Behavior Analysis</td>
<td>3</td>
</tr>
<tr>
<td>DMFT 5410</td>
<td>Quantitative Research I</td>
<td>3</td>
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</table>
DMFT 6110 Systems Application in the Life Cycle of Aging  3
DMFT 6120 Relationships in Aging  3
DMFT 6130 Caregiving in the Family  3
DMFT 6140 Grief and Loss in Aging  3
DMFT 6321 Fundamentals of Teaching Marriage and Family Therapy  3
DMFT 6430 Qualitative Research I  3
DMFT 6530 Organizational Systems and Consultation  3
DMFT 6550 International Perspectives in Counseling and Therapy  3
DMFT 6590 Advanced Bowen Family Systems  3
FSHC 5000 Family Systems Health Care I  3
FSHC 5010 Family Systems Health Care II: Grief and Loss  3

*See course schedule for a list of elective options, as elective courses may vary.

**Internal Practicums and Supervision**

- *Internal Practicum*: Four terms of enrollment in internal clinical practicums at the Brief Therapy Institute, the program’s on-campus clinical facility, are required. Teams of students (maximum of six) meet weekly with a faculty supervisor to work with live, community-referred clients. Cases are supervised throughout the calendar year. Students may choose a flexible practicum during their fourth practicum if one is available. It is provided for students to see cases independently at the clinic. The faculty supervisor must approve this independent placement and students must continue to obtain supervision during this time.

- *Supervision*: One course in the fundamentals of supervision of family therapy clinicians is required. Additionally, students will register for two supervision practicums that offer them the opportunity to practice skills learned in that class. Students must be in good academic standing to be eligible to register for the course.

**Master of Science in Family Therapy**

The M.S. in Family Therapy curriculum includes the following:

**Required Core Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFTM 5310</td>
<td>Introduction to Systems Theory</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 5311</td>
<td>Substance Abuse and Critical Issues in Systems Theories</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 5320</td>
<td>Introduction to Marital and Family Therapy: Counseling Theories and Techniques</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 5321</td>
<td>Theories of Marriage and Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 5322</td>
<td>Clinical Practice in Marriage and Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 5335</td>
<td>Human Development Across the Life Cycle</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 5350</td>
<td>Research in Marriage and Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 6320</td>
<td>Assessment in Marital and Family Therapy</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 6331</td>
<td>Diversity and Psychosocial Issues</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 6332</td>
<td>Human Sexuality and Gender</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 6333</td>
<td>Theories of Personality and Psychopathology</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 6340</td>
<td>Legal, Ethical, and Professional Issues</td>
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<td>Course Code</td>
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<tr>
<td>SFTM 6374</td>
<td>Group Psychotherapy</td>
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<tr>
<td>SFTM 6558</td>
<td>Couples Therapy: Theory and Application</td>
<td>3</td>
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</tbody>
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**Practicum Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>SFTM 5400</td>
<td>Internal Practicum</td>
<td>6</td>
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<tr>
<td>SFTM 6300</td>
<td>External Practicum</td>
<td>6</td>
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</tbody>
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**Electives (6 credit hours)**

Select two courses from the following elective courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>FSHC 5000</td>
<td>Family Systems Health Care I†</td>
<td>3</td>
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<tr>
<td>FSHC 5010</td>
<td>Family Systems Health Care II: Grief and Loss†</td>
<td>3</td>
</tr>
<tr>
<td>FSHC 5300</td>
<td>Integration and Collaboration</td>
<td>3</td>
</tr>
<tr>
<td>FSHC 5510</td>
<td>Politics and Economics in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 5036</td>
<td>Infant Mental Health</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 5037</td>
<td>Suicide Prevention</td>
<td>3</td>
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<tr>
<td>SFTM 5038</td>
<td>Military Families</td>
<td>3</td>
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<tr>
<td>SFTM 5039</td>
<td>Collaborative Divorce</td>
<td>3</td>
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<tr>
<td>SFTM 5050</td>
<td>Family Play Therapy</td>
<td>3</td>
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<tr>
<td>SFTM 5355</td>
<td>Introduction to Equine-Assisted Family Therapy*</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 5361</td>
<td>Developing a Private Practice**</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 5362</td>
<td>Solution-Focused Coaching**</td>
<td>3</td>
</tr>
<tr>
<td>SFTM 5363</td>
<td>Advanced Equine Family Therapy*</td>
<td>3</td>
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<tr>
<td>SFTM 5366</td>
<td>Advanced Addictions</td>
<td>3</td>
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<tr>
<td>SFTM 5367</td>
<td>Working with Autism and ADHD: Applied Behavior Analysis and Systemic Thinking</td>
<td>3</td>
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<tr>
<td>SFTM 6550</td>
<td>International Perspectives</td>
<td>3</td>
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<tr>
<td>SFTM 6630</td>
<td>Grief and Loss</td>
<td>3</td>
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Other electives may be available as offered.

Required electives may be taken the term of the student’s choice. The program fulfills the academic requirements for state licensure in Florida; additional post-master’s clinical experience is required for licensure. Students may enter the program in the fall or summer terms. Students may choose to take any two electives and not go for a concentration. They can also choose to concentrate in Equine-Assisted Therapy, Solution-Focused Coaching, or Medical Family Therapy.

*Courses required for students who want a concentration in Equine-Assisted Therapy
†Courses required for students who want a concentration in Medical Family Therapy.
**Courses required for students who want a concentration in Solution-Focused Coaching
Course Descriptions

DMFT 5001—Doctoral Seminar I
In this general orientation to doctoral studies, students learn advanced ethics, diversity, and social justice while focusing on the research, writing, and library skills necessary for authoring papers in doctoral courses and for publications. Students take this course each of their first three terms. (1 credit hour)

DMFT 5002—Doctoral Seminar II
In this continuation of DMFT 5001, students are introduced to professional development opportunities in diverse settings, specific details regarding professionalism, program and portfolio requirements, internships, and dissertation. It is offered each term in second year. Prerequisite: DMFT 5001 (1 credit hour)

DMFT 5003—Doctoral Seminar III
In this continuation of DMFT 5002, students are tutored in the skills necessary to develop successful coursework, clinical, and academic/research portfolios as part of the doctoral program requirements. It is offered third year. Prerequisite: DMFT 5002 (1 credit hour)

DMFT 5004—Reading/Writing/Editing Doctoral Scholars
Excellent reading, writing, and editing skills are essential for family therapists who wish to make scholarly contributions to the field. Researchers, supervisors, and clinicians must be able to compose and publish clear descriptions of their work, and professors and journal reviewers must be able to read with discernment and effectively critique the writings of others. This course develops and hones the necessary skills for making such contributions. (3 credit hours)

DMFT 5006—Introduction to Systems Theory
This course provides an overview of theories that use metaphors of system, pattern, interaction, and communication to describe human behavior and relationships as well as the study of the emergence of theories from cybernetics to language studies. (3 credit hours)

DMFT 5007—Research in Marriage and Family Therapy
This course offers a review of quantitative and qualitative methods of inquiry, as exemplified in recent marital and family therapy research studies. It focuses on teaching students to be intelligent, critical consumers of research in the field. Offered winter term. (3 credit hours)

DMFT 5008—Introduction to Marital and Family Therapy: Counseling Theories and Techniques
An introduction and review of the history of marital and family therapy and the clinical approaches of interactional therapies are included in this course. The focus is based on basic therapeutic concepts and skills. Offered fall term. (3 credit hours)

DMFT 5009—Theories of Marriage and Family Therapy
This course offers a comparative study of theories of marital and family therapy, including systemic, structural, strategic, intergenerational, contextual, behavioral, experiential therapies, and others. It provides a survey of differences in clinical practices. Offered winter term. Prerequisite: DMFT 5006 (3 credit hours)

DMFT 5010—Systemic Family Therapy I
The study of those systemic therapies informed by cybernetics and oriented to the social organization of communication are included in this course. Emphasis is placed on the work of the Mental Research Institute and solution-focused brief therapy. Offered fall term. Prerequisites: Core courses, DMFT 5006, DMFT 5009 (3 credit hours)

DMFT 5020—Systemic Family Therapy II
This course centers on narrative therapy theory and practice. Students will extensively explore assumptions, including distinctions between structuralist and post-structuralist thought, which underline this model and contrast with other therapeutic models. Practice methods will focus on various maps and scaffolds that describe and organize narrative practices. Students will explore the application of these assumptions and practices to a range of therapeutic problems as well as diversity and community issues. Offered winter term. Prerequisites: DMFT 5006, DMFT 5009, DMFT 5010 (3 credit hours)

DMFT 5030—Systemic Family Therapy III
This course acquaints students with the basic concepts of the natural systems approach to family therapy. Emphasis is placed on family-of-origin issues, multigenerational systems processes, and biological/evolutionary contributions to the understanding of human systems. Offered fall term. Prerequisites: DMFT 5006, DMFT 5009, DMFT 5020 (3 credit hours)

DMFT 5036—Infant Mental Health
This course is designed to provide students with an introduction to the growing field of infant mental health. Emphasis will be placed on clinical assessment and treatment of mental health issues among infants and their caregivers within the contexts of social, cultural, and family systems. This course is a preparation for those who may wish to become certified in the area of infant mental health. It will also be useful for those who wish to practice general marriage and family therapy and gain more knowledge of the early parenting years of the family life cycle. Offered winter term. (3 credit hours)
DMFT 5037—Suicide Prevention and Crisis Intervention
Suicide is one of the most dangerous actions in which depressed people engage that may, in fact, be preventable. This is true for those with suicidal ideation at all ages. This course will help the student learn how to identify the potential for suicide and how to respond and refer. Since suicide is often precipitated by situational crises, early intervention techniques, particularly the identification of suicide potential, is crucial. Suicide ideation is frequently seen in criminal defendants, especially those who make suicide attempts when first admitted to jail or prison. Suicide-by-cop and highly publicized intentional and random multiple-shooting events will be studied to better understand the shooter’s motivations and early identification. Effective suicide prevention and crisis intervention strategies will be explored. Offered winter term. (3 credit hours)

DMFT 5038—Military Families
This course will prepare the student to work with active military and veterans and their families. The course will cover the military culture as it interacts with the dominant culture and trace the history of cultural conflict between these different ethics. In addition, course material will be presented on PTSD and Acute Stress Disorder as they particularly apply to military situations. The stresses of deployment and reintegration on the spouses and children of active-duty military and veterans will also be discussed. The student will become prepared to work in Veterans Administration and Department of Defense settings after appropriate experience and licensure requirements are met. Offered fall term. (3 credit hours)

DMFT 5039—Collaborative Divorce
This course will provide information regarding career opportunities for marriage and family therapists working with families transitioning into divorce. It will cover collaboration with other professionals, such as attorneys and mediators. The student will be guided as to how to become certified as a mediator, parent coordinator, guardian ad litem, or collaborative practitioner. In addition, the course will be useful to those wishing to practice general marriage and family therapy, helping them to learn more about the experience of divorce in order to assist their clients. Offered fall term. (3 credit hours)

DMFT 5040—Systemic Family Therapy IV
Study of the complexities and subtleties of language and the art of therapeutic implication are focused on in this course, with discussions on the relationships between hypnosis and brief therapy. The course draws on the work of Milton Erickson as a primary resource. Offered winter term. Prerequisites: DMFT 5006, DMFT 5009, DMFT 5030 (3 credit hours)

DMFT 5045—Group Psychotherapy
This class is designed to provide an opportunity for students and professionals to develop a set of core competencies in general group work from a systemic perspective. These core competencies include knowledge of group theories, common group dynamics, common group types, and legal and ethical issues. During the course, students will also be introduced to various specialty/advanced-competency areas in group work. The development of core skills will occur through a combination of didactic lecture in group theory, classroom discussion, and an experiential group (during the second part of each class meeting). Offered summer term. (3 credit hours)

DMFT 5046—Human Development Across the Life Cycle
This course covers the stages of the individual life cycle, and of the family life cycle, in a cultural context. The interplay of individual development, unique individual difference, culture, socioeconomic context, and family context will be considered and integrated with major models of family therapy. Therapy techniques appropriate for each stage of development will be explored. Offered fall term. (3 credit hours)

DMFT 5050—Family Play Therapy
This course will explore creative means of expression in therapy, including, but not limited to, art, music, sand tray, puppets, and other play-related materials. The use of these techniques with children, adolescents, and families will be discussed and practiced. This course is a preparation for those who may wish to focus on working with young children and/or on pursuing certification as a registered play therapist. It will also be useful to the general marriage and family therapists to add creative techniques to their repertoires. Offered fall term. (3 credit hours)

DMFT 5110—Language Systems
This course locates the practice of therapy within cultural, philosophical, and scientific domains; it uses notions about the relational nature of language as a means of examining, critiquing, and explicating therapeutic practice. Offered winter term. Prerequisite: DMFT 5006 (3 credit hours)

DMFT 5120—Thinking Systems
The study of systemic theory, particularly the ideas of relationship, difference, and context, is the focus of this course, which emphasizes the ideas of Gregory Bateson. Offered fall term. Prerequisite: DMFT 5006 (3 credit hours)

DMFT 5130—Crisis Management
This course provides students with advanced skills in crisis management for the expansion of their supervision and training of other professionals. Offered winter term. (3 credit hours)

DMFT 5140—Advanced Micro Skills
This course provides students with the most advanced micro skills in clinical work, giving them the resources for training and overseeing supervisees and becoming mentors of other mental health professionals. Offered fall term. (3 credit hours)
DMFT 5300—Legal, Ethical, and Professional Issues in Marriage and Family Therapy
This course offers an in-depth explanation of accreditation and licensure organizations, along with the ethical codes they promote in family therapy and related fields. This includes a review of the therapist’s legal responsibilities and liabilities in mental health and family law, insurance claims, and private practice management with inclusion of an overview of professional opportunities in public service and training programs. Offered fall term. (3 credit hours)

DMFT 5301—Agency Practice and Organizational Consulting
This course examines applications of family therapy methods and ideas in community and agency settings, including in-home, residential, outpatient, and inpatient settings. The course will prepare students to work in the community and learn and refine their skills as related to completing clinical documentation; learning and meeting requirements of different funding sources; preparing safe aftercare and discharge plans; and working collaboratively with clients, families, and representatives of larger systems involved with such clients. Students will learn about managed care, Medicaid, Medicare, and private insurance systems. They will also learn rules and regulations related to working with different funding sources and Federal and State funding systems. Students will learn techniques of agency administration and organizational consultation. This course will be useful to those seeking careers in agencies, hospitals, and managed-care settings, as well as for the general marriage and family therapist. Offered summer term. (3 credit hours)

DMFT 5311—Substance Abuse/Addictions and Critical Issues in Systems Theories
This course addresses the application of modern and postmodern ideas to substance abuse, addictions, and critical issues in the practice of therapy. Emphasis is placed on the application of modern and postmodern ideas to substance abuse, addictions, and critical issues based on research, theories, practice, and treatment. Also included are other critical issues of culture, ethnicity, gender, race, religion, violence, and other areas of critical concern in social systems. Offered summer term. Prerequisite: DMFT 6200 (3 credit hours)

DMFT 5312—Advanced Substance Abuse Training
This course addresses the application of modern and postmodern ideas to substance abuse, addictions, and critical issues in the practice of therapy. Emphasis is placed on the application of modern and postmodern ideas to substance abuse, addictions, and critical issues based on research, theories, practice, and treatment. Also included are other critical issues of culture, ethnicity, gender, race, religion, violence, and other areas of critical concern in social systems. Through course assignments and instructor approval, advanced doctoral students will construct an advanced-level component to include specific requirements regarding certification and supervision in addictions. (3 credit hours)

DMFT 5340—Grant Writing and Funding Opportunities
This course provides students with knowledge of how to assess, identify, and write grants to acquire funding opportunities in agency and treatment facilities. Offered winter term. (3 credit hours)

DMFT 5355—Introduction to Equine-Assisted Family Therapy
This course will provide students with an introduction to all aspects of equine-assisted mental health approaches. Beginning with an overview of the rapidly growing animal-assisted therapy field, the course will cover in greater depth equine-assisted psychotherapy, team building, and therapeutic riding programs. Through hands-on experience working with horses, students will be introduced to the equine-assisted family therapy model being developed as a collaborative effort between NSU’s Family Therapy Program and Stable Foundations, an independent, equine-assisted therapy program in the community. Offered fall and winter terms. (3 credit hours)

DMFT 5356—Religious and Spiritual Diversity
This course is a basic course on religious/spiritual differences that uses systemic and relational family therapy theory to train mental health professionals in the art and skill of acceptance and respect of other human beings’ deeply held faith/non-faith beliefs. The instructor will use basic therapeutic skill in creating a class community that is inviting, open, and honoring. Students will be challenged through the use of didactic, experiential, and written activities related to both personal and professional experiences with religion and spirituality. (3 credit hours)

DMFT 5361—Developing a Private Practice in Coaching and Therapy
This course examines applications of family therapy methods and ideas in private practice settings. It will prepare students to develop a private practice as a marriage and family therapist, a career/college/health and wellness coach, or both, depending on previous background and additional coursework. Students will learn the basics of developing a referral base, understanding managed care and insurance systems, and developing workshops and community outreach. The ethics of private practice and the need for practitioner self-care will also be stressed. This course will be useful for those planning a private practice career as all or part of their professional journey. Offered summer term. (3 credit hours)

DMFT 5362—Solution-Focused Coaching
This course prepares the student for professional practice as a solution-focused coach. In this course, the distinctions between therapy, education, and coaching are clearly presented, and the student learns basic skills and approaches to solution-focused
coaching. Students will also be educated on specializations in career, college, health and wellness, and other specific types of coaching practice. Offered summer term. (3 credit hours)

DMFT 5363—Advanced Equine-Assisted Family Therapy
This course will utilize an equine-assisted, experiential model to provide students with an opportunity to explore and develop their awareness of the Self of the Therapist (SOTT). Additionally, through clinical role plays incorporating application of marriage and family therapy theories and models, students will learn to conduct equine-assisted clinical and training sessions with a variety of populations and presenting issues. Students will apply different interventions and activities involving the horses and mock clients in role-play situations and will be expected to intentionally incorporate a systemic, relational approach in all sessions. The course readings will also integrate concepts from other clinical and theoretical coursework to facilitate students’ abilities to consistently connect the systemic family therapy framework with an equine-assisted approach. (3 credit hours)

DMFT 5364—Advanced Narrative Therapy Practices
This course is designed to provide students with a chance to more deeply explore narrative therapy ideas and practices than was possible in Systemic Family Therapy II, as well as to collaborate on developing skills in ongoing cases. (3 credit hours)

DMFT 5366—Advanced Addictions
This course will review systemic models of advanced addiction treatment. The course will cover the history of the DSM diagnosis of addiction, the general systemic approach to addiction, and a description of how each marriage and family therapy model (including narrative, structural, and solution-focused brief therapy, among others) approaches addiction treatment. The opioid crisis and federal drug policy will be discussed. (3 credit hours)

DMFT 5367—Working with Autism and ADHD: Applied Behavior Analysis and Systemic Thinking
This course reviews prevalent neurobiological disorders, specifically autism and Attention Deficit Hyperactivity Disorder (ADHD), and the implementation of a both/and perspective, using applied behavior analysis and systemic thinking. (3 credit hours)

DMFT 5410—Quantitative Research I
This course covers fundamental concepts and practices in quantitative research method by introducing measurement and statistics, questionnaire development, and experimental and quasi-experimental research designs for the study of human sciences. Exemplary studies from family therapy literature are included. Offered summer term. Prerequisite: DMFT 5007 or equivalent (3 credit hours)

DMFT 6110—Systems Application in the Family Life Cycle of Aging
This course will provide a focus on the major concepts of systems thinking as applied to the family life cycle of aging. The class will focus on foundational concepts of systemic theories associated with the work of Gregory Bateson, Humberto Maturana, and Heinz von Foester. Students will have an opportunity to explore interactional theories informed by cybernetics, language, and natural systems metaphors in the framework of the aging process. This course will provide not only an opportunity to learn about systemic theories, but also a possibility to reflect on applications of such theoretical concepts while examining the process of aging and family interactions involving older adults. Offered winter term. (3 credit hours)

DMFT 6120—Relationships in Aging
Multidimensional in nature, aging invites diverse health care professionals to work together to examine its various aspects. This course will offer students an opportunity to reflect on diverse relationships among older adults themselves, senior health care consumers and their health care providers, and various health care professionals who are taking care of the aging population. The role modification in the American household, romantic relationships in later life, and the societal outlook on the process of aging are just a few topics addressed in this class. Students will also examine current needs and requirements of the working environment with older adults, including the subject of integrative primary care and the necessity of multidisciplinary teamwork. Offered winter term. (3 credit hours)

DMFT 6130—Caregiving in the Family
Caregiving constitutes a challenging experience for the whole family. This course will provide an opportunity to examine diverse characteristics of the caregivers, emotional and physical issues associated with caregiving, and existing resources implemented to support families and caretakers. In addition, students will have an opportunity to examine the notions of well-being and quality of life as applied to those providing and receiving care. While reflecting on the caregiving process, students will use concepts from such theoretical frameworks as constructivism, social constructionism, and general systems theory to investigate diverse perceptions and ideas about caregiving. Providing theoretical guidelines, this class will also give students a chance to acquire attuned therapeutic skills to provide assistance to caregivers and their families. Offered summer term. (3 credit hours)

DMFT 6140—Grief and Loss in Aging
Loss has multiple faces, especially when growing older. The experiences of loss are uniquely tinted by our cultural framework, spiritual beliefs, family traditions, and individual values. This course offers students an opportunity to examine
different types of losses in later life, paying particular attention to the concepts of anticipatory and disenfranchised grief. Students explore how loss is perceived among older adults from diverse ethnical and cultural backgrounds, paying particular attention to the variety of mourning traditions. In addition, the concept of resilience is introduced, inviting students to become curious about diverse stories of healing. Offered fall term. (3 credit hours)

DMFT 6200—Internal Practicum I–II
These two supervised clinical courses consist of the application of systemic therapy ideas and practices at the on-site Family Therapy Clinic. Prerequisites: DMFT 5006, DMFT 5008, DMFT 5300. (3 credit hours)

DMFT 6210—Clinical Practicum
This course provides students with hands-on supervision in a team setting to promote their clinical skills and work with others. Prerequisites: DMFT 5046, DMFT 6520, DMFT 6558, DMFT 7301, DMFT 7302, DMFT 7311 (3 credit hours)

DMFT 6300—External Practicum
This course is designed to allow students to gain clinical experience in real-world settings. Practicum sites are located throughout the community and allow students the opportunity to apply their clinical training in a variety of hands-on venues. Prerequisites: DMFT 5046, DMFT 6520, DMFT 6558, DMFT 7301, DMFT 7302, DMFT 7311 (3 credit hours)

DMFT 6320—Supervision Practicum I–II
Extensive live-supervision and case-consultation experience with clinicians in learning systemic therapies is conducted in the on-site Family Therapy Clinic. Students receive supervision of their supervision of others by AAMFT faculty supervisors. Faculty approval is required. Prerequisite: DMFT 6325 (3 credit hours)

DMFT 6321—Fundamentals of Teaching Marriage and Family Therapy
This course will introduce students to the fundamentals of teaching marriage and family therapy in both a graduate and undergraduate learning environment. It will cover the distinctions between clinical and theoretical courses and practicum instruction, as well as those designed specifically to prepare students for state licensing examinations. Students will be exposed to the basic elements of syllabus construction, the application of evaluative rubrics, and other evaluative teaching mechanisms. They will also be required to demonstrate skills in course planning and lecture construction and delivery. Offered summer term. (3 credit hours)

DMFT 6325—Fundamentals of Supervision in Marriage and Family Therapy
This course is designed to critically examine the most current literature in supervision from the field of marriage and family therapy and assist students in the development of their own supervision philosophy. Practical elements of supervision—such as contracts, evaluations, structure, and ethical issues—are taught, along with the examination of the systemic nature of supervision, including isomorphism and diverse contextual variables. This course provides the coursework necessary to become an AAMFT-approved supervisor as well as a Florida-state-qualified supervisor. This course is designed to be taken by advanced doctoral students in their third summer term. (3 credit hours)

DMFT 6400—Evidence-Based Research Methods
This course is designed to promote the advancement of understanding research conducted in the marriage and family therapy field. It provides an opportunity to better understand and make informed decisions in practice and supervision based on evidence-based methods. Offered fall term. Prerequisite: DMFT 5007 (3 credit hours)

DMFT 6410—Qualitative Action Research
Promotion of research skills and the understanding of qualitative action research provides a method for conducting research and especially conducting an applied clinical project. Offered summer term. Prerequisite: DMFT 5007 (3 credit hours)

DMFT 6430—Qualitative Research I
This course focuses on the introduction to qualitative research methodologies and the use of the investigator as the research instrument of choice. Participant observation and interviewing strategies are discussed. Students are introduced to methods for transcribing and organizing interviews and field notes. Exemplary studies from other disciplines are used; however, studies from the family therapy literature, when available, are offered. Offered winter term. Prerequisites: DMFT 5007, DMFT 6410 (3 credit hours)

DMFT 6450—Evidence-Based Research Methods
This course is designed to promote the advancement of understanding research conducted in the marriage and family therapy field. It provides an opportunity to better understand and make informed decisions in practice and supervision based on evidence-based methods. Offered fall term. Prerequisite: DMFT 5007 (3 credit hours)

DMFT 6540—Independent Study in Family Therapy
An independent study is developed with a faculty member of choice on a mutually determined, critical, family therapy topic that could include a specific research-based or clinical project or a grant-funded research project. This course is generally taken at the end of the second year or later to enhance a student’s independent studies and trainings. Prerequisite: Program approval required. (3 credit hours)
DMFT 6550—International Perspectives in Counseling and Therapy
This course is designed to review issues relevant to the practice of counseling, therapy, and human services work in an international context. Issues explored include the adaptation of western models of therapy for practice in other countries; immigrant family experiences and the relevance to clinical practice in the U.S.; and global ethical issues in counseling and therapy. Students will learn to become more sophisticated with regard to their understanding of family functioning and the role of counseling and therapy in an international context. Prerequisites: DMFT 5006, DMFT 5008, DMFT 5009, DMFT 6200 I, II. Offered summer term. (3 credit hours)

DMFT 6558—Couples Therapy: Theory and Application
In this course, students will examine their own experiences, biases, and values about couples and working with couples, as well as the historical development of couples therapy. Students will learn current clinical approaches to couples therapy and evidence-based models for working with couples. Students will examine current couple and marital research, as well as assessment instruments used for working with couples. Students will examine specific professional, ethical, and legal issues associated with couples work. Issues of diversity and a commitment to multicultural exploration are demonstrated and interwoven throughout all discussions as students explore specific areas of work with couples, such as extramarital affairs, intimate partner violence, divorce, step-parenting, and health and illness. Offered winter term. (3 credit hours)

DMFT 6570—School-Based Family Counseling
This course offers training to work in educational settings utilizing brief, solution-oriented, and strength-based approaches to school issues. It will assist those therapists seeking a Certified Educational Planner credential. Offered summer term. Prerequisite: DMFT 6200. (3 credit hours)

DMFT 6590—Advanced Bowen Systems
This course advances the study of the concepts of the natural systems approach to family therapy, family-of-origin issues, multigenerational systems processes, biological/evolutionary constructions to the understanding of human systems, and the practical applications across multiple disciplines. Offered summer term. (3 credit hours)

DMFT 6600—Preliminary Review
This course is an organized review of, and personal reflection upon, the collective body of work students have produced during their progress through their first year. A written self-review of professional growth, personal growth, and responses to challenges, along with other significant contributions, is submitted for faculty review. (3 credit hours)

DMFT 6630—Grief and Loss
The personal beliefs and philosophies regarding dying, loss, and death are explored. Bereavement across the life cycle, including developmental issues relating to adults and children and their understanding of loss, is reviewed. The manner in which other cultures create meaningful rituals for life and death will be presented. Offered summer term. (3 credit hours)

DMFT 6650—Coursework Portfolio
This course is an organized review of, and personal reflection upon, the collective body of work students have produced during their progress through the course curriculum. A written self-review of professional growth, personal growth, and responses to challenges, along with other significant contributions, is submitted in an electronic format that will include all course syllabi, papers, presentations, and other relevant data that reflect a successful doctoral student. (3 credit hours)

DMFT 6750—Clinical Portfolio
This course provides an opportunity for students to demonstrate their clinical competence, creativity, and theoretical clarity in a manner and setting similar to that which could be expected in a job interview situation. This culmination of in-house clinical training allows students to demonstrate the full range and depth of their clinical skills and theoretical knowledge through a written statement of treatment philosophy, case study, and video presentation. (3 credit hours)

DMFT 6875—Course Comprehensive Exam
This course is a written exam assessing the student’s ability to apply the knowledge gained across cases and topics based on coursework. (3 credit hours)

DMFT 6950—Applied Clinical Project (ACP)
This course is a capstone experience of the students’ demonstration of ability to be able to articulate and demonstrate to other mental health professionals their unique area of systems-based practice expertise. The ACP should be a project the student carries out under faculty supervision from concept, to proposal, to implementation, and finally through eventual evaluation of the effectiveness of the program. (3 credit hours)

DMFT 7301—Assessment in Marital and Family Therapy
This course provides an overview of methods and instruments used to define problems and indicate solutions, including a comparative study of interactional approaches and individual and family dysfunction assessments. Offered summer term. Prerequisite: DMFT 6200. (3 credit hours)
SFTD 5003—Doctoral Seminar III
In this continuation of SFTD 5002, students are tutored in the skills necessary to develop successful coursework, clinical, and academic/research portfolios as part of the doctoral program requirements. Offered fall term. Prerequisite: SFTD 5002 (1 credit hour)

SFTD 5004—Reading/Writing/Editing for Doctoral Scholars
Excellent reading, writing, and editing skills are essential for family therapists who wish to make scholarly contributions to the field. Researchers, supervisors, and clinicians must be able to compose and publish clear descriptions of their work, and professors and journal reviewers must be able to read with discernment and effectively critique the writings of others. This course develops and hones the necessary skills for making such contributions. (3 credit hours)

SFTD 5006—Introduction to Systems Theory
This course provides an overview of theories that use metaphors of system, pattern, interaction, and communication to describe human behavior and relationships as well as the study of the emergence of theories from cybernetics to language studies. (3 credit hours)

SFTD 5007—Research in Marriage and Family Therapy
This course offers a review of quantitative and qualitative methods of inquiry, as exemplified in recent marital and family therapy research studies. It focuses on teaching students to be intelligent, critical consumers of research in the field. Offered winter term. (3 credit hours)

SFTD 5008—Introduction to Marital and Family Therapy: Counseling Theories and Techniques
An introduction and review of the history of marital and family therapy and the clinical approaches of interactional therapies are included in this course. The focus is based on basic therapeutic concepts and skills. Offered fall term. (3 credit hours)

SFTD 5009—Theories of Marriage and Family Therapy
This course offers a comparative study of theories of marital and family therapy, including systemic, structural, strategic, intergenerational, contextual, behavioral, experiential therapies, and others. It provides a survey of differences in clinical practices. Offered winter term. Prerequisite: SFTD 5006 (3 credit hours)

SFTD 5010—Systemic Family Therapy I
The study of those systemic therapies informed by cybernetics and oriented to the social organization of communication are included in this course. Emphasis is placed on the work of the Mental Research Institute and solution-focused brief therapy. Offered fall term. Prerequisites: Core courses, SFTD 5006, SFTD 5009 (3 credit hours)
SFTD 5020—Systemic Family Therapy II
This course centers on narrative therapy theory and practice. Students will extensively explore assumptions, including distinctions between structuralist and post-structuralist thought, which underline this model and contrast with other therapeutic models. Practice methods will focus on various maps and scaffolds that describe and organize narrative practices. Students will explore the application of these assumptions and practices to a range of therapeutic problems as well as diversity and community issues. Offered winter term. Prerequisites: SFTD 5006, SFTD 5009, SFTD 5010 (3 credit hours)

SFTD 5030—Systemic Family Therapy III
This course acquaints students with the basic concepts of the natural systems approach to family therapy. Emphasis is placed on family-of-origin issues, multigenerational systems processes, and biological/evolutionary contributions to the understanding of human systems. Offered fall term. Prerequisites: SFTD 5006, SFTD 5009, SFTD 5020 (3 credit hours)

SFTD 5036—Infant Mental Health
This course is designed to provide students with an introduction to the growing field of infant mental health. Emphasis will be placed on clinical assessment, and treatment of mental health issues among infants and their caregivers within the contexts of social, cultural, and family systems. This course is a preparation for those who may wish to become certified in the area of infant mental health. It will also be useful for those who wish to practice general marriage and family therapy and gain more knowledge of the early parenting years of the family life cycle. Offered winter term. (3 credit hours)

SFTD 5037—Suicide Prevention and Crisis Intervention
Suicide is one of the most dangerous actions in which depressed people engage that may, in fact, be preventable. This is true for those with suicidal ideation at all ages. This course will help the student learn how to identify the potential for suicide and how to respond and refer. Since suicide is often precipitated by situational crises, early intervention techniques, particularly the identification of suicide potential, is crucial. Suicide ideation is frequently seen in criminal defendants, especially those who make suicide attempts when first admitted to jail or prison. Suicide—by-cop and highly publicized intentional and random multiple-shooting events will be studied to better understand the shooter’s motivations and early identification. Effective suicide prevention and crisis intervention strategies will be explored. Offered winter term. (3 credit hours)

SFTD 5038—Military Families
This course will prepare the student to work with active military and veterans and their families. The course will cover the military culture as it interacts with the dominant culture, and trace the history of cultural conflict between these different cultures. In addition, course material will be presented on PTSD and Acute Stress Disorder as they particularly apply to military situations. The stresses of deployment and reintegration on the spouses and children of active-duty military and veterans will also be discussed. The student will become prepared to work in Veterans Administration and Department of Defense settings, after appropriate experience and licensure requirements are met. Offered fall term. (3 credit hours)

SFTD 5039—Collaborative Divorce
This course will provide information regarding career opportunities for marriage and family therapists working with families transitioning into divorce. It will cover collaboration with other professionals, such as attorneys and mediators. The student will be guided as to how to become certified as a mediator, parent coordinator, guardian ad litem, or collaborative practitioner. In addition, the course will be useful to those wishing to practice general marriage and family therapy, helping them to learn more about the experience of divorce in order to assist their clients. Offered fall term. (3 credit hours)

SFTD 5040—Systemic Family Therapy IV
Study of the complexities and subtleties of language and the art of therapeutic implication are focused on in this course, with discussions on the relationships between hypnosis and brief therapy. The course draws on the work of Milton Erickson as a primary resource. Offered winter term. Prerequisites: SFTD 5006, SFTD 5009, SFTD 5030 (3 credit hours)

SFTD 5045—Group Psychotherapy
This class is designed to provide an opportunity for students and professionals to develop a set of core competencies in general group work from a systemic perspective. These core competencies include knowledge of group theories, common group dynamics, common group types, and legal and ethical issues. During the course, students will also be introduced to various specialty/advanced-competency areas in group work. The development of core skills will occur through a combination of didactic lecture in group theory, classroom discussion, and an experiential group. Offered summer term. (3 credit hours)

SFTD 5046—Human Development Across the Life Cycle
This course covers the stages of the individual life cycle, and of the family life cycle, in a cultural context. The interplay of individual development, unique individual difference, culture, socioeconomic context, and family context will be considered and integrated with major models of family therapy. Therapy techniques appropriate for each stage of development will be explored. Offered fall term. (3 credit hours)

SFTD 5050—Family Play Therapy
This course will explore creative means of expression in therapy, including, but not limited to, art, music, sand tray, puppets, and other play-related materials. The use of these
techniques with children, adolescents, and families will be discussed and practiced. This course is a preparation for those who may wish to focus on working with young children and/or on pursuing certification as a registered play therapist. It will also be useful to the general marriage and family therapists to add creative techniques to their repertoires. Offered summer term. (3 credit hours)

SFTD 5110—Language Systems
This course locates the practice of therapy within cultural, philosophical, and scientific domains; it uses notions about the relational nature of language as a means of examining, critiquing, and explicating therapeutic practice. Offered winter term. Prerequisite: SFTD 5006 (3 credit hours)

SFTD 5120—Thinking Systems
The study of systemic theory, particularly the ideas of relationship, difference, and context, is the focus of this course, which emphasizes the ideas of Gregory Bateson. Offered fall term. Prerequisite: SFTD 5006 (3 credit hours)

SFTD 5140—Advanced Micro Skills
This course will introduce students to systemically focused clinical micro skills for use in the advancement of their own clinical work, development of self-supervision, and as a tool for supervising other clinicians. Students will advance through micro skills at basic, therapeutic, epistemological, model, and advanced skill levels via role plays, observing other clinicians, transcript, and video/audio recording analysis. (3 credit hours)

SFTD 5300—Legal, Ethical, and Professional Issues in Marriage and Family Therapy
This course offers an in-depth explanation of accreditation and licensure organizations, along with the ethical codes they promote in family therapy and related fields. This includes a review of the therapist’s legal responsibilities and liabilities in mental health and family law, insurance claims, and private practice management with inclusion of an overview of professional opportunities in public service and training programs. Offered fall term. (3 credit hours)

SFTD 5301—Agency Practice and Organizational Consulting
This course examines applications of family therapy methods and ideas in community and agency settings including in-home, residential, outpatient, and inpatient settings. The course will prepare students to work in the community and learn and refine their skills as related to completing clinical documentation; learning and meeting requirements of different funding sources; preparing safe aftercare and discharge plans; and working collaboratively with clients, families, and representatives of larger systems involved with such clients. Students will learn about managed care, Medicaid, Medicare, and private insurance systems. They will also learn rules and regulations related to working with different funding sources and Federal and State funding systems. Students will learn techniques of agency administration and organizational consultation. This course will be useful to those seeking careers in agencies, hospitals, and managed-care settings, as well as for the general marriage and family therapist. Offered summer term. (3 credit hours)

SFTD 5311—Substance Abuse/Addictions and Critical Issues in Systems Theories
This course addresses the application of modern and postmodern ideas to substance abuse, addictions, and critical issues in the practice of therapy. Emphasis is placed on the application of modern and postmodern ideas to substance abuse, addictions, and critical issues based on research, theories, practice, and treatment. Also included are other critical issues of culture, ethnicity, gender, race, religion, violence, and other areas of critical concern in social systems. Offered summer term. Prerequisite: SFTD 6200 (3 credit hours)

SFTD 5355—Introduction to Equine-Assisted Family Therapy
This course will provide students with an introduction to all aspects of equine-assisted mental health approaches. Beginning with an overview of the rapidly growing animal-assisted therapy field, the course will cover in greater depth equine-assisted psychotherapy, team building, and therapeutic riding programs. Through hands-on experience working with horses, students will be introduced to the equine-assisted family therapy model being developed as a collaborative effort between NSU’s Family Therapy Program and Stable Foundations, an independent, equine-assisted therapy program in the community. Offered fall and winter terms. (3 credit hours)

SFTD 5356—Religious and Spiritual Diversity
This course is a basic course on religious/spiritual differences that uses systemic and relational family therapy theory to train mental health professionals in the art and skill of acceptance and respect of other human beings’ deeply held faith/non-faith beliefs. The instructor will use basic therapeutic skill in creating a class community that is inviting, open, and honoring. Students will be challenged through the use of didactic, experiential, and written activities related to both personal and professional experiences with religion and spirituality. (3 credit hours)

SFTD 5361—Developing a Private Practice in Coaching and Therapy
This course examines applications of family therapy methods and ideas in private practice settings. It will prepare students to develop a private practice as a marriage and family therapist, a career/college/health and wellness coach, or both, depending on previous background and additional coursework. Students will learn the basics of developing a referral base, understanding managed care and insurance systems, and developing workshops and community outreach. The ethics of private practice and the need for practitioner self-care will...
also be stressed. This course will be useful for those planning a private practice career as all or part of their professional journey. Offered summer term. (3 credit hours)

SFTD 5362—Solution-Focused Coaching
This course prepares the student for professional practice as a solution-focused coach. In this course, the distinctions between therapy, education, and coaching are clearly presented, and the student learns basic skills and approaches to solution-focused coaching. Students will also be educated on specializations in career, college, health and wellness, and other specific types of coaching practice. Offered summer term. (3 credit hours)

SFTD 5363—Advanced Equine-Assisted Family Therapy
This course will utilize an equine-assisted, experiential model to provide students with an opportunity to explore and develop their awareness of the Self of the Therapist (SOTT). Additionally, through clinical role plays incorporating application of marriage and family therapy theories and models, students will learn to conduct equine-assisted clinical and training sessions with a variety of populations and presenting issues. Students will apply different interventions and activities involving the horses and mock clients in role-play situations and will be expected to intentionally incorporate a systemic, relational approach in all sessions. The course readings will also integrate concepts from other clinical and theoretical coursework to facilitate students’ abilities to consistently connect the systemic family therapy framework with an equine-assisted approach. (3 credit hours)

SFTD 5364—Advanced Narrative Therapy Practices
This course is designed to provide students with a chance more deeply explore narrative therapy ideas and practices than was possible in Systemic Family Therapy II, as well as to collaborate on developing skills in ongoing cases. (3 credit hours)

SFTD 5366—Advanced Addictions
This course will review systemic models of advanced addiction treatment. The course will cover the history of the DSM diagnosis of addiction, the general systemic approach to addiction, and a description of how each marriage and family therapy model (including narrative, structural, and solution-focused brief therapy, among others) approaches addiction treatment. The opioid crisis and federal drug policy will be discussed. (3 credit hours)

SFTD 5367—Working with Autism and ADHD: Applied Behavior Analysis and Systemic Thinking
This course reviews prevalent neurobiological disorders, specifically autism and Attention Deficit Hyperactivity Disorder (ADHD), and the implementation of a both/and perspective, using applied behavior analysis and systemic thinking. (3 credit hours)

SFTD 5410—Quantitative Research I
This course covers fundamental concepts and practices in quantitative research method by introducing measurement and statistics, questionnaire development, and experimental and quasi-experimental research designs for the study of human sciences. Exemplary studies from family therapy literature are included. Offered summer term. Prerequisite: SFTD 5007 or equivalent (3 credit hours)

SFTD 6110—Systems Application in the Family Life Cycle of Aging
This course will provide a focus on the major concepts of systems thinking as applied to the family life cycle of aging. The class will focus on foundational concepts of systemic theories associated with the work of Gregory Bateson, Humberto Maturana, and Heinz von Foerster. Students will have an opportunity to explore interactional theories informed by cybernetics, language, and natural systems metaphors in the framework of the aging process. This course will provide not only an opportunity to learn about systemic theories, but also a possibility to reflect on applications of such theoretical concepts while examining the process of aging and family interactions involving older adults. Offered winter term. (3 credit hours)

SFTD 6120—Relationships in Aging
Multidimensional in nature, aging invites diverse health care professionals to work together to examine its various aspects. This course will offer students an opportunity to reflect on diverse relationships among older adults themselves, senior health care consumers and their health care providers, and various health care professionals who are taking care of the aging population. The role modification in the American household, romantic relationships in later life, and the societal outlook on the process of aging are just a few topics addressed in this class. Students will also examine current needs and requirements of the working environment with older adults, including the subject of integrative primary care and the necessity of multidisciplinary teamwork. Offered winter term. (3 credit hours)

SFTD 6130—Caregiving in the Family
Caregiving constitutes a challenging experience for the whole family. This course will provide an opportunity to examine diverse characteristics of the caregivers, emotional and physical issues associated with caregiving, and existing resources implemented to support families and caretakers. In addition, students will have an opportunity to examine the notions of well-being and quality of life as applied to those providing and receiving care. While reflecting on the caregiving process, students will use concepts from such theoretical frameworks as constructivism, social constructionism, and general systems theory to investigate diverse perceptions and
ideas about caregiving. Providing theoretical guidelines, this class will also give students a possibility to acquire attuned therapeutic skills to provide assistance to caregivers and their families. Offered summer term. (3 credit hours)

**SFTD 6140—Grief and Loss in Aging**
Loss has multiple faces, especially when growing older. The experiences of loss are uniquely tinted by our cultural framework, spiritual beliefs, family traditions, and individual values. This course offers students an opportunity to examine different types of losses in later life, paying particular attention to the concepts of anticipatory and disenfranchised grief. Students explore how loss is perceived among older adults from diverse ethnic and cultural backgrounds, paying particular attention to the variety of mourning traditions. In addition, the concept of resilience is introduced inviting students to become curious about diverse stories of healing. Offered fall term. (3 credit hours)

**SFTD 6200—Internal Practicum I–IV**
These four supervised clinical courses consist of the application of systemic therapy ideas and practices at the on-site Family Therapy Clinic. Approval is needed to register for Internal Practicum IV. **Prerequisites:** SFTD 5006, SFTD 5008, SFTD 5300 (3 credit hours)

**SFTD 6320—Supervision Practicum**
Extensive live-supervision and case-consultation experience with clinicians in learning systemic therapies is conducted in the on-site Family Therapy Clinic. Students receive supervision of their supervision of others by AAMFT faculty supervisors. Faculty approval is required. (3 credit hours)

**SFTD 6321—Fundamentals of Teaching Marriage and Family Therapy**
This course will introduce students to the fundamentals of teaching marriage and family therapy in both a graduate and undergraduate learning environment. It will cover the distinctions between clinical and theoretical courses and practicum instruction, as well as those designed specifically to prepare students for state licensing examinations. Students will be exposed to the basic elements of syllabus construction, the application of evaluative rubrics, and other evaluative teaching mechanisms. They will also be required to demonstrate skills in course planning and lecture construction and delivery. Offered summer term. (3 credit hours)

**SFTD 6325—Fundamentals of Supervision in Marriage and Family Therapy**
This course is designed to critically examine the most current literature in supervision from the field of marriage and family therapy and assist students in the development of their own supervision philosophy. Practical elements of supervision—such as contracts, evaluations, structure, and ethical issues—are taught, along with the examination of the systemic nature of supervision, including isomorphism and diverse contextual variables. This course provides the coursework necessary to become an AAMFT-approved supervisor as well as a Florida-state-qualified supervisor. This course is designed to be taken by advanced doctoral students in their third summer term. (3 credit hours)

**SFTD 6410—Quantitative Research II**
This course provides an overview of the principles and techniques of computer-aided data analysis with an introduction to the use of univariate, bivariate, and multivariate statistics for hypothesis testing. An in-depth look at the theory and assessment of reliability and validity are included. Offered fall term. **Prerequisites:** SFTD 5007, SFTD 5410 (3 credit hours)

**SFTD 6430—Qualitative Research I**
This course focuses on the introduction to qualitative research methodologies and the use of the investigator as the research instrument of choice. Participant observation and interviewing strategies are discussed. Students are introduced to methods for transcribing and organizing interviews and field notes. Exemplary studies from other disciplines are used; however, studies from the family therapy literature, when available, are offered. Offered winter term. **Prerequisite:** SFTD 5007 (3 credit hours)

**SFTD 6520—Diversity and Psychosocial Issues**
Human development in the context of family transitions across the life cycle—such as childbirth, childhood, adolescence, courtship, marriage, maturity, aging, and death—are reviewed. This course focuses on the diversity of psychosocial development across ethnicity, class, gender, race, age, and culture, with discussions and implications for interactional therapies and practices. Offered fall term. **Prerequisite:** SFTD 6200I (3 credit hours)

**SFTD 6540—Independent Study in Family Therapy**
An independent study is developed with a faculty member of choice on a mutually determined, critical, family therapy topic that could include a specific research-based or clinical project or a grant-funded research project. This course is generally taught, along with the examination of the systemic nature of supervision, including isomorphism and diverse contextual variables. This course provides the coursework necessary to become an AAMFT-approved supervisor as well as a Florida-state-qualified supervisor. This course is designed to be taken by advanced doctoral students in their third summer term. (3 credit hours)

**SFTD 6550—International Perspectives in Counseling and Therapy**
This course is designed to review issues relevant to the practice of counseling, therapy, and human services work in an international context. Issues explored include the adaptation of western models of therapy for practice in other countries; immigrant family experiences and the relevance to clinical practice in the U.S.; and global ethical issues in counseling and
therapy. Students will learn to become more sophisticated with regard to their understanding of family functioning and the role of counseling and therapy in an international context. Offered summer term. **Prerequisites:** SFTD 5006, SFTD 5008, SFTD 5009, SFTD 6200 I, II (3 credit hours)

**SFTD 6558—Couples Therapy: Theory and Application**
In this course, students will examine their own experiences, biases, and values about couples and working with couples as well as the historical development of couples therapy. Students will learn current clinical approaches to couples therapy and evidence-based models for working with couples. Students will examine current couple and marital research, as well as assessment instruments used for working with couples. Students will examine specific professional, ethical, and legal issues associated with couples work. Issues of diversity and a commitment to multicultural exploration are demonstrated and interwoven throughout all discussions as students explore specific areas of work with couples, such as extramarital affairs, intimate partner violence, divorce, step-parenting, and health and illness. Offered winter term. (3 credit hours)

**SFTD 6570—School-Based Family Counseling**
This course offers training to work in educational settings utilizing brief, solution-oriented, and strength-based approaches to school issues. It will assist those therapists seeking a Certified Educational Planner credential. Offered summer term. **Prerequisite:** SFTD 6200 I (3 credit hours)

**SFTD 6590—Advanced Bowen Systems**
This course advances the study of the concepts of the natural systems approach to family therapy, family-of-origin issues, multigenerational systems processes, biological/evolutionary constructions to the understanding of human systems and the practical applications across multiple disciplines. Offered summer term. (3 credit hours)

**SFTD 6600—Preliminary Review**
This course is an organized review of, and personal reflection upon, the collective body of work students have produced during their progress through their first year. A written self-review of professional growth, personal growth, and responses to challenges, along with other significant contributions is submitted for faculty review. (3 credit hours)

**SFTD 6630—Grief and Loss**
The personal beliefs and philosophies regarding dying, loss, and death are explored. Bereavement across the life cycle, including developmental issues relating to adults and children and their understanding of loss, is reviewed. The manner in which other cultures create meaningful rituals for life and death will be presented. Offered summer term. (3 credit hours)

**SFTD 6650—Coursework Portfolio**
This course is an organized review of, and personal reflection upon, the collective body of work students have produced during their progress through the course curriculum. (3 credit hours)

**SFTD 6750—Clinical Portfolio**
This course provides an opportunity for students to demonstrate their clinical competence, creativity, and theoretical clarity in a manner and setting similar to that which could be expected in a job interview situation. This culmination of in-house clinical training allows students to demonstrate the full range and depth of their clinical skills and theoretical knowledge through a written statement of treatment philosophy, case study, and video presentation. (3 credit hours)

**SFTD 6825—Academic/Research Portfolio**
This course is developed as a way for students to demonstrate their academic and professional research accomplishments during the program, including professional development and career building skills, as well as participate in academic publishing, research projects, and professional presentations across various venues. All students are required to demonstrate they possess doctoral-level competency in both writing and professional presentation skills. (3 credit hours)

**SFTD 6900—Dissertation**
This course includes the development, writing, and defense of the dissertation. When approved, students register for at least 2 credit hours per term. (12 credit hours minimum)

**SFTD 7301—Assessment in Marital and Family Therapy**
This course provides an overview of methods and instruments used to define problems and indicate solutions, including a comparative study of interactional approaches and individual and family dysfunction assessments. Offered summer term. **Prerequisite:** SFTD 6200 (3 credit hours)

**SFTD 7302—Personality Theories and Psychopathology**
A review of major theories of personality and psychopathology are the focus of this course, emphasizing psychiatric diagnostic classification systems. The study of implications for treatment and comparisons with interactional approaches are included. Offered summer term. **Prerequisite:** SFTD 5006 (3 credit hours)

**SFTD 7311—Human Sexuality and Gender**
This course provides a review of the psychosocial development of sexuality and gender from childhood through aging. Also addressed is a summary of clinical approaches to sexual and gender issues comparing interactional approaches with psychodynamic and behavioral models. Offered winter term. **Prerequisite:** SFTD 5006 (3 credit hours)
SFTD 7313—Individual and Group Psychotherapy
This course reviews major theories of psychotherapy and understanding of psychosocial development on which they are based. It explores individual and group techniques from psychodynamic, behavioral/cognitive, humanist/ experiential, and systemic approaches. (3 credit hours)

SFTD 7350—Qualitative Research II
This research course explores how qualitative data are transformed and categorized during description, explanation, and interpretation. Students are introduced to a variety of inductive, deductive, and abductive methods for categorizing meaning and interactive processes. Computer-assisted qualitative data analysis methods are addressed. Family therapy-related studies are offered. Offered summer term. Prerequisites: SFTD 5007, SFTD 6450 (3 credit hours)

SFTD 7360—Teaching Practicum
This supervised teaching experience in undergraduate or graduate instruction in family therapy or a related field provides students with opportunities to develop their pedagogical understanding of teaching and enhance their teaching skills. Prerequisites: SFTD 6310 and faculty approval. (3 credit hours)

SFTD 7410—Clinical or Research Internship
This internship provides students with the opportunity to advance their clinical and practice skills while they complete the clinical requirements for the program and for marriage and family therapy licensure. Students who are already licensed can take the research internship to expand their research skills and/or work with faculty members on a research project. Faculty approval is required. Prerequisites: SFTD 5045, SFTD 5046, SFTD 6520, SFTD 7301, SFTD 7302, SFTD 7311, and successful completion of the clinical portfolio (3 credit hours)

SFTM 5036—Infant Mental Health
This course is designed to provide students with an introduction to the growing field of infant mental health. Emphasis will be placed on clinical assessment and treatment of mental health issues among infants and their caregivers within the contexts of social, cultural, and family systems. This course is a preparation for those who may wish to become certified in the area of infant mental health. It will also be useful for those who wish to practice general marriage and family therapy and gain more knowledge of the early parenting years of the family life cycle. Offered winter term. (3 credit hours)

SFTM 5037—Suicide Prevention and Crisis Intervention
Suicide is one of the most dangerous actions in which depressed people engage that may, in fact, be preventable. This is true for those with suicidal ideation at all ages. This course will help the student learn how to identify the potential for suicide and how to respond and refer. Since suicide is often precipitated by situational crises, early intervention techniques, particularly the identification of suicide potential, is crucial. Suicide ideation is frequently seen in criminal defendants, especially those who make suicide attempts when first admitted to jail or prison. Suicide-by-cop and highly publicized intentional and random multiple-shooting events will be studied to better understand the shooter’s motivations and early identification. Effective suicide prevention and crisis intervention strategies will be explored. Offered winter term. (3 credit hours)

SFTM 5038—Military Families
This course will prepare the student to work with active military and veterans and their families. The course will cover the military culture as it interacts with the dominant culture and trace the history of cultural conflict between these different ethics. In addition, course material will be presented on PTSD and Acute Stress Disorder as they particularly apply to military situations. The stresses of deployment and reintegration on the spouses and children of active-duty military and veterans will also be discussed. The student will become prepared to work in Veterans Administration and Department of Defense settings after appropriate experience and licensure requirements are met. Offered fall term. (3 credit hours)

SFTM 5039—Collaborative Divorce
This course will provide information regarding career opportunities for marriage and family therapists working with families transitioning into divorce. It will cover collaboration with other professionals, such as attorneys and mediators. The student will be guided as to how to become certified as a mediator, parent coordinator, guardian ad litem, or collaborative practitioner. In addition, the course will be useful to those wishing to practice general marriage and family therapy, helping them to learn more about the experience of divorce in order to assist their clients. Offered fall term. (3 credit hours)

SFTM 5050—Family Play Therapy
This course will explore creative means of expression in therapy, including, but not limited to, art, music, sand tray, puppets, and other play-related materials. The use of these techniques with children, adolescents, and families will be discussed and practiced. This course is a preparation for those who may wish to focus on working with young children and/or on pursuing certification as a registered play therapist. It will also be useful to the general marriage and family therapists to add creative techniques to their repertoires. Offered summer term. (3 credit hours)

SFTM 5301—Agency Practice and Organizational Consulting
This course examines applications of family therapy methods and ideas in community and agency settings, including in-home, residential, outpatient, and inpatient settings. The course will prepare students to work in the community
and learn and refine their skills as related to completing clinical documentation; learning and meeting requirements of different funding sources; preparing safe aftercare and discharge plans; and working collaboratively with clients, families, and representatives of larger systems involved with such clients. Students will learn about managed care, Medicaid, Medicare, and private insurance systems. They will also learn rules and regulations related to working with different funding sources and Federal and State funding systems. Students will learn techniques of agency administration and organizational consultation. This course will be useful to those seeking careers in agencies, hospitals, and managed-care settings, as well as for the general marriage and family therapist. Offered summer term. (3 credit hours)

SFTM 5310—Introduction to Systems Theory
This course provides an overview of theories that use metaphors of system, pattern, interaction, and communication to describe human behavior and relationships, as well as the study of the emergence of theories from cybernetics to language studies. (3 credit hours)

SFTM 5311—Substance Abuse/Addictions and Critical Issues in Systems Theories
This course addresses the application of modern and postmodern ideas to substance abuse, addictions, and critical issues in the practice of therapy. Emphasis is placed on the application of modern and postmodern ideas to substance abuse, addictions, and critical issues based on research, theories, practice, and treatment. Also included are other critical issues of culture, ethnicity, gender, race, religion, violence and other areas of critical concern in social systems. Offered summer term. Prerequisite: SFTM 5400 I, SFTM 5321; Corequisite: SFTM 6300 (3 credit hours)

SFTM 5320—Introduction to Marital and Family Therapy: Counseling Theories and Techniques
An introduction and review of the history of marital and family therapy and the clinical approaches of interactional therapies are included in this course. The focus is based on basic therapeutic concepts and skills, including joining, listening, and conducting the initial interview through termination. Offered fall term. (3 credit hours)

SFTM 5321—Theories of Marriage and Family Therapy
This course offers a comparative study of theories of marital and family therapy, including systemic, structural, strategic, intergenerational, contextual, behavioral, experiential therapies, and others. It also provides a survey of differences in clinical practices. Offered winter term. Prerequisite: SFTM 5310 (3 credit hours)

SFTM 5322—Clinical Practices in Marriage and Family Therapy
This course examines applications of family therapy methods and counseling theories and techniques in specific situations, including divorce, child rearing, school issues, and others, and incorporates case study reviews. Offered fall term. Prerequisite: SFTM 5400 II, taken with SFTM 6300 (3 credit hours)

SFTM 5330—Group Psychotherapy
This class is designed to provide an opportunity for students and professionals to develop a set of core competencies in general group work from a systemic perspective. These core competencies include knowledge of group theories, common group dynamics, common group types, and legal and ethical issues. During the course, students will also be introduced to various specialty/advanced-competency areas in group work. The development of core skills will occur through a combination of didactic lecture in group theory, classroom discussion, and an experiential group (during the second part of each class meeting). Offered summer term. (3 credit hours)

SFTM 5335—Human Development Across the Life Cycle
This course covers the stages of the individual life cycle, and of the family life cycle, in a cultural context. The interplay of individual development, unique individual difference, culture, socioeconomic context, and family context will be considered and integrated with major models of family therapy. Therapy techniques appropriate for each stage of development will be explored. Offered fall term. (3 credit hours)

SFTM 5350—Research in Marriage and Family Therapy
This course offers a review of quantitative and qualitative methods of inquiry, as exemplified in recent marital and family therapy research studies. It focuses on teaching students to be intelligent, critical consumers of research in the field. Offered winter term. Prerequisite: SFTM 5310 (3 credit hours)

SFTM 5355—Introduction to Equine-Assisted Family Therapy
This course will provide students with an introduction to all aspects of equine-assisted mental health approaches. Beginning with an overview of the rapidly growing animal-assisted therapy field, the course will cover in greater depth equine-assisted psychotherapy, team building, and therapeutic riding programs. Through hands-on experience working with horses, students will be introduced to the equine-assisted family therapy model being developed as a collaborative effort between NSU’s Family Therapy Program and Stable Foundations, an independent, equine-assisted therapy program in the community. Offered fall and winter terms. (3 credit hours)
SFTM 5356—Religious and Spiritual Diversity
This course is a basic course on religious/spiritual differences that uses systemic and relational family therapy theory to train mental health professionals in the art and skill of acceptance and respect of other human beings’ deeply held faith/non-faith beliefs. The instructor will use basic therapeutic skill in creating a class community that is inviting, open, and honoring. Students will be challenged through the use of didactic, experiential, and written activities related to both personal and professional experiences with religion and spirituality. (3 credit hours)

SFTM 5357—Developing a Private Practice in Coaching and Therapy
This course examines applications of family therapy methods and ideas in private practice settings. It will prepare students to develop a private practice as a marriage and family therapist, a career/college/health and wellness coach, or both, depending on previous background and additional coursework. Students will learn the basics of developing a referral base, understanding managed care and insurance systems, and developing workshops and community outreach. The ethics of private practice and the need for practitioner self-care will also be stressed. This course will be useful for those planning a private practice career as all or part of their professional journey. Offered summer term. (3 credit hours)

SFTM 5361—Developing a Private Practice
This course examines applications of family therapy methods and ideas in private practice settings. It will prepare students to develop a private practice as a marriage and family therapist, a career/college/health and wellness coach, or both, depending on previous background and additional coursework. Students will learn the basics of developing a referral base, understanding managed care and insurance systems, and developing workshops and community outreach. The ethics of private practice and the need for practitioner self-care will also be stressed. This course will be useful for those planning a private practice career as all or part of their professional journey. (3 credit hours)

SFTM 5362—Solution-Focused Coaching
This course prepares the student for professional practice as a solution-focused coach. In this course, the distinctions between therapy, education, and coaching are clearly presented, and the student learns basic skills and approaches to solution-focused coaching. Students will also be educated on specializations in career, college, health and wellness, and other specific types of coaching practice. (3 credit hours)

SFTM 5363—Advanced Equine Family Therapy
This course will utilize an equine-assisted, experiential model to provide students with an opportunity to explore and develop their awareness of the Self of the Therapist (SOTT). Additionally, through clinical role plays incorporating application of marriage and family therapy theories and models, students will learn to conduct equine-assisted clinical and training sessions with a variety of populations and presenting issues. Students will apply different interventions and activities involving the horses and mock clients in role-play situations and will be expected to intentionally incorporate a systemic, relational approach in all sessions. The course readings will also integrate concepts from other clinical and theoretical coursework to facilitate students’ abilities to consistently connect the systemic family therapy framework with an equine-assisted approach. (3 credit hours)

SFTM 5366—Advanced Addictions
This course will review systemic models of advanced addiction treatment. The course will cover the history of the DSM diagnosis of addiction, the general systemic approach to addiction, and a description of how each marriage and family therapy model (including narrative, structural, and solution-focused brief therapy, among others) approaches addiction treatment. The opioid crisis and federal drug policy will be discussed. (3 credit hours)

SFTM 5367—Working with Autism and ADHD: Applied Behavior Analysis and Systemic Thinking
This course reviews prevalent neurobiological disorders, specifically autism and Attention Deficit Hyperactivity Disorder (ADHD), and the implementation of a both/and perspective, using applied behavior analysis and systemic thinking. (3 credit hours)

SFTM 5400—Internal Practicum I–II
These two supervised clinical courses consist of the application of systemic therapy ideas and practices at the on-site Family Therapy Clinic. Prerequisites: SFTM 5310, SFTM 5320, SFTM 6340 (3 credit hours)

SFTM 5700—Course Comprehensive Exam
This course is a written exam that assesses the student’s ability to apply the theoretical knowledge gained across cases and topics based on coursework and clinical experiences. (3 credit hours)
SFTM 6110—Systems Application in the Family Life Cycle of Aging
This course will provide a focus on the major concepts of systems thinking as applied to the family life cycle of aging. The class will focus on foundational concepts of systemic theories associated with the work of Gregory Bateson, Humberto Maturana, and Heinz von Foester. Students will have an opportunity to explore interactional theories informed by cybernetics, language, and natural systems metaphors in the framework of the aging process. This course will provide not only an opportunity to learn about systemic theories, but also a possibility to reflect on applications of such theoretical concepts while examining the process of aging and family interactions involving older adults. Offered winter term. (3 credit hours)

SFTM 6120—Relationships in Aging
Multidimensional in nature, aging invites diverse health care professionals to work together to examine its various aspects. This course will offer students an opportunity to reflect on diverse relationships among older adults themselves, senior health care consumers and their health care providers, and various health care professionals who are taking care of the aging population. The role modification in the American household, romantic relationships in later life, and the societal outlook on the process of aging are just a few topics addressed in this class. Students will also examine current needs and requirements of the working environment with older adults, including the subject of integrative primary care and the necessity of multidisciplinary teamwork. Offered winter term. (3 credit hours)

SFTM 6130—Caregiving in the Family
Caregiving constitutes a challenging experience for the whole family. This course will provide an opportunity to examine diverse characteristics of the caregivers, emotional and physical issues associated with caregiving, and existing resources implemented to support families and caretakers. In addition, students will have an opportunity to examine the notions of well-being and quality of life as applied to those providing and receiving care. While reflecting on the caregiving process, students will use concepts from such theoretical frameworks as constructivism, social constructionism, and general systems theory to investigate diverse perceptions and ideas about caregiving. Providing theoretical guidelines, this class will also give students a possibility to acquire attuned therapeutic skills to provide assistance to caregivers and their families. Offered summer term. (3 credit hours)

SFTM 6140—Grief and Loss in Aging
Loss has multiple faces, especially when growing older. The experiences of loss are uniquely tinted by our cultural framework, spiritual beliefs, family traditions, and individual values. This course offers students an opportunity to examine different types of losses in later life, paying particular attention to the concepts of anticipatory and disenfranchised grief. Students explore how loss is perceived among older adults from diverse ethnic and cultural backgrounds, paying particular attention to the variety of mourning traditions. In addition, the concept of resilience is introduced inviting students to become curious about diverse stories of healing. Offered fall term. (3 credit hours)

SFTM 6300—External Practicum I–II
Advanced clinical training and supervision is provided to enhance the practice of systemic therapy from strength-based, solution-oriented models of therapy that can be incorporated in a wide variety of community settings. Prerequisite: SFTM 5400 II. (3 credit hours)

SFTM 6320—Assessment in Marital and Family Therapy
This course provides an overview of methods and instruments used to define problems and indicate solutions. Diagnosis, appraisals, assessments, and testing appropriate to the practice of marriage and family therapy are addressed. The course also includes a comparative study of interactional approaches and individual and family dysfunction assessments. Offered summer term. Prerequisites: SFTM 5310, SFTM 5321, SFTM 5400 I. (3 credit hours)

SFTM 6331—Diversity and Psychosocial Issues
Human development in the context of family transitions across the life cycle—such as childbirth, childhood, adolescence, courtship, marriage, maturity, aging, and death—are reviewed. This course focuses on the diversity of psychosocial development across ethnicity, class, gender, race, age, and culture, with discussions and implications for interactional therapies and practices. Offered fall term. Prerequisite: SFTD 6200 I. (3 credit hours)

SFTM 6332—Human Sexuality and Gender
This course provides a review of the psychosocial development of sexuality and gender from childhood through aging. Also addressed is a summary of clinical approaches to sexual and gender issues comparing interactional approaches with psychodynamic and behavioral models. Offered winter term. Corequisite: SFTM 5310. (3 credit hours)
SFTM 6333—Personality Theories and Psychopathology
A review of major theories of personality and psychopathology are the focus of this course, which emphasizes psychiatric diagnostic classification systems. The study of implications for treatment and comparisons with interactional approaches are included. Offered summer term. Corequisite: SFTM 5310 (3 credit hours)

SFTM 6340—Legal, Ethical, and Professional Issues in Marriage and Family Therapy
This course offers an in-depth explanation of accreditation and licensure organizations, along with the ethical codes they promote in family therapy and related fields. This includes a review of the therapist’s legal responsibilities and liabilities in mental health and family law, insurance claims, and private practice management with inclusion of an overview of professional opportunities in public service and training programs. Offered fall term. (3 credit hours)

SFTM 6550—International Issues in Counseling and Therapy
This course is designed to review issues relevant to the practice of counseling, therapy, and human services work in an international context. Issues explored include the adaptation of western models of therapy for practice in other countries; immigrant family experiences and the relevance to clinical practice in the U.S.; and global ethical issues in counseling and therapy. Students will learn to become more sophisticated with regard to their understanding of family functioning and the role of counseling and therapy in an international context. Offered summer term. Prerequisites: SFTM 5310, SFTM 5320, SFTM 5321, SFTM 6340, SFTM 5400 (3 credit hours)

SFTM 6558—Couples Therapy: Theory and Application
In this course, students will examine their own experiences, biases, and values about couples and working with couples as well as the historical development of couples therapy. Students will learn current clinical approaches to couples therapy and evidence-based models for working with couples. Students will examine current couple and marital research, as well as assessment instruments used for working with couples. Students will examine specific professional, ethical, and legal issues associated with couples work. Issues of diversity and a commitment to multicultural exploration are demonstrated and interwoven throughout all discussions as students explore specific areas of work with couples, such as extramarital affairs, intimate partner violence, divorce, step-parenting, and health and illness. Offered winter term. (3 credit hours)

SFTM 6570—School-Based Family Counseling
This course offers training to work in educational settings utilizing brief, solution-oriented, and strength-based approaches to school issues. It will assist those therapists seeking a Certified Educational Planner credential. Offered summer term. Corequisite: SFTM 6300 (3 credit hours)

SFTM 6630—Grief and Loss
The personal beliefs and philosophies regarding dying, loss, and death are explored. Bereavement across the life cycle, including developmental issues relating to adults and children and their understanding of loss, is reviewed. The manner in which other cultures create meaningful rituals for life and death will be presented. Offered summer term. (3 credit hours)
Dr. Kiran C. Patel College of Osteopathic Medicine Departments

**BASIC SCIENCES**
Chair and Assistant Professor: **M. Wilkinson** | Associate Professors: **L. Baumbach-Reardon, D. Khanna, B. Mayi, J. Migliozzi, P. Rose** | Assistant Professors: **M. Holloway, H. Nguyen, M. Parmar, P. Waziry**

**CLINICAL IMMUNOLOGY**
Chair: **N. Klimas** | Professors: **J. Burks, M. Morris** | Assistant Professors: **K. A. Cheema, L. Nathanson, V. Renesca, I. Rey, I. Rozenfeld, L. Salgueiro, M. Vera-Nunez, X. Zeng**

**DERMATOLOGY**
Chair: **TBA**

**EMERGENCY MEDICINE**
Chair and Assistant Professor: **D. Cohen**

**FAMILY MEDICINE**

Division of Community Medicine
Chair and Professor: **S. Zucker** | Professor: **F. Lippman** | Assistant Professor: **D. Steinkohl, M. Wilkinson**

**FAMILY THERAPY**
Chair and Assistant Professor: **F. M. Niazi** | Director—Doctoral Programs and Associate Professor: **K. S. Erolin** | Director—BTI and Associate Professor: **A. B. Gordon** | Director—M.S. Programs and Professor: **A. H. Rambo** | Professors: **T. V. Boyd, M. D. Reiter** | Associate Professors: **C. A. Beliard, C. F. Burnett** | Assistant Professors: **P. Li, J. M. West**

**GERIATRICS**
Chair and Professor: **N. Pandya** | Associate Professor: **V. Guida** | Assistant Professors: **E. Hames, H. Masri, S. Tewary**

**HEALTH PROFESSIONS PREPARATION PROGRAM GRADUATE CERTIFICATE**
Director and Assistant Professor: **C. Brown-Wujick** | Faculty Director and Assistant Professor: **S. Riskin** | Professors: **N. Lutfi, B. Mayi** | Associate Professors: **T. Bacoat-Jones, L. Baumbach-Reardon, J. Migliozzi, P. Rose** | Assistant Professors: **D. Khanna, H. Nguyen, M. Parmar, P. Waziry**

**INTEGRATIVE MEDICINE**
Chair and Assistant Professor: **A. Bested** | Assistant Professor: **M. Vera-Nunez**

**INTERNAL MEDICINE**
Chair and Professor: **S. Snyder** | Professor: **N. Klimas** | Associate Professor: **J. Hamstra** | Assistant Professors: **S. Amini, A. Bloom, S. Fatteh, M. Kesselman, G. Merlino, S. Riskin, J. Shook**

Division of Cardiovascular Medicine
Chair and Professor: **TBA** | Clinical Professor: **M. Chizner**

Division of Endocrinology
Chair and Professor: **N. Pandya** | Clinical Assistant Professor: **F. Diaz**

Division of Gastroenterology
Chair: **TBA**

Division of Hematology/Oncology
Chair: **TBA** | Clinical Associate Professor: **B. Lenes**

Division of Infectious Diseases
Chair: **TBA**
Division of Nephrology
Chair and Professor: S. Snyder | Clinical Assistant Professor: J. Waterman

Division of Neurology
Chair and Clinical Assistant Professor: H. M. Todd | Clinical Assistant Professors: T. Hammond, J. Harris, M. Swerdloff

Division of Pulmonary Medicine
Chair and Clinical Professor: E. Bolton, Jr. | Clinical Assistant Professor: J. Glaimo

MEDICAL EDUCATION

NUTRITION
Chair and Assistant Professor: S. Petrosky | Professor: E. Groseclose | Associate Professor: N. Mikati | Assistant Professors: A. Cheema, M. Gordon, M. Luis, L. Nathanson, S. Pinnock, I. Scripa, K. Thomas-Purcell, P. Waziry | Adjunct Professor: T. Silver | Adjunct Associate Professors: G. Canfield, D. Pickett-Bernard | Adjunct Assistant Professors: V. Beljanksi, L. Craggs-Dino, S. Escobar, D. Kalman | Adjunct Instructors: D. Boyce, A. Navarre, A. Semeco

OBSTETRICS AND GYNECOLOGY
Chair and Assistant Professor: R. Alexis | Associate Professor: K. Johnson | Assistant Professors: W. Alexis, K. Brown-Burgess

OSTEOPATHIC PRINCIPLES AND PRACTICE
Interim Chair and Professor: M. Sandhouse | Professor: E. Wallace | Associate Professor: Y. Qureshi | Assistant Professors: P. Barry, J. Bruner, C. Carr, H. Laird, R. Joseph, J. Moljo, J. Wallace-Ross, N. Widboom

Division of Physical Medicine and Rehabilitation
Chair and Clinical Assistant Professor: J. Diaz

PEDiATRICS

PSYCHiATRY AND BEhAViORAL MEDiCINE
Chair and Professor: R. Ownby | Associate Professor: D. Shaw

Division of Medical Humanities
Chair: TBD

PUBLIC HEALTH

RESEARCH
Chair and Professor: N. Klimas | Professor: I. Fernandez | Associate Professor: R. Jacobs

RURAL AND URBAN UNdERSERVED MEDiCINE
Chair and Assistant Professor: M. Florent-Carre | Professor: J. Howell

SPORTS MEDiCINE
Chair and Assistant Professor: A. Posey | Professor: E. Wallace | Assistant Professors: L. Issac, R. Joseph, R. Mehra
SURGERY
Chair and Associate Professor: **E. Goldsmith** | Assistant Professor: **T. Bacoat-Jones**

Division of Anesthesiology
Chair and Clinical Associate Professor: **R. H. Sculthorpe**

Division of Cardiothoracic Surgery
Chair and Clinical Assistant Professor: **R. Segurola**

Division of Correctional Medicine
Chair: **TBA** | Clinical Assistant Professor: **D. Rectine**

Division of General Surgery
Chair and Clinical Associate Professor: **TBA**

Division of Ophthalmology
Chair and Clinical Professor: **W. Bizer**

Division of Orthopedic Surgery
Chair and Clinical Professor: **J. Rush** | Clinical Associate Professor: **M. Rech**

Division of Otorhinolaryngology
Chair and Clinical Associate Professor: **R. Contrucci**

Division of Radiology
Chair: **TBA** | Clinical Associate Professor: **J. Ditchek**

Division of Urology
Chair: **TBA**

BIOMEDICAL INFORMATICS PROGRAM
Director and Associate Professor: **A. Rana** | Professors: **P. Hardigan, R. Ownby** | Associate Professors: **S. Bronsburg, T. Craddock, R. Jacobs, D. Shaw** | Assistant Professors: **G. Cravens** | Adjunct Associate Professors: **K. Clauson, D. Hays, M. Shen, J. Singer, H. Wiggin** | Adjunct Assistant Professors: **R. AlHazme, P. Casimir, D. Dittman, J. Krive, E. Popovich, M. Ramim, J. Templeton** | Adjunct Instructors: **J. Garcia, D. Patrishkoff**

DISASTER AND EMERGENCY MANAGEMENT PROGRAM
Director and Professor: **K. Davis** | Assistant Professors: **N. Cook, E. Sklar** | Adjunct Assistant Professors: **J. Grenstone, S. Lam, E. Spiceland, L. Taylor, G. Zimmerman-McAllister** | Adjunct Instructors: **J. Cohen, J. Holgerson, J. Kuhlman, M. Reynolds, N. Robinson, J. Sabet**

MEDICAL EDUCATION PROGRAM
Director: **K. Valenti** | Associate Professors: **G. Canfield, A. Perez, A. Rana** | Assistant Professors: **J. Jordan, S. Pinnock, S. Taylor** | Adjunct Instructors: **M. Butler-Pearson, C. Lippmann, T. Morrow-Nelson, J. Quinones Nottingham, B. Packer-Muti, D. Riviera**
College of Pharmacy
Mission
To educate and develop practitioners and researchers who, through their leadership and entrepreneurism, will transform the profession of pharmacy to improve global health

Vision
To be recognized as an innovative and entrepreneurial college of pharmacy providing opportunities that encourage innovation in education, practice, and research

Values
• entrepreneurship
• excellence
• innovation
• integrity
• professionalism
• respect for diversity
• service
• teamwork

Administration
Michelle A. Clark, Ph.D.
Dean

Ana M. Castejon, Ph.D.
Associate Dean, Graduate Programs
Interim Chair, Pharmaceutical Sciences

Peter M. Gannett, Ph.D.
Associate Dean, Research

Robert McGory, M.S., Pharm.D.
Associate Dean, Professional Program

Goar Alvarez, B.S., Pharm.D.
Assistant Dean, Pharmacy Services

Elizabeth Frenzel Shepherd, B.S., M.B.A., Pharm.D.
Assistant Dean, Strategic Partnerships and Program Development

Carla A. Luque, Pharm.D.
Assistant Dean, Student Services

Rochelle S. Nappi, Ed.D.
Assistant Dean, Palm Beach

Blanca I. Ortiz, Pharm.D.
Assistant Dean, Puerto Rico

Karen Sando, Pharm.D.
Assistant Dean, Assessment and Accreditation

Carsten Evans, B.S., M.S., Ph.D.
Executive Director, HPD Continuing Education and Professional Affairs

Silvia E. Rabionet, Ed.D.
Chair, Sociobehavioral and Administrative Pharmacy

Matthew J. Seamon, Pharm.D., J.D.
Chair, Pharmacy Practice

Overview
With the nation struggling to deliver high quality, affordable health care, there has come a greater appreciation of the importance of pharmacists as members of today’s health care team. The pharmacist’s role has expanded rapidly from drug compounding and distribution to a patient-centered role. The College of Pharmacy is educating its students in practices vital to meeting the challenges facing the profession and leading to improved health and wellness while reducing health care costs.

The College of Pharmacy admitted its first class in 1987 to become the first College of Pharmacy in South Florida. Since then, it has graduated more than 4,500 pharmacy professionals. The college offers the Doctor of Pharmacy (Pharm.D.) degree program, a Ph.D. or M.S. in Pharmaceutical Sciences, and an M.S. in Pharmaceutical Affairs.

Pharmacists are experts on drugs and therapeutic goals, their biological action and uses, formulation, adverse effects, and potential for drug interactions. Pharmacists must be able to think quickly and accurately in an organized manner, despite environmental distractions; be able to communicate effectively; and have interprofessional abilities sufficient to interact with others. They consider both the medication and the patient to ensure the patient has the right drug, in the right amount, for the right length of time, and with minimal adverse effects. The result is improved health care.
Most pharmacists practice in patient-oriented settings: in community pharmacies, hospitals, extended care facilities, or public health clinics. In addition, pharmacists are employed by the pharmaceutical industry in research and development, in manufacturing, or as medical science liaisons. They work in academic institutions, government, health maintenance organizations, and home health care programs.

The college embraces these opportunities for pharmacists to assume a wider role in the health care needs of society, and qualified students have the opportunity to earn concurrent master’s degrees in either business administration (M.B.A.), public health (M.P.H.), or biomedical informatics (M.S.).

Ph.D. graduates focus on expanding the science of drug knowledge by creating and testing new drug molecules or using technology to develop new dosage forms. This field responds to needs identified by practicing pharmacists in caring for patients. The pharmaceutical scientist is very knowledgeable in pharmacology, pharmaceutics, pharmacokinetics, and administration.

The M.S. in Pharmaceutical Affairs and the M.S. in Pharmaceutical Sciences prepare students interested in pursuing positions in academia, industry, research organizations, health care systems, and government and nongovernmental agencies. The degrees also provide additional preparation for students interested in pursuing a Pharm.D. or Ph.D. degree.

Accreditation
The Accreditation Council for Pharmacy Education, 190 S. LaSalle Street, Suite 2850, Chicago, IL 60603-3410, (312) 664-3575, Fax 866-228-2631, website: acpe-accredit.org, has accredited the Doctor of Pharmacy Program of the College of Pharmacy, Nova Southeastern University.

Memberships
The College of Pharmacy is a member of the American Association of Colleges of Pharmacy. The College of Pharmacy is also a member of the International Pharmaceutical Federation (FIP).

Facilities
The College of Pharmacy administrative offices are located on the third floor of the Health Professions Division Administration Building. Pharmacy practice and research laboratories are located on the third floor of the Library/Laboratories Building. The NSU Palm Beach Campus and NSU Puerto Rico Regional Campus have administrative offices, classrooms, and labs on site. Experiential sites are primarily located throughout Florida and Puerto Rico, and pharmacy practice faculty members are assigned to innovative, patient-centered facilities in South Florida and Puerto Rico.

In the fall of 2000, the NSU College of Pharmacy opened a program in Palm Beach County. After spending many years at a shared site, NSU moved to its own 75,000-square-foot facility. Classes began at the new location in the fall of 2011. The NSU Palm Beach Campus features classrooms and labs, a student lounge, a fitness area, a pharmacy library, and administrative offices. In the fall of 2001, a full-time program on the campus of Pontificia Universidad Catolica de Puerto Rico in Ponce, Puerto Rico, was opened. The Puerto Rico program moved to its new location in San Juan in 2014. The San Juan location has state-of-the-art facilities for pharmacy students and is equipped with lecture halls; study rooms; computer, pharmacetics, and patient care management laboratories; a Drug Information Center; and additional meeting and classroom space fully equipped for compressed interactive video.

Each campus has administrators and faculty and staff members. Interactive video technology is used to provide lectures among the three campuses simultaneously. This provides for live interaction between lecturer and students regardless of location. Identical handouts, tests, and texts are used. Communication through telephone, fax, interactive technologies, and email are available to students at all campuses. All students have access to the Martin and Gail Press Health Professions Division Library, computer labs, online learning resources, and the vast technological innovations provided by NSU, which has been a leader in distance education programs for many years.

The NSU Pharmacy and Pharmacy Clinics are located next to the Sanford L. Ziff Health Care Center in Fort Lauderdale on the corner of University Drive and SW 30th Avenue. The pharmacy is open to the public and offers a range of disease management services, including diabetes care and anticoagulation management, to name a few. The pharmacy recently added an herbal and supplementation therapy clinic, a service that has been requested often by many patients. Furthermore, the pharmacy offers compounding, medication therapy management services (medication check-ups), and adult vaccinations. It teaches pharmacy students throughout the spectrum of their professional student career.

Core Performance Standards for Admission and Progress
The Nova Southeastern University Health Professions Division is pledged to the admission and matriculation of qualified students and wishes to acknowledge awareness of laws that prohibit discrimination against anyone on the basis of race, color, religion or creed, sex, pregnancy status, national or ethnic origin, nondisqualifying disability, age, ancestry, marital status, sexual orientation, gender, gender identity, military service, veteran status, or political beliefs or affiliations.

Regarding those students with verifiable disabilities, the university will not discriminate against such individuals who are otherwise qualified, but will expect applicants and students to meet certain minimal technical standards (core performance standards) as set forth herein, with or without
reasonable accommodation. In adopting these standards, the university believes it must keep in mind the ultimate safety of the patients whom its graduates will eventually serve, as well as the efficacy and safety in the learning environment. The standards reflect what the university believes are reasonable expectations required of health professions students and personnel in performing common functions. Any exceptions to such standards must be approved by the dean of the student’s particular college, based upon appropriate circumstances.

The holders of health care degrees must have the knowledge and skills to function in a broad variety of clinical situations and to render a wide spectrum of patient care. In order to carry out the activities described below, candidates for Health Professions Division degrees must be able to integrate consistently, quickly, and accurately all information received, and they must have the ability to learn, integrate, analyze, and synthesize data.

Honor and integrity of the health professions student and health care professional is essential and depends on the exemplary behavior of the individual health care provider in his or her relations with patients, faculty members, and colleagues. This includes accountability to oneself and to relationships with fellow students, future colleagues, faculty members, and patients who come under the student’s care or contribute to his or her training and growth, as well as members of the general public. This applies to personal conduct that reflects on the student’s honesty and integrity in both academic and nonacademic settings, whether or not involving an NSU-sponsored activity. All students must have the capacity to manage their lives and anticipate their own needs. Upon accepting admission to NSU, each student subscribes to, and pledges complete observance to, NSU’s Student Code of Conduct Policies. A violation of these standards is an abuse of the trust placed in every student and could lead to suspension or dismissal.

Candidates for degrees offered by the Health Professions Division must have, with or without reasonable accommodation, multiple abilities and skills including intellectual, conceptual, integrative, and quantitative abilities; interpersonal communication; mobility and strength; motor skills; and hearing, visual, tactile, behavioral, and social attributes. Candidates for admission and progression must be able to perform these abilities in a reasonably independent manner.

**Intellectual, Conceptual, Integrative, and Qualitative Abilities**

These abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem solving—a critical skill—requires all of these intellectual abilities. Candidates and students must have critical thinking ability sufficient for good clinical judgment. This is necessary to identify cause/effect relationships in clinical situations and to develop plans of care. In addition, candidates and students should be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures.

Individual is expected to be able to perform multiple tasks in a diverse, dynamic, highly competitive, and challenging learning environment. Examples include, but are not limited to, identification of cause/effect relationships in clinical situations, development of treatment plans, transferring knowledge from one situation to another, evaluating outcomes, problem solving, prioritizing, and using short- and long-term memory. All individuals are expected to meet their program requirements on a satisfactory level as determined by HPD administration or the applicable college/program administration. College of Pharmacy students must be able to perform multiple tasks in a diverse, dynamic, highly competitive, and challenging environment. They must be able to think quickly and accurately in an organized manner, despite environmental distractions.

**Interpersonal Communication**

Candidates and students must be able to interact and communicate effectively, with respect to policies, protocols, and process—with faculty and staff members, students, patients, patient surrogates, and administration during the student’s educational program. They must be able to communicate effectively and sensitively with patients, faculty members, and an interprofessional health care team. Communication includes verbal and nonverbal communication, including, but not limited to, speaking, reading, writing, gestures, and body language. They must have interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds. A student must have sufficient proficiency with English to retrieve information from texts and lectures and communicate concepts on written and oral exams and patient charts; elicit patient backgrounds; describe patient changes in moods, activity, and posture; and coordinate patient care with all members of the health care team. A student must be able to communicate or provide communication in lay language so that patients and their families can understand the patient’s conditions, treatment options, and instructions. The student must be able to accurately enter information in the patient’s electronic health record, according to his or her program’s requirements.

**Motor Skills**

Candidates and students must have sufficient motor function to execute movements reasonably required to provide general care and emergency treatment to patients. Examples of emergency treatment reasonably required of some health care professionals are cardiopulmonary resuscitation (CPR); administration of intravenous medication; the application of pressure to stop bleeding; the opening of obstructed airways; and the ability to calibrate and use laboratory equipment, grasp and manipulate small objects/instruments, use a computer keyboard, and other related laboratory and medical equipment. Such actions require coordination of both gross and fine muscular movements, equilibrium, and functional use of the senses of touch and vision. College of Pharmacy candidates and students must have sufficient visual and motor skills to weigh
Candidates and students must possess the emotional, behavioral, and social attributes to make sound judgments and function in the complex and often unpredictable environments of health care. They must be able to assess asymmetry, range of motion, and tissue texture through instruments, as well as have tactile ability sufficient for physical assessment. They must be able to observe the patient and the patient’s responses, including body language and features of the examination and treatment. Pharmacy students must be able to read and interpret prescriptions, medical orders, and patient profiles, as well as to identify correct medication dosage and inspect medicine for deterioration or expiration.

Visual
Candidates and students must have visual ability sufficient for observation, assessment, and rendering of treatment necessary in patient care. It must be consistent in many cases with being able to assess asymmetry, range of motion, and tissue texture changes. It is necessary to have adequate visual capabilities for proper evaluation and treatment integration. Candidates and students must be able to observe the patient and the patient’s responses, including body language and features of the examination and treatment. Pharmacy students must be able to read and interpret prescriptions, medical orders, and patient profiles, as well as to identify correct medication dosage and inspect medicine for deterioration or expiration.

Tactile
Candidates and students must have sufficient tactile ability for physical assessment. They must be able to perform palpation and functions of physical examination and/or those related to therapeutic intervention. Pharmacy students must be able to measure and compound, sometimes transferring from container to container, and to perform sterile procedures. The student must be able to use tactile senses to diagnose directly by palpation and indirectly by sensations transmitted through instruments, as well as have tactile ability sufficient for physical assessment.

Sensory
A student must be able to acquire information from written documents and to evaluate information presented as images from digital platforms, paper, films, slides, or video. A student must be able to benefit from electronic and other instrumentation that enhances visual, auditory, and somatic sensations needed for examination or treatment.

Behavioral and Social Attributes
Candidates and students must possess the emotional health required for full use of their intellectual abilities; the exercise of good judgment; the ability to take responsibility for their own actions with respect to policies, protocols, and processes—with faculty and staff members, students, patients, patient surrogates, and administration during the student’s educational program; the prompt completion of all responsibilities attendant to the diagnosis, care, and treatment of patients; and the development of mature, sensitive, and effective relationships with the patients. Candidates and students must be able to physically tolerate taxing workloads, to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in the clinical problems of many patients. Compassion, diversity inclusiveness, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities that will be assessed during the admissions and education process.

Financial Aid
The purpose of the Student Financial Assistance Program at Nova Southeastern University is to help as many qualified students as possible to complete their pharmacy education. Various loans, scholarships, and grants are available to qualified students to help ease the high cost of a health professions education. Approximately 90 percent of College of Pharmacy students receive some form of financial assistance. These financial assistance programs are described in a variety of separate university publications. Although most first-year pharmacy students will be classified as graduate students for financial aid purposes, students who matriculate with fewer than 90 semester hours and students in the dual-admission program will be classified as undergraduates for the first year in the College of Pharmacy.

Transfer Credits
Requests for transfer credit must be submitted in writing to the associate dean or director of the relevant program. The request must include an official copy of the transcript containing the course title, final course grade, and a course syllabus.

In the Pharm.D. program, transfer credit will only be considered for courses taken at pharmacy schools accredited by ACPE or for those courses given prior approval by the associate dean, Professional Program. Up to, but no more than, four elective credit hours may be transferred from a regionally accredited graduate institution.

A minimum of 30 credit hours of didactic coursework and all Advanced Pharmacy Practice Experiences (APPE) must be completed at NSU. Transfer credits may not exceed 2/3 of the required credits to complete the degree program.

In the M.S. and Ph.D. programs, a maximum of 6 credits may be transferred from a regionally accredited graduate institution. Requests must be submitted in writing to the associate dean or director of the relevant program.
For all programs, transfer credit will only be considered for courses designated with a graduate level course number that were passed with a grade of B or better. Credit will not be transferred if previous credit was used to earn a degree from the granting institution. An official transcript from the institution attended must be provided before transfer credit will be awarded. All transfer credit requests must be received prior to August 1 of the first year of pharmacy school.

Official transcripts must be sent to Nova Southeastern University, Enrollment Processing Services, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, FL 33329-9905. Electronic transcripts should be sent to electronictranscript@nova.edu.

Class Cancellation Policy
The university reserves the right to cancel any class.

Doctor of Pharmacy (Pharm.D.) Entry-Level Program

Admissions Requirements
The College of Pharmacy selects students based on pre-pharmacy academic performance, Pharmacy College Admission Test (PCAT) scores, personal interviews, written applications, and letters of reference.

1. Prior to matriculation, all NSU College of Pharmacy applicants must complete a minimum of 66 semester hours of coursework at a regionally accredited college or university, including the following required courses, with a minimum GPA of 2.0 on a 4.0 scale (2.75 preferred):

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Biology I and II (including laboratory)</td>
<td>8</td>
</tr>
<tr>
<td>Anatomy and/or Physiology (with or without laboratory)</td>
<td>6</td>
</tr>
<tr>
<td>General Chemistry (including laboratory)</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry (including laboratory)</td>
<td>8</td>
</tr>
<tr>
<td>General Physics (with or without laboratory)</td>
<td>3</td>
</tr>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>Calculus</td>
<td>3</td>
</tr>
<tr>
<td>Speech/Public Speaking/Oral Communication (in English)</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Sciences (Choose two courses of the following: genetics, cellular or molecular biology, microbiology, or biochemistry)</td>
<td>6*</td>
</tr>
<tr>
<td>Humanities/Social and Behavioral Sciences/Other Electives</td>
<td>6**</td>
</tr>
</tbody>
</table>

*No two classes taken should be from the same discipline. **Ethics, micro or macroeconomics, and general/life science statistics are highly recommended and may substitute for up to 9 humanities and social and behavioral sciences elective credits.

2. A recommended cumulative GPA of 2.75 and a preferred science GPA of 2.3 and math GPA of 2.0 on a 4.0 scale is recommended.

3. Official scores from the Pharmacy College Admission Test (PCAT)* are recommended, but no longer required. Applicants who choose to submit official scores from PCAT should ensure the following:
   • PCAT scores must be no more than three years old at the time of the applicant’s interview. Applicants should take the PCAT no later than February prior to the expected date of matriculation.

   Applicants may register online at pcatweb.info or call 800-622-3231 with any questions.

4. Applicants are required to provide three letters of reference from the members of the pre-professional committee, or if such a committee does not exist, letters of reference from two science professors and one liberal arts professor are necessary. A letter of reference from a pharmacist may substitute for one letter from a professor in either subject.

   + NSU COP will accept scores from the following health-related admissions tests in place of the PCAT: GRE, MCAT, DAT, or OAT.

Application Procedures

Primary Application Process
Applicants apply for matriculation into the fall semester. The Office of Admissions processes applications on a rolling basis; therefore, it is in the best interest of the applicant to apply early.

Listed below are the steps necessary to complete the primary application process.

1. Applicants must submit an electronic PharmCAS application. The interactive, web-based application is available at PharmCAS.org. The PharmCAS application process takes four to six weeks.
   • May 3: PharmCAS submission application deadline
2. Applicants must submit the following materials to PharmCAS:
   • official transcripts from all college and universities attended
     (must be submitted directly to PharmCAS by the college
     or university)
   • three letters of reference
   • PCAT scores

Secondary Application Process
In addition to completing the PharmCAS application, NSU requires the completion of an NSU application. Upon receipt of the PharmCAS application, NSU will email a link to access our NSU application.

1. Applicants must submit the following materials electronically to NSU:
   • a completed NSU application
     - due June 15 for admission
   • a nonrefundable application fee of $50 (U.S.)

Transfer Students
Candidates in good academic standing from their college/university of record may apply for consideration as a transfer student by
1. submitting a completed electronic application with a nonrefundable application fee of $50 (U.S.) by June 15
2. meeting all entry-level or advanced-standing admissions requirements for the NSU College of Pharmacy, as applicable
3. submitting the following documentation
   • official transcripts for all college coursework
   • a written statement outlining the reasons for requesting the transfer
   • three letters of recommendation (two from pharmacy faculty members and one from the dean, associate dean, or assistant dean of the transferring college of pharmacy that indicate the student is in good standing within the current or most recent academic program)
4. completing an interview
5. submitting any official standardized test scores such as PCAT, GRE, TOEFL, or IELTS to help further the evaluation of applications (recommended)

Transfer credits will not exceed 2/3 of the required credits to complete the degree program. A minimum of 30 credit hours of didactic coursework and all Advanced Pharmacy Practice Experiences (APPE) must be completed at NSU.

Note: Due to the design of the Pharm.D. curriculum, a transfer student may be required to enter as a first-year student.

Nondegree-Seeking Students
The college accepts nondegree-seeking students for travel study, study abroad, and some specific coursework. A nondegree-seeking student is one who wishes to take courses in the program, but does not intend to pursue a degree at the time of application. Nondegree-seeking students are not guaranteed future acceptance into the program. Contact phss@nova.edu for more information on this option.

Interview Process
A personal interview is part of the admissions process; however, being interviewed is not a guarantee of admission. Upon receipt of the completed application, a review will be made to determine if the applicant will be granted an interview. Not all applicants will be granted an interview. The Office of Admissions will notify selected applicants to schedule interviews.

Notice of Acceptance
Notice of acceptance or other action by the committee on admissions will be on a “rolling” or periodic schedule. Early completion of the application process is in the best interest of the applicant.

Admittance to the college is contingent upon successful completion of all prerequisite coursework prior to the first day of the semester. Proof of completion is required.

Transcripts
After acceptance, final and official transcripts from all colleges and universities attended, and/or final and official documents must be received within 90 calendar days from the start of the term. If these final and official transcripts and/or documents are not received by that time, the student will not be allowed to continue class attendance. In addition, financial aid will not be disbursed to a student until he or she provides all the necessary documents required to be fully admitted.

Foreign Coursework
Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.

• World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org
It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University.

All admissions materials and foreign evaluations must be mailed to

Nova Southeastern University
Enrollment Processing Services
College of Pharmacy
Office of Admissions
3301 College Avenue
P.O. Box 299000
Fort Lauderdale, FL 33329-9905.

Program Requirements
All students must purchase an iPad for assignments and assessments, and have an active account with an Internet service provider. In addition, students must have ongoing access to a computer capable of connecting to the Internet and playing streaming video files. Online course notes and discussions will be provided to the student through an online course management system. Nova Southeastern University will provide access to email, online databases, and library resources.

Students must also provide their own transportation to experiential sites. It is recommended that all students have their own personal transportation, due to the inconsistency of reliable public transportation. During the final year, all students return to their respective campuses for live instruction and board exam preparation at designated times.

International/Student Visa Information
It is the applicant’s responsibility to contact the Office of International Students and Scholars for information on immigration regulations and student visa requirements at

Nova Southeastern University
Attention: Office of International Students and Scholars
3301 College Avenue
Fort Lauderdale, FL 33314-7796
(954) 262-7240
800-541-6682, ext. 27240
Fax: (954) 262-3846
Email: intl@nsu.nova.edu
nova.edu/internationalaffairs/students

Tuition: Entry-Level Program
All tuition and fees are subject to change by the board of trustees without notice.

Annual tuition for 2020–2021 will be posted online at pharmacy.nova.edu.

Florida Residency
Florida residents in the entry-level Pharm.D. degree program must request in-state tuition by application. For tuition purposes, students’ Florida residency status (in state or out-of-state) will be determined based on initial matriculation and will remain the same throughout the entire enrollment of the student at NSU. The determination as to eligibility for in-state tuition at NSU shall be made exclusively by NSU. Students may direct questions to the Florida residency specialist via phone at (954) 262-1126 or via email at HPDfloridaresidency@nova.edu.

Fees and Deposit—All Programs

- Acceptance and Preregistration Deposit—$1,000. This deposit is required to reserve the accepted applicant’s place in the entering, first-year class. This deposit will be deducted from the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is due within three weeks of an applicant’s acceptance.
- Health Professions Division General Access Fee—$145 per annum.
- NSU Student Services Fee—$1,500 per annum.
- Registration Fee—$30 per semester.
- Late Payment Fee—All tuition and fees not paid within 30 days after the start of the semester will incur a $100 late payment fee.
- College of Pharmacy Fees—Additional fees will be incurred for national certifications, pharmacy testing, and other college-approved activities. These fees are estimated at $1,000 over the course of the program.

The first semester’s tuition and fees, less the $1,000 deposit, are due on or before the first day of classes. Tuition and fees for each subsequent semester are due on or before the first day of classes. Students will not be permitted to register or attend classes until their financial obligations have been met. The financial ability of applicants to complete their training at the college is important. Applicants should have specific plans for financing their professional education. This should include tuition, fees, iPads, computer-related expenses, health insurance, books, printing, required equipment, and living and other miscellaneous expenses.

Each student is required to carry adequate personal medical and hospital insurance. For more information about NSU’s required health insurance, visit the website at nova.edu/bursar/health-insurance.
Undergraduate/Pharm.D. Dual Admission Program

Nova Southeastern University Health Professions Division has established a dual admission program with the Nova Southeastern University Halmos College of Natural Sciences and Oceanography, Pontificia Universidad Católica de Puerto Rico, and Universidad Central De Bayamon for a select number of highly motivated, qualified students interested in pursuing both an undergraduate education and professional studies in pharmacy. This allows students to receive their undergraduate bachelor of science degree and a doctor of pharmacy degree in a six- to eight-year period.

Candidates must maintain a minimum cumulative GPA of 3.0 on a 4.0 scale. The Pharmacy College Admissions Test (PCAT) is recommended, but not required. Students will spend two to three years in the undergraduate school and then will be awarded a B.S. degree upon successful completion of the second/third year at Nova Southeastern University College of Pharmacy. Students will receive the Doctor of Pharmacy degree after successfully completing the four-year Pharm.D. program at Nova Southeastern University College of Pharmacy.

For information and requirements for dual admission, contact one of the following:

• Office of Admissions
  Halmos College of Natural Sciences and Oceanography
  Nova Southeastern University
  3301 College Avenue
  Fort Lauderdale, FL 33314-7796

• Office of Admissions
  Pontificia Universidad Católica de Puerto Rico
  2250 Avenida Las Americas
  Suite 584
  Ponce, PR 00717-0777

• Office of Admissions
  Universidad Central De Bayamon
  P.O. Box 1725
  Bayamon, PR 00960-1725

Pharmacy Intern License

A Florida or Puerto Rico pharmacy intern license is a requirement for placement on pharmacy practice experiences. Without a pharmacy intern license, a student cannot complete the curriculum or the requirements of the Pharm.D. degree. A U.S. Social Security number is required in order to obtain a pharmacy intern license in the state of Florida. It is the responsibility of international students to ensure that their visa status allows for the issuance of a Social Security number.

Internship hours must be completed within the guidelines of the Florida Board of Pharmacy, as set forth in the Rule, Chapter 64B16-26 and by the Board of Pharmacy in any state in which the student plans to be licensed. The directors of experiential education will provide assistance and guidance to students regarding pharmacy practice experiences and earning required hours.

International students with questions regarding the validity of their visa for issuance of a Social Security number should contact the Office of International Students and Scholars by phone at (954) 262-7240 or 800-541-6682, extension 27240, or by email at intl@nova.edu.

Course of Study

The Doctor of Pharmacy degree is awarded after successful completion of four years of professional study in the College of Pharmacy. The curriculum stresses innovative teaching delivery and assessment methods. Students are provided an initial orientation during which they are exposed to library and online resources, professionalism, and academic expectations. Some courses may be offered in a BlendFlex model, which includes synchronous and asynchronous online learning, as well as on-campus learning and videoconferencing.

The curriculum is designed so courses integrate information and build on one another in order to provide students with the knowledge and skills necessary to be successful in the profession. The curriculum meets the changing needs of the profession. The evolution of the practice of pharmacy has increased the types and depth of care pharmacists provide to patients. The generalist practitioner must collect, analyze, synthesize, and communicate information relating to the selection and use of medication. Pharmacists who practice “at the top of their license” develop and refine skills and earn certificates in the latest standards of practice and patient safety. They may need to complete postgraduate residencies and specialty board certification for employment in hospitals. The curriculum uses active-learning components to improve critical thought process, reflective activity to stimulate professional growth, and experiential learning to optimize provision of patient-centered care.

Course content, teaching modalities, enhanced assessments, and incorporation of a block structure promote student learning and professional growth. The curricular design is based upon the 3 Ps.

• Prepare knowledge in the classroom.
• Practice skills in the laboratory.
• Provide direct care in experiential activities.

Students will learn, understand, retain, and apply pharmaceutical principles to patient-centered care.

During the second and third years, students will complete required Introductory Pharmacy Practice Experiences (IPPEs). IPPE: Community Pharmacy is a 160-hour, outpatient experience highlighting the operations and practice management aspects of community pharmacy practice. IPPE:
Health Systems is a 160-hour inpatient experience highlighting the operations and practice management aspects of health systems pharmacy practice.

During the final year, students will complete seven or eight (depending on the program) 240-hour Advanced Pharmacy Practice Experiences (APPEs) in direct patient care areas and elective experiences in specialty health care areas. APPEs continue the student’s education by providing opportunities for the clinical application of patient care in a broad variety of health care environments and systems. At this point in the curriculum, it is expected that student pharmacists practice drug therapy monitoring with more independence. APPEs are six-week, full-time commitments for the students (a minimum of 40 hours per week).

Each semester of the fourth-year curriculum includes a Curricular Review course that provides resources for student-initiated review to assess and strengthen students’ knowledge and skills developed during the curriculum. Students are required to return to their respective campuses at designated times each semester for live instruction and assessment.

Students are responsible for having reliable transportation (e.g., personal vehicle) to attend assigned IPPE and APPE sites and may be required to secure accommodation at APPE sites away from their home location. APPEs may be taken in any sequence, however students may not begin APPEs until all didactic courses, IPPEs, electives, and assessments, are successfully completed. Failure to successfully complete required coursework will prevent the student from progressing in the curriculum. Students have 60 days after the end of the semester to resolve any grade disputes; after that, the instructor may discard all materials from the semester. This may lead to a delay in graduation. The program must be completed within six academic years from the date of matriculation.

Global Engagement
Opportunities for travel study, international APPEs, and medical outreach are available. Students must be preapproved to participate in college-sponsored, international programs.

Graduation Requirements—Entry Level
To receive a Pharm.D. degree, a student must fulfill the following requirements:

- be of good moral character
- successfully complete all curricular requirements and assessments within six academic years
- have a minimum cumulative GPA of 2.0 on a 4.0 scale for alpha grading, or 70 percent for numerical grading
- satisfactorily meet all financial obligations
- complete a minimum of 30 credit hours of didactic coursework and all APPEs at NSU COP, if transferring from another college of pharmacy
- submit to the registrar’s office an application for degree/diploma by the posted deadline. Applications received after the deadline will not be considered for that year’s commencement ceremony
- must attend the commencement ceremony in person
- receive approval by a College of Pharmacy faculty vote

Entry-Level Curriculum Outline
The curriculum is frequently being revised and modified to meet the demands of the profession. These courses are representative of the overall requirements of the program at the time of publication. Updates to the curriculum will be posted online at pharmacy.nova.edu.

<table>
<thead>
<tr>
<th>First Year—Fall/Winter Semesters</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHRC 4810 Patient Care Basics</td>
<td>1</td>
</tr>
<tr>
<td>PHRC 4820 Biochemical Basis of Drug Therapy</td>
<td>3</td>
</tr>
<tr>
<td>PHRC 4830 Fundamentals of Pharmacodynamics</td>
<td>2</td>
</tr>
<tr>
<td>PHRC 4840 Dosage Forms and Drug Delivery</td>
<td>4</td>
</tr>
<tr>
<td>PHRC 4850 Pharmaceutical Calculations</td>
<td>2</td>
</tr>
<tr>
<td>PHRC 4861 Essentials of Professional Practice I</td>
<td>2</td>
</tr>
<tr>
<td>PHRC 4871 Evidence-Based Practice I</td>
<td>1</td>
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<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>------------</td>
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<tr>
<td>PHRC 4881</td>
<td>Leadership and Professional Development I</td>
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<tr>
<td>PHRL 4811</td>
<td>Pharmacy Skills Development I</td>
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<tr>
<td>PHRC 4891</td>
<td>Integrated Pharmacy Applications I</td>
</tr>
<tr>
<td>PHRC 4910</td>
<td>Nonprescription Drugs and Self-Care</td>
</tr>
<tr>
<td>PHRC 4921</td>
<td>Individualized Drug Therapy</td>
</tr>
<tr>
<td>PHRC 4931</td>
<td>Integrated Disease Management I</td>
</tr>
<tr>
<td>PHRC 4962</td>
<td>Essentials of Professional Practice II</td>
</tr>
<tr>
<td>PHRC 4972</td>
<td>Evidence-Based Practice II</td>
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<td>PHRC 4982</td>
<td>Leadership and Professional Development II</td>
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<td>PHRL 4912</td>
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<td>PHRC 4992</td>
<td>Integrated Pharmacy Applications II</td>
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</table>

**Total First Year** 38

### Second Year—Fall/Winter Semesters

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHRC 4990</td>
<td>IPPE: Community Pharmacy</td>
<td>4</td>
</tr>
<tr>
<td>PHRC 5800</td>
<td>Patient and Physical Assessment</td>
<td>2</td>
</tr>
<tr>
<td>PHRC 5832</td>
<td>Integrated Disease Management II</td>
<td>4</td>
</tr>
<tr>
<td>PHRC 5833</td>
<td>Integrated Disease Management III</td>
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<tr>
<td>PHRC 5863</td>
<td>Essentials of Professional Practice III</td>
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<tr>
<td>PHRC 5873</td>
<td>Evidence-Based Practice III</td>
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</tr>
<tr>
<td>PHRC 5883</td>
<td>Leadership and Professional Development III</td>
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<td>PHRL 5813</td>
<td>Pharmacy Skills Development III</td>
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<td>PHRC 5893</td>
<td>Integrated Pharmacy Applications III</td>
<td>2</td>
</tr>
<tr>
<td>PHRC 5910</td>
<td>Immunology and Clinical Microbiology</td>
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<tr>
<td>PHRC 5934</td>
<td>Integrated Disease Management IV</td>
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<td>PHRC 5935</td>
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<td>PHRC 5974</td>
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<td>PHRC 5984</td>
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<td>PHRC 5994</td>
<td>Integrated Pharmacy Applications IV</td>
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<tr>
<td>PHRE</td>
<td>Electives</td>
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**Total Second Year** 44
### Third Year—Fall/Winter Semesters

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>PHRC 5990</td>
<td>IPPE: Health Systems</td>
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</tr>
<tr>
<td>PHRL 6810</td>
<td>Sterile Products Laboratory</td>
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</tr>
<tr>
<td>PHRC 6836</td>
<td>Integrated Disease Management VI</td>
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<tr>
<td>PHRC 6837</td>
<td>Integrated Disease Management VII</td>
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<tr>
<td>PHRC 6838</td>
<td>Integrated Disease Management VIII</td>
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<tr>
<td>PHRC 6865</td>
<td>Essentials of Professional Practice V</td>
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<td>PHRC 6875</td>
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<td>PHRC 6885</td>
<td>Leadership and Professional Development V</td>
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<td>PHRL 6815</td>
<td>Pharmacy Skills Development V</td>
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<td>PHRC 6895</td>
<td>Integrated Pharmacy Applications V</td>
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<tr>
<td>PHRC 6920</td>
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<tr>
<td>PHRE</td>
<td>Elective</td>
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<tr>
<td>PHRC 7700</td>
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<tr>
<td>PHRC 77XX</td>
<td>APPE*</td>
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**Total Third Year** 37

### Fourth Year—Summer/Fall/Winter Semesters

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>PHRC 7710</td>
<td>APPE: Internal Medicine*</td>
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<td>PHRC 7720</td>
<td>APPE: Ambulatory Care*</td>
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<tr>
<td>PHRC 7730</td>
<td>APPE: Advanced Hospital*</td>
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<tr>
<td>PHRC 7740</td>
<td>APPE: Community Pharmacy*</td>
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<td>PHRC 7750</td>
<td>APPE: Elective I*</td>
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<td>PHRC 7760</td>
<td>APPE: Elective II*</td>
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<td>PHRC 7770</td>
<td>APPE: Elective III*</td>
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<td>PHRC 7801</td>
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<tr>
<td>PHRC 7803</td>
<td>Curricular Review III</td>
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**Total Fourth Year** 40 (minimum)

**Total Curriculum** 159 (minimum)

*One APPE is taken at the end of Year 3 and is not repeated in Year 4.*
Doctor of Pharmacy (Pharm.D.) Advanced Standing (International Pharmacy Graduates)

In an effort to meet the growing demands of the pharmacy profession, the Nova Southeastern University College of Pharmacy provides an opportunity for international pharmacy graduates to enter the Pharm.D. program with advanced standing. Upon completion of the program, students are eligible to take the North American Pharmacy Licensing Examination (NAPLEX) and the Multistate Pharmacy Jurisprudence Examination (MPJE). This opportunity is designed exclusively for graduates of pharmacy degree programs outside of the United States jurisdiction, allowing them to build upon their pharmacy education and prepare them for clinical pharmacy practice.

The Advanced Standing Doctor of Pharmacy degree is awarded after successful completion of three years of professional study in the College of Pharmacy. The college educates students to achieve the same outcomes as the Entry-level Pharm.D. degree program. Courses integrate information and build on one another to provide students with the knowledge and skills necessary to be successful in the profession and have a strong understanding of the principles of drug therapy, as well as the business, human relation, communication, and legal aspects of pharmacy and the U.S. health care system. Courses focus on application of material learned, the use of drugs in the disease process, and developing skills essential to monitoring drug therapy.

Pharmacy practice experiences in community, hospital, and other traditional pharmacy settings facilitate real-life application of the material and provide opportunities to integrate information learned. Full-time practice experiences facilitate application of drug therapy monitoring with more independence.

The curriculum stresses innovative delivery and assessment methods. Courses will be on campus and approved experiential sites. All lectures, handouts, reading materials, and assessments will be in English.

Admissions Requirements

The College of Pharmacy selects international pharmacy graduates for the program based on previous academic performance, TOEFL/IELTS scores (if applicable), written applications, pharmacy experience, and letters of reference.

1. Prior to matriculation, applicants must have an earned Bachelor of Pharmacy degree or a Bachelor of Science degree in Pharmacy from an accredited institution. The college will evaluate all official transcripts to determine if the student has successfully completed the courses listed below with a grade of C or higher.

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy and/or Physiology</td>
<td>6</td>
</tr>
<tr>
<td>Biochemistry</td>
<td></td>
</tr>
<tr>
<td>Microbiology</td>
<td></td>
</tr>
<tr>
<td>Pharmaceutics</td>
<td></td>
</tr>
<tr>
<td>Pharmacokinetics</td>
<td></td>
</tr>
<tr>
<td>Pharmacology</td>
<td></td>
</tr>
</tbody>
</table>

The college may require an applicant to complete additional prerequisite courses in order to strengthen his or her academic background.

2. Applicants must have a minimum cumulative GPA of 2.75 on a 4.0 scale on all college-level coursework.

3. An official course-by-course evaluation of foreign coursework with the cumulative grade point average included (see under application procedures for further details) must be provided.

4. Proof of English proficiency is required of all applicants. The following standardized tests currently satisfy NSU College of Pharmacy English requirements for nonnative English speakers:
   - Test of English as a Foreign Language (TOEFL)*: minimum score of 213 on the computer-based or 80 on the Internet-based test (toefl.org)
   - International English Language Testing System (IELTS)*: minimum score of 6.0 on the test module (ielts.org)

* TOEFL and IELTS scores may be no more than two years old at the time of the interview.

Candidates who have taken college courses in the United States may also prove English proficiency by completing two college-level English composition courses at a regionally accredited college or university in the United States with a minimum cumulative GPA of 2.0 on a 4.0 scale.

5. Three letters of reference are required from the dean/director of a pharmacy program, registered pharmacists, or professors. It is strongly recommended that applicants also submit official scores from the Graduate Record Examination (GRE) and/or the Pharmacy College Admission Test (PCAT).

Application Procedures

Primary Application Process

Applicants apply for matriculation into the fall semester. The Office of Admissions processes applications on a “rolling” basis; therefore, it is in the best interest of the applicant to apply early. Listed below are the steps necessary to complete the primary application process.
1. Applicants must submit an electronic PharmCAS application. The interactive, web-based application can be accessed through PharmCAS.org. The PharmCAS application process takes four to six weeks.

• May 3: PharmCAS submission application deadline

2. Applicants must submit the materials listed following to PharmCAS.

• official transcripts and foreign evaluations from all colleges and universities attended (must be submitted directly to PharmCAS by the college or university or by the NACES-approved foreign evaluator)
• TOEFL scores, if applicable
• PCAT scores, if applicable
• three letters of reference

Secondary Application Process
In addition to completing the PharmCAS application, NSU requires the completion of an NSU application. Upon receipt of the PharmCAS application, NSU will email a link to access our NSU application.

1. Applicants must submit the following materials electronically to NSU:

• a completed NSU application

• June 15: NSU submission application deadline
• a nonrefundable application fee of $50 (U.S.)

2. Applicants must submit the following materials to NSU by June 15:

• GRE scores, if applicable (PharmCAS will not collect GRE scores.)
• The NSU code is 5522.
• IELTS scores, if applicable (PharmCAS will not collect IELTS scores.)

All admissions materials submitted to NSU must be mailed to Nova Southeastern University
Enrollment Processing Services
College of Pharmacy Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

Interview Process
A personal interview is part of the admissions process; however, being interviewed is not a guarantee of admission. Upon receipt of the completed application, a review will be made to determine if the applicant will be granted an interview. Not all applicants will be granted an interview. The Office of Admissions will notify selected applicants to schedule interviews.

Notice of Acceptance
Notice of acceptance or other action by the Committee on Admissions will be on a “rolling” or periodic schedule. Early completion of the application process is in the best interest of the applicant. Admittance to the college is contingent upon successful completion of all prerequisite coursework prior to the first day of the semester. Proof of completion is required.

Transcripts
After acceptance, final and official transcripts from all colleges and universities attended, and/or final and official documents, must be received within 90 calendar days from the start of the term. If these final and official transcripts and/or documents are not received by that time, the student will not be allowed to continue class attendance. In addition, financial aid will not be disbursed to a student until he or she provides all the necessary documents required to be fully admitted.

Foreign Coursework
Coursework taken at foreign institutions must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed following.

• World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org

• Josef Silny & Associates, Inc., International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org

• Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, WI 53203-3470
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly to NSU’s Enrollment Processing Services.

3. In order to be considered for admissions, applicants must submit all required documents, including all official test scores from the testing center, directly to NSU’s Enrollment Processing Service at the address below.

Nova Southeastern University
Enrollment Processing Service
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905
Program Requirements
All students must purchase an iPad for assignments and assessments, and have an active account with an Internet service provider. In addition, students must have ongoing access to a computer capable of connecting to the Internet and playing streaming video files. Online course notes and discussions will be provided to the student through an online course management system. Nova Southeastern University will provide access to email, online databases, and library resources.

It is recommended that all students have their own personal transportation, due to the inconsistency of reliable public transportation. During the final year, all students return to their respective campuses for live instruction and board exam preparation at designated times.

Tuition: Advanced Standing Program
All tuition and fees are subject to change by the board of trustees without notice.

Tuition for 2020–2021 will be posted online at pharmacy.nova.edu.

Fees and Deposit—All Programs
• Acceptance and Preregistration Deposit—$1,000. This deposit is required to reserve the accepted applicant’s place in the entering, first-year class. This deposit will be deducted from the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is due within three weeks of an applicant’s acceptance.
• Health Professions Division General Access Fee—$145 per annum.
• NSU Student Services Fee—$1,500 per annum.
• Registration Fee—$30 per semester.
• Late Payment Fee—All tuition and fees not paid within 30 days after the start of the semester will incur a $100 late fee.
• College of Pharmacy Fees—Additional fees will be incurred for national certifications, pharmacy testing, and other college-approved activities. These fees are estimated at $1,000 over the course of the program.

The first semester’s tuition and fees, less the $1,000 deposit, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be permitted to register until their previous financial obligations have been met. The financial ability of applicants to complete their training at the college is important. Applicants should have specific plans for financing their professional education. This should include tuition, fees, iPads, computer-related expenses, health insurance, books, printing, required equipment, and living and other miscellaneous expenses.

Each student is required to carry adequate personal medical and hospital insurance. For more information about NSU’s required health insurance, visit the website at nova.edu/bursar/health-insurance.

International/Student Visa Information
It is the applicant’s responsibility to contact the Office of International Students and Scholars for information on immigration regulations and student visa requirements at Nova Southeastern University
Attention: Office of International Students and Scholars
3301 College Avenue
Fort Lauderdale, FL 33314-7796
(954) 262-7240
800-541-6682, ext. 27240
Fax: (954) 262-3846
Email: int@nsu.nova.edu
nova.edu/internationalaffairs/students

Pharmacy Intern License
A Florida or Puerto Rico pharmacy intern license is a requirement for placement on pharmacy practice experiences in the state or territory placed. Without a pharmacy intern license, a student cannot complete the curriculum or the requirements of the Pharm.D. degree. A U.S. Social Security number is required in order to obtain a pharmacy intern license in the state of Florida. It is the responsibility of international students to ensure that their visa status allows for the issuance of a Social Security number.

Internship hours must be completed within the guidelines of the Florida Board of Pharmacy, as set forth in the Rule, Chapter 64B16-26 and by the Board of Pharmacy in any state in which the student plans to be licensed. The directors of experiential education will provide assistance and guidance to students regarding pharmacy practice experiences and earning required hours.

International students with questions regarding the validity of their visa for issuance of a Social Security number should contact the Office of International Students and Scholars by phone at (954) 262-7240 or 800-541-6682, extension 27240, or by email at int@nova.edu.

Graduation Requirements—Advanced Standing
Graduation requirements for students in the Advanced Standing Doctor of Pharmacy degree program are the same as the Entry-level Pharm.D. program, except advanced standing students must successfully complete all curricular requirements and assessments within five academic years.
## Advanced Standing Curriculum Outline

The curriculum is frequently being revised and modified to meet the demands of the profession. These courses are representative of the overall requirements of the program at the time of publication. Updates to the curriculum will be posted online at pharmacy.nova.edu.

<table>
<thead>
<tr>
<th>First Year—Summer Semester</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>PHRC 5811 Foundations of Pharmacy I</td>
<td>2</td>
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<tr>
<td>PHRC 5812 Foundations of Pharmacy II</td>
<td>5</td>
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<tr>
<td><strong>Total</strong></td>
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### First Year—Fall/Winter Semesters

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHRC 4990 IPPE: Community Pharmacy</td>
</tr>
<tr>
<td>PHRC 5800 Patient and Physical Assessment</td>
</tr>
<tr>
<td>PHRC 5813 Foundations of Pharmacy III</td>
</tr>
<tr>
<td>PHRC 5832 Integrated Disease Management II</td>
</tr>
<tr>
<td>PHRC 5833 Integrated Disease Management III</td>
</tr>
<tr>
<td>PHRC 5863 Essentials of Professional Practice III</td>
</tr>
<tr>
<td>PHRC 5873 Evidence-Based Practice III</td>
</tr>
<tr>
<td>PHRC 5883 Leadership and Professional Development III</td>
</tr>
<tr>
<td>PHRC 5893 Integrated Pharmacy Applications IV</td>
</tr>
<tr>
<td>PHRL 5813 Pharmacy Skills Development III</td>
</tr>
<tr>
<td>PHRC 5910 Immunology and Clinical Microbiology</td>
</tr>
<tr>
<td>PHRC 5934 Integrated Disease Management IV</td>
</tr>
<tr>
<td>PHRC 5935 Integrated Disease Management V</td>
</tr>
<tr>
<td>PHRC 5964 Essentials of Professional Practice IV</td>
</tr>
<tr>
<td>PHRC 5974 Evidence-Based Practice IV</td>
</tr>
<tr>
<td>PHRC 5984 Leadership and Professional Development IV</td>
</tr>
<tr>
<td>PHRL 5914 Pharmacy Skills Development IV</td>
</tr>
<tr>
<td>PHRC 5994 Integrated Pharmacy Applications III</td>
</tr>
</tbody>
</table>

| Total First Year | 49 |
### Second Year—Fall/Winter Semesters

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PHRC 5990</td>
<td>IPPE: Health Systems</td>
<td>4</td>
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<tr>
<td>PHRL 6810</td>
<td>Sterile Products Laboratory</td>
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</tr>
<tr>
<td>PHRC 6836</td>
<td>Integrated Disease Management VI</td>
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<tr>
<td>PHRC 6837</td>
<td>Integrated Disease Management VII</td>
<td>3</td>
</tr>
<tr>
<td>PHRC 6838</td>
<td>Integrated Disease Management VIII</td>
<td>3</td>
</tr>
<tr>
<td>PHRC 6865</td>
<td>Essentials of Professional Practice V</td>
<td>3</td>
</tr>
<tr>
<td>PHRC 6875</td>
<td>Evidence-Based Practice V</td>
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<tr>
<td>PHRC 6885</td>
<td>Leadership and Professional Development V</td>
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<td>PHRL 6815</td>
<td>Pharmacy Skills Development V</td>
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<tr>
<td>PHRC 6895</td>
<td>Integrated Pharmacy Applications V</td>
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<td>PHRC 6920</td>
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<td>PHRE</td>
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<td>PHRC 7700</td>
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<tr>
<td>PHRC 77XX</td>
<td>APPE*</td>
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</table>

**Total Second Year**  37

### Final Year—Summer/Fall/Winter Semesters

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHRC 7710</td>
<td>APPE: Internal Medicine*</td>
<td>6</td>
</tr>
<tr>
<td>PHRC 7720</td>
<td>APPE: Ambulatory Care*</td>
<td>6</td>
</tr>
<tr>
<td>PHRC 7730</td>
<td>APPE: Advanced Hospital Practice*</td>
<td>6</td>
</tr>
<tr>
<td>PHRC 7740</td>
<td>APPE: Community Pharmacy Practice*</td>
<td>6</td>
</tr>
<tr>
<td>PHRC 7750</td>
<td>APPE: Elective I*</td>
<td>6</td>
</tr>
<tr>
<td>PHRC 7760</td>
<td>APPE: Elective II*</td>
<td>6</td>
</tr>
<tr>
<td>PHRC 7770</td>
<td>APPE: Elective III*</td>
<td>6</td>
</tr>
<tr>
<td>PHRC 7801</td>
<td>Curricular Review I</td>
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</tr>
<tr>
<td>PHRC 7802</td>
<td>Curricular Review II</td>
<td>1</td>
</tr>
<tr>
<td>PHRC 7803</td>
<td>Curricular Review III</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Third Year**  40

**Total Curriculum**  126 (minimum)

*One APPE is taken at the end of Year 2 and is not repeated in Year 3.*
Entry-Level and Advanced Standing Course Descriptions

Note: Listed at the end of each entry are lecture hours, laboratory hours, and credit hours.

PHRC 4810—Patient Care Basics
This course provides students with an introductory toolkit to providing patient-centered care. It introduces students to the Pharmacists’ Patient Care Process and its role in delivering consistent patient-care services. The pharmacist’s role in the Medication-Use Process is explored and the use of information technology and quality measures in these processes are addressed. Basic patient care skills of vital sign assessment, point-of-care testing, interpretation of medical and pharmacy terminology, and laboratory values are introduced and social, behavioral and communication factors impacting patient care are discussed. (16-0-1)

PHRL 4811—Pharmacy Skills Development I
This is the first of a five-course, pharmacy skills development series that integrates principles of pharmaceutical sciences, social and behavioral pharmacy, and pharmacy practice. In this course, students apply knowledge and practice skills complementary to content in the first semester of the curriculum. Skills practiced include written and verbal communication, pharmacy calculations, application of basic knowledge of commonly used medications, identification of medication errors, verification of orders, and drug information retrieval and provision. Team-building activities are incorporated throughout the course to enhance professionalism and communication skills. (0-48-1)

PHRC 4820—Biochemical Basis of Drug Therapy
This course focuses on the structure and function of vitamins, carbohydrates, proteins, hormones, nucleic acids, and lipids, as well as bioenergetics and major catabolic pathways at the cellular level. It establishes the biochemical basis for cell structure and emphasizes an integrated approach to the understanding of cellular metabolism; provides a biochemical, genetic, and molecular basis for understanding disease and drug functioning; and examines the mechanisms for genetic information flow in prokaryotic and eukaryotic cells. (32-0-2)

PHRC 4830—Fundamentals of Pharmacodynamics
This course applies the concepts of organic chemistry to help students understand drug action at the molecular level. It introduces students to basic pharmacological principles that explain drug effects as they pertain to mechanisms of action and drug disposition into different organs and tissues. In addition, this course describes drug actions at physiological receptors focusing on compounds that act on the autonomic nervous system. (48-0-3)

PHRC 4840—Dosage Forms and Drug Delivery
This course integrates basic anatomical and physiological features of various routes of administrations, drug and excipients physicochemical characteristics, and biopharmaceutical principles into the design and formulation of various conventional pharmaceutical dosage forms. It emphasizes the drug approval processes and regulatory standards. The course explores in detail most pharmaceutical dosage forms, their characteristics and uses, formulation composition and requirements, manufacturing methods and compendial testing, and packaging. (64-0-4)

PHRC 4850—Pharmaceutical Calculations
This course introduces the common systems of measurement and mathematical principles used in the traditional practice of pharmacy. Emphasis is also placed on calculations relevant to specific dose regimens based on patient specific clinical parameters. Competencies developed throughout the course shall prepare students to accurately analyze and solve real-life pharmaceutical problems involving calculations used in the preparation and dispensing of pharmaceutical preparations. (16-0-1)

PHRC 4861—Essentials of Professional Practice I
This is the first of a five-course sequence that prepares the student to develop the knowledge and problem-solving skills needed to become a practice-ready professional who can apply concepts to manage the quality and safety of the Medication-Use Process and deliver patient-centered care. This course addresses laws that govern the pharmacist’s scope of practice and the foundation for effective patient communication. (32-0-2)

PHRC 4871—Evidence-Based Practice I
This is the first of a five-course sequence that prepares the student to retrieve, evaluate, and use the medical and scientific literature and other drug information resources. It is designed to prepare students to apply drug information skills for the delivery of patient-centered care using evidence-based principles to improve outcomes. Students learn the strengths and weaknesses of the various references and how to apply their use in practice. Active learning experiences include retrieving scientific literature, utilizing electronic resources, performing literature searches, and formulating responses to basic drug information requests. (16-0-1)

PHRC 4881—Leadership and Professional Development I
This is the first in a series of five courses that center on the development of self-awareness, professionalism, an innovative/entrepreneurial mindset, leadership, and teamwork skills. This course presents the foundational
principles of professionalism, goal setting, career planning, teamwork, reflective thinking, professional interaction, and personal/professional growth. Students will develop professional goals, create a professional biography, define their professional legacy, and identify professional areas of interest to guide career planning. Curriculum and cocurriculum activities stimulating student growth in the five major areas of development will be documented and tracked through the electronic portfolio. (16-0-1)

**PHRC 4891—Integrated Pharmacy Applications I**
This is the first in a series five courses offered at the end of each semester designed to integrate and apply knowledge and skills from previous courses. The “Bring Back” section of the course will reinforce foundational concepts from the fall semester, including pharmaceutical calculations, commonly used drugs, and pharmacy law. The “Look Forward” section of the course introduces material to prepare students for future courses, including basic patient assessment and self-care concepts, as well as practical applications of pharmacokinetics. Additionally, in each course, students will have the opportunity to receive specialized training and earn certification in a specific area of pharmacy practice. This course offers certification in immunization. (32-0-2)

**PHRC 4910—Nonprescription Drugs and Self-Care**
This course is designed to familiarize the student with the principles and theories of self-care, nonprescription medications, medical devices, and home-testing kits commonly found in community pharmacy practice. The pharmacist’s role in self-care is explored and students apply the Pharmacist’s Patient Care Process in solving patient-care cases. It approaches medical conditions by focusing on typical presenting signs and symptoms. For each condition, students explore the basic causes, signs, and symptoms; basic self-care guidelines; and when to refer patients. Emphasis is placed on problem-solving processes involved in the therapeutic evaluation, rational use, and recommendation of treatment to patients. Topics include dermatological, respiratory, ophthalmic, otic, oral, gastrointestinal, and genitai-urinary disorders. A very strong emphasis is placed on patient care and patient counseling. (43-0-3)

**PHRC 4912—Pharmacy Skills Development II**
This is the second of a five-course, pharmacy skills series that integrates principles of pharmaceutical sciences, social and behavioral pharmacy, and pharmacy practice. In this course, students apply knowledge and practice skills complementary to content in the second semester of the curriculum. Skills practiced include written and verbal communication, compounding of nonsterile formulations, pharmacy calculations, application of basic knowledge of commonly used medications, identification of errors, verification of orders, and drug information retrieval and provision. Team-building activities are incorporated throughout the course to enhance professionalism and communication skills. (0-48-1)

**PHRC 4921—Individualized Drug Therapy**
This course explores the individualization of drug therapy. It provides students with the foundation in pharmacokinetic concepts and application. The principles involved in drug absorption, distribution, metabolism, and elimination in the human body are discussed and mechanisms and rates of these processes are studied. The influence of physiologic and biochemical process on the fate of drugs in the body are explored and pharmacokinetic principles are applied in the therapeutic monitoring of drugs. This course also provides students with a foundation on pharmacogenomic concepts. (64-0-4)

**PHRC 4931—Integrated Disease Management I**
This is the first in a series that integrates the principles of pathophysiology, pharmaceutics, pharmacodynamics, pharmacokinetics and pharmacotherapy in the treatment of diseases. Students learn how to appropriately select, and monitor pharmacotherapy regimens based on drug, disease, and patient characteristics and apply the Pharmacist’s Patient Care Process in solving patient-care cases. This course focuses on women’s health, urology, gastrointestinal and endocrine disorders, obesity, and dyslipidemias. (64-0-4)

**PHRC 4962—Essentials of Professional Practice II**
This is the second of a five-course sequence that prepares the student to develop the knowledge and problem-solving skills needed to be practice-ready professionals who manage the quality and safety of the medication use process and deliver patient-centered care. This course addresses professional communications, managing people, ethics in professional practice, quality improvement strategies in the medication-use process and an introduction to project management techniques. (32-0-2)

**PHRC 4972—Evidence-Based Practice II**
This is the third of a five-course sequence that prepares the student to retrieve, evaluate, and use the medical and scientific literature and other drug information resources. This course is designed to expose students to the fundamentals of research design and methodology and applied biostatistical data analysis. It focuses on familiarizing students with general methodologic approaches used in experimental design, statistical analysis of data, investigator’s responsibilities, ethical considerations in research, protection of human subjects, and institutional review boards (IRBs). (32-0-2)

**PHRC 4982—Leadership and Professional Development II**
This is the second in a series of five courses that center on the development of self-awareness, professionalism, leadership skills, and an innovative and entrepreneurial mindset. This course continues to present the foundational principles of
This course provides students with the knowledge and skills necessary to perform comprehensive patient assessments utilizing the skills of history taking, inspection, palpation, percussion, auscultation, and specimen extraction to conduct point-of-care testing. Charting, interpretation of findings, and evaluation of common clinical conditions—especially as related to medications—are integrated into these activities. The course emphasizes the first two steps of the Pharmacists' Patient Care Process: collect and assess, and is taught using a combination of self-study and laboratory sections that allow students to practice and demonstrate acquired skills. (16-48-2)

PHRC 5811—Foundations of Pharmacy I
This is the first in a series of three foundational courses that provide the basis for pharmacist patient-centered care. The courses integrate concepts from pharmaceutical sciences, sociobehavioral and administrative pharmacy, and pharmacy practice. This online course introduces topics such as health care systems, interprofessional collaboration, the laws that govern the pharmacist's scope of practice, ethics in professional practice, health literacy, and health disparities. Problem-solving skills are emphasized using pharmaceutical calculations and the application of drug information skills. (32-0-2)

PHRC 5812—Foundations of Pharmacy II
This is the second in a series of three foundational courses that provide the basis for pharmacist patient-centered care. The courses integrate concepts from pharmaceutical sciences, sociobehavioral and administrative pharmacy, and pharmacy practice. This comprehensive, blended course addresses calculations; patient and professional communication; pharmacokinetic principles; disease management; nonprescription medication use; and self-care skills. The course contains four weekly laboratories in which students apply knowledge and practice skills complementary to course content. (60-20-5)

PHRC 5813—Foundations of Pharmacy III
This is the third in a series of three foundational courses that provide the basis for pharmacist patient-centered care. This course incorporates the principles of pathophysiology, pharmaceutics, pharmacodynamics, pharmacokinetics, and pharmacotherapy in the treatment of diseases. Students learn how to appropriately select and monitor pharmacotherapy regimens based on drug, disease, and patient characteristics and apply the Pharmacists' Patient Care Process in solving patient care cases. The course focuses on fluid and electrolytes; acid-base balance; anemias; and renal, hepatic, and clotting disorders. (32-0-2)

PHRL 5813—Pharmacy Skills Development III
This is the third of a five-course, pharmacy skills development series that integrates principles of pharmaceutical sciences, sociobehavioral and administrative pharmacy, and pharmacy practice. This course emphasizes the first two steps of the Pharmacists' Patient Care Process: collect and assess, and is taught using a combination of self-study and laboratory sections that allow students to practice and demonstrate acquired skills. (16-48-2)
PHRC 5873—Evidence-Based Practice III
This is the third of a five-course sequence that prepares the student to retrieve, evaluate, and use the medical and scientific literature and other drug information resources. The course continues to expand on the use of health informatics in practice. It introduces pharmacoepidemiology and applies the fundamentals of biostatistical data analysis, research design, and methodology to evaluate scientific and medical literature. (32-0-2)

PHRC 5883—Leadership and Professional Development III
This is the third in a series of five courses that center on the development of self-awareness, professionalism, leadership skills, and an innovative and entrepreneurial mindset. This course emphasizes goal setting, career planning, teamwork, constructive criticism, and professional growth. Students reflect on their strengths and weaknesses, update professional goals, create a curriculum vitae, and develop a professional development plan. Teamwork is reinforced through team-based learning and curriculum and cocurricular activities stimulating student growth are tracked through the electronic portfolio. (16-0-1)

PHRC 5893—Integrated Pharmacy Applications III
This is the third in a series of five courses offered at the end of each semester designed to integrate and apply knowledge and skills from previous courses. Students in each course become certified in a specific area of pharmacy. The Bring Back and Look Forward sections of the course reinforce concepts and introduce material to prepare students for future courses. This course offers certification in point-of-care testing. It brings back pharmacotherapy cases and topics in drug literature evaluation, health informatics, economics, finance, and management. It introduces basics of immune response in preparation for the infectious disease and immunology courses that follow. (24-8-2)

PHRL 5914—Pharmacy Skills Development IV
This is the fourth of a five-course, pharmacy skills development series that integrates principles of pharmaceutical sciences, social and behavioral pharmacy, and pharmacy practice. In this course, students apply knowledge and practice skills complementary to content in the fourth semester of the curriculum. Skills practiced include written and verbal communication; pharmacy calculations; application of commonly used medications knowledge; identification of errors; verification of orders; drug information retrieval, evaluation, and provision; patient assessment; and selection and monitoring of pharmacotherapy patient-care plans. Team-building activities are incorporated throughout the course to enhance professionalism and communication skills. (32-0-2)
PHRC 5934—Integrated Disease Management IV
This is the fourth in a series of eight courses that integrate the principles of pathophysiology, pharmacodynamics, pharmacokinetics, and pharmacotherapy in the treatment of diseases. Students learn how to appropriately select and monitor pharmacotherapy regimens based on drug, disease, and patient characteristics and apply the Pharmacists’ Patient Care Process in solving patient-care cases. This course focuses on the treatment of infectious diseases. (48-0-3)

PHRC 5935—Integrated Disease Management V
This is the fifth in a series of eight courses that integrate the principles of pathophysiology, pharmacodynamics, pharmacokinetics, and pharmacotherapy in the treatment of diseases. Students learn how to appropriately select and monitor pharmacotherapy regimens based on drug, disease, and patient characteristics and apply the Pharmacists’ Patient Care Process in solving patient-care cases. This course focuses on the treatment of infectious diseases. (80-0-5)

PHRC 5964—Essentials of Professional Practice IV
This is the fourth of a five-course sequence that prepares the student to develop the knowledge and problem-solving skills needed to become a practice-ready professional who can apply concepts to manage the quality and safety of the Medication-Use Process and deliver patient-centered care. This course addresses the quality instantiates and the management of hospital and community pharmacies. It explores different pharmacy practice models, presents pharmaceutical marketing concepts, and introduces how to develop a business plan for a pharmacy product or service. (32-0-2)

PHRC 5974—Evidence-Based Practice IV
This is the fourth of a five-course sequence that prepares the student to retrieve, evaluate, and use the medical and scientific literature and other drug information resources. This course exposes students to data analytics and an “abbreviated” scientific process by planning, developing, and presenting a simple research project using the National Health and Nutrition Examination Survey (NHANES) database as a data source. The application of data analytics in health informatics will also be discussed. (32-0-2)

PHRC 5984—Leadership and Professional Development IV
This is the fourth in a series of five courses that center on the development of self-awareness, professionalism, leadership skills, and an innovative and entrepreneurial mindset. This course continues to present the foundational principles of professionalism, leadership development, goal setting, career planning, teamwork, constructive criticism, professional interaction, and personal/professional growth. Students will reflect on their strength, career goals, and their ability to guide their learning to achieve and expand on these. Teamwork is reinforced through team-based learning. Curriculum and cocurriculum activities stimulating student growth in the four major areas of development will be documented and tracked through the electronic portfolio. (16-0-1)

PHRC 5990—Introductory Pharmacy Practice Experience: Health Systems
This course is a 160-hour, out-of-classroom, supervised, inpatient experience highlighting the operations and practice management aspects of health systems pharmacy practice. The experience is designed to introduce students to medication-use processes, patient and health care provider communication, inpatient health care delivery, and the role of the pharmacist in this setting. Emphasis is placed on medication dispensing; drug procurement/inventory control; application of institutional pharmacy policy/procedure; and local, state, and federal regulations. Students participate in all applicable pharmacy operations and patient-care activities, reply to drug information questions, complete projects, and participate in topic discussions. (64-0-4)

PHRC 5994—Integrated Pharmacy Applications IV
This is the fourth in a series of five courses offered at the end of each semester designed to integrate and apply knowledge and skills from previous courses. The Bring Back and Look Forward sections of the course reinforce previously taught concepts and introduce material to prepare students for future courses. This course brings back pharmaceutical and pharmacokinetics calculations, frequently used drugs, pharmacy management applications, and pharmacotherapy cases. It introduces concepts to prepare students to continue the Integrated Disease Management, Essentials of Professional Practice, and Evidence-Based Practice course series. It reviews expectations for experiential courses in preparation for the Introductory Pharmacy Practice Experience: Health Systems course. (32-0-2)

PHRC 6250—Pharmacodynamics V
The fifth course in the pharmacodynamics sequence of classes, this course applies the principles of biochemistry, physiology, and pathophysiology to understand drug actions at the receptor, cellular, and system levels under normal physiological and pathological conditions. It covers antineoplastic agents and immunomodulators. The remainder of the course introduces students to the principles of toxicology and poison management. (48-0-3)

PHRC 6350—Pharmacy Management
An overview of management theories, human resources, and financial management applied to pharmacy operations is provided in this course. Elements of supervision, management, and leadership are discussed in an effort to develop skills needed to operate a pharmacy effectively. Prerequisite: PHRC 5300 (48-0-3)
PHRC 6370—Pharmacoeconomics and Outcomes Research
This course focuses on theories and methodologies of pharmacoeconomics and outcomes research. Applications to clinical practice, the pharmaceutical industry, and formulary decision making are explored. **Prerequisite:** PHRC 5350 (32-0-2)

PHRC 6380—Public Health and Pharmacy Practice
This course covers public health foundations, concepts, and tools as they apply to pharmacy practice. Social determinants of health, health disparities, and cultural competencies, as well as their impact on population health, are emphasized. Skills related to epidemiology, pharmacoepidemiology, surveillance, and risk assessment are discussed. The course also explores models of pharmacy-run public health programs. **Prerequisite:** PHRC 5300 (32-0-2)

PHRC 6430—Pharmacotherapy III
This is the third of four courses in pharmacotherapy. Pharmacotherapy III combines rational pharmacotherapy with clinical pharmacokinetics. Courses are divided into disease-state modules and focus on the therapeutic decision-making process. Concepts include pharmacotherapy management based on the assessment of physical findings, laboratory values, adverse drug effects, drug interactions, and patient education. The concepts and techniques of biopharmaceutics and pharmacokinetics are also applied to the practical design of individualized drug dosage regimens, taking into consideration factors such as hepatic and renal impairment, effects of other diseases, and drug interactions. Application of previous course materials, including pharmacodynamics and pharmacokinetics, is required. Disease categories presented in this course may build upon previous pharmacotherapy courses. **Prerequisite:** PHRC 5410 Corequisite: PHRL 6720 (96-0-6)

PHRC 6440—Pharmacotherapy IV
Pharmacotherapy IV is the fourth and final course in the pharmacotherapy curricular component. Material presented in this course continues to integrate concepts from previous courses in the curriculum (pathophysiology, pharmacokinetics, calculations, biopharmaceutics, and pharmacodynamics) and builds upon the preceding pharmacotherapy courses. The course is divided into disease-state modules and focuses on the development, monitoring, and evaluation of pharmacotherapeutic plans through application of clinical pharmacokinetic principles, assessment of physical findings, laboratory values, adverse drug effects, drug interactions, and patient education. The class concludes with a high-stakes practicum in which students must demonstrate competence in select course outcomes. **Prerequisite:** PHRC 5410 Corequisite: PHRL 6730 (96-0-6)

PHRC 6540—Pharmacy Practice Seminar
This course is the culmination of the student’s medical and drug information evaluation skills pathway. Students will research a problem or deficit related to pharmacy practice and develop an innovative solution (service or product). A scientific paper describing research outcomes, a professional poster, and a platform presentation are completed. Students will also conduct a prospective financial analysis and operational and marketing plans for their innovation. Presentations will be made to peers and health care professionals, providing valuable experience in presentation skills and in medical information resource utilization. **Prerequisite:** P3 standing (16-0-1)

PHRC 6580—IPPE: Health System
Students are exposed to various aspects of institutional pharmacy practice including drug storage, drug security, and policies and procedures. On-site experience provides basic knowledge of the drug distribution process in a hospital setting. Activities will include prescription preparation, using a unit dose system, use of references, and inventory management. **Prerequisite:** PHRC 5420 (0-120-2)

PHRC 6680—IPPE: Pharmacy Service
This course provides an introduction to the application of skills, concepts, and knowledge acquired in the didactic component of the curriculum in institutional pharmacy settings. This course promotes the development of pharmacy practice skills and furthers the development of communication skills. On-site experience enables students to prepare for advanced pharmacy practice experiences. **Prerequisite:** PHRC 5420 (0-120-2)

PHRL 6720—Patient Care Management Laboratory II
This is the second of three in the patient care management (PCM) sequence of laboratories. PCM II mirrors the disease states discussed in PHRC 6430. The weekly classroom component of the course exposes students to additional exercises to prepare for and complement laboratory activities. Students will have the opportunity to hone communication skills in both simulated inpatient and outpatient settings. Team building activities are incorporated throughout the course to enhance professionalism and communication skills among health care professionals. The laboratory uses realistic, integrated patient cases that allow students to draw upon knowledge acquired from all other courses in the curriculum. Cases encompass therapeutic, communication, legal, and social-behavioral issues. Patient care plans are systematically documented and communicated based on patient cases. This course emphasizes decision-making processes that allow pharmacy students to integrate their knowledge and skills in an interactive learning environment. Physical assessment techniques and interpretation are interwoven into the laboratory sessions. Students are assessed for their knowledge
of commonly used medications throughout the course.  
Prerequisite: PHRL 5710  Corequisite: PHRC 6430 (0-28-1)

PHRL 6730—Patient Care Management Laboratory III
This is the third of three in the patient care management (PCM) sequence of laboratories. PCM III covers the following specific pharmacotherapeutic topics (as those in PHRC 6440). The weekly classroom component of the course provides guidance and exercises to prepare for and complement laboratory activities. Students will have the opportunity to hone communication skills in both simulated inpatient and outpatient settings. Team building activities are incorporated throughout the course to enhance professionalism and communication skills among health care professionals. The laboratory uses realistic, integrated patient cases that allow students to draw upon knowledge acquired from all other courses in the curriculum. Cases encompass therapeutic, communication, legal, and social behavioral issues. Patient care plans are systematically documented and communicated based on patient cases. This course emphasizes decision-making processes that allow pharmacy students to integrate their knowledge and skills in an interactive learning environment. Physical assessment techniques and interpretation are interwoven into the laboratory sessions. Students are assessed for their knowledge of commonly used medications throughout the course. Prerequisites: PHRL 5710 and 6720  Corequisite: PHRC 6440 (0-28-1)

PHRL 6810—Sterile Products Laboratory
This laboratory course is designed to develop the knowledge and skills necessary to prepare sterile products safely and effectively. Students will learn the history and evolution of aseptic processing and the current regulations and standards of practice that guide sterile preparation. The course is taught using a combination of self-study and a laboratory component that allows students to apply the fundamental concepts and skills required for the safe and compliant compounding of sterile products in a cleanroom. Students who successfully complete the course will earn a certificate in sterile-product preparation. (0-48-1)

PHRL 6815—Pharmacy Skills Development V
This is the fifth of a five-course, pharmacy skills development series that integrates principles of pharmaceutical sciences, social and behavioral pharmacy, and pharmacy practice. In this course, students apply knowledge and practice skills complementary to content in the fifth semester of the curriculum. Skills practiced include written and verbal communication, pharmacy calculations, application of commonly used medications knowledge, identification of errors, verification of orders, drug information retrieval, evaluation and provision, patient assessment, and selection and monitoring of pharmacotherapy patient-care plans. Team-building activities are incorporated throughout the course to enhance professionalism and communication skills. (0-48-1)

PHRC 6836—Integrated Disease Management VI
This is the sixth in a series of eight courses that integrate the principles of pathophysiology, pharmacodynamics, pharmacokinetics, and pharmacotherapy in the treatment of diseases. Students learn how to appropriately select and monitor pharmacotherapy regimens based on drug, disease, and patient characteristics and apply the Pharmacists’ Patient Care Process in solving patient-care cases. This course focuses on neurologic and psychiatric disorders. (64-0-4)

PHRC 6837—Integrated Disease Management VII
This is the seventh in a series of eight courses that integrate the principles of pathophysiology, pharmacodynamics, pharmacokinetics, and pharmacotherapy in the treatment of diseases. Students learn how to appropriately select and monitor pharmacotherapy regimens based on drug, disease, and patient characteristics and apply the Pharmacists’ Patient Care Process in solving patient-care cases. This course focuses on clinical toxicology, pain management, substance abuse, and attention-deficit/hyperactivity disorder. (48-0-3)

PHRC 6838—Integrated Disease Management VIII
This is the eighth in a series of eight courses that integrate the principles of pathophysiology, pharmacodynamics, pharmacokinetics, and pharmacotherapy in the treatment of diseases. Students learn how to appropriately select and monitor pharmacotherapy regimens based on drug, disease, and patient characteristics and apply the Pharmacists’ Patient Care Process in solving patient-care cases. This course focuses on special populations, nutrition, and the use of complementary and alternative therapies in the treatment of diseases. (48-0-3)

PHRC 6865 Essentials of Professional Practice V
This is the conclusion of a five-course sequence that prepares the student to develop the knowledge and problem-solving skills needed to become a practice-ready professional who can apply concepts to manage the quality and safety of the medication-use process and deliver patient-centered care. This course addresses pharmacy law and advanced communication concepts as it relates to professional practice. (48-0-3)

PHRC 6875 Evidence-Based Practice V
This is the fifth of a five-course sequence that prepares the student to retrieve, evaluate, and use the medical and scientific literature and other drug information resources. The course focuses on theories and methodologies of pharmacoconomics and outcomes research. Applications to clinical practice, the pharmaceutical industry, and formulary decision making are explored. (32-0-2)
PHRC 6885—Leadership and Professional Development V
This is the fifth in a series of five courses that center on the development of self-awareness, professionalism, leadership skills, and an innovative and entrepreneurial mindset. This course emphasizes the maturation of the student into the ideal professional candidate. Students reflect on their experiences, strengths, and career goals to map a pathway to their chosen professional path. They update their curricula vitae and bios, create professional websites, and develop job interviewing skills as they prepare to enter the pharmacy workforce. Teamwork is reinforced through team-based learning. Curriculum and cocurricular activities stimulating student growth are tracked through the electronic portfolio. (16-0-1)

PHRC 6895—Integrated Pharmacy Applications V
This is the fifth in a series of five courses offered at the end of each semester designed to integrate and apply knowledge and skills from previous courses. Students in each course become certified in a specific area of pharmacy and receive software training. The Bring Back and Look Forward sections of the course reinforce concepts and introduce material to prepare students for future courses. This course utilizes patient cases to apply pharmacy practice concepts. It offers certification in medication therapy management and outlines expectations for P3 and Advanced Standing P2 winter semester. (32-0-2)

PHRC 6920—Seminar
This course is the culmination of the students’ medical and drug information evaluation skills pathway. Students will research a problem or deficit related to pharmacy practice and develop an innovative solution (service or product). A scientific paper describing research outcomes, a professional poster, and a platform presentation are completed. Students will also conduct a prospective financial analysis and operational and marketing plans for their innovation. Presentations will be made to peers and health care professionals, providing valuable experience in presentation skills and in medical information resource utilization. (16-0-1)

PHRC 7700—Integrated Care
This course is designed to integrate the knowledge and skills students have attained throughout the curriculum in preparation for the Advanced Pharmacy Practice Experiences (APPE). The course centers on solving integrated patient-care cases using the Pharmacists’ Patient Care Process. New drugs, changes in laws, and standards of practice and innovations are also addressed. (64-0-4)

PHRC 7710—APPE: Internal Medicine
The Internal Medicine Advanced Pharmacy Practice Experience (APPE) is a six-week, full-time (minimum 40 hours per week), out-of-classroom, supervised, inpatient experience emphasizing individualized patient care. The experience is designed to optimize students’ competency in pharmacist-provided patient care, interprofessional collaboration, utilization of evidence-based medicine, communication, and patient education. Students apply pharmacotherapeutic principles, disease-related knowledge, dosing guidelines, best practice standards, and site-specific procedures to identify therapeutic problems and to implement and monitor patient-care plans in collaboration with health care teams. Students will be expected to communicate effectively in writing through documentation in the patients’ medical records and verbally with stakeholders. Students will present patient cases, provide formal education presentations, participate in informal topic discussions, complete assigned projects, and perform and document pharmacist activities (e.g., patient histories, transitions of care, therapeutic interventions, and creation of treatment plans). Prerequisite: Successful completion of P1, P2, and P3 coursework (0-240-6)

PHRC 7720—APPE: Ambulatory Care
The Ambulatory Care Advanced Pharmacy Practice Experience (APPE) is a six-week, full-time (minimum 40 hours per week), out-of-classroom, supervised, outpatient experience emphasizing individualized patient care. The experience is designed to optimize students’ competency in pharmacist-provided patient care, interprofessional collaboration, utilization of evidence-based medicine, communication, and patient education. Students apply pharmacotherapeutic principles, disease-related knowledge, dosing guidelines, best practice standards, and site-specific procedures to identify therapeutic problems, and to implement and monitor patient care plans in collaboration with health care teams. Students will be expected to communicate effectively in writing through documentation in the patients’ medical records and verbally using communication techniques such as motivational interviewing, coaching, and patient education and counseling. Students will present patient cases, provide formal education presentations, participate in informal topic discussions, complete assigned projects, and perform and document pharmacist activities (e.g., patient histories, transitions of care, therapeutic interventions, and creation of treatment plans). Prerequisite: Successful completion of P1, P2 and P3 coursework (0-240-6)

PHRC 7730—APPE: Advanced Hospital
The Advanced Hospital Advanced Pharmacy Practice Experience (APPE) is a six-week, full-time (minimum 40 hours per week), out-of-classroom, supervised, operational and management experience in an institutional setting. This experience is designed to optimize students’ competency in all aspects of the Medication-Use Process and health care delivery while emphasizing the interprofessional dynamics of the health system setting. Students will be exposed to the application of management principles for oversight of pharmacy personnel, institutional policy/procedure, drug procurement/inventory, formulary management, clinical programs, development of standards of care, medication safety
programs, and dispensing of sterile products. Students will be expected to communicate effectively with stakeholders verbally and in writing. Students will present case studies, provide formal education presentations, participate in informal topic discussions, complete assigned projects, and perform and document pharmacist activities (e.g., adverse drug reaction reporting, documentation of medication errors, and participation in institutional committees). Prerequisite: Successful completion of P1, P2, and P3 coursework (0-240-6)

PHRC 7740—APPE: Community Pharmacy
The Community Pharmacy Advanced Pharmacy Practice Experience (APPE) is a six-week, full-time (minimum 40 hours per week), out-of-classroom, supervised, operational and management experience in the outpatient, community setting. This experience is designed to optimize students’ competency in patient screening, the Medication-Use Process, and outpatient health care delivery. Emphasis will be placed on the oversight of pharmacy personnel, drug distribution, pharmacy policy/procedure, drug procurement/inventory, medication safety, and insurance adjudication. Students will participate in continual quality improvement processes and create improvement opportunities based on data. Students will have the opportunity to guide patients with self-care and medication self-administration. They will counsel patients on prescription, nonprescription medications, and nondrug therapy alternatives. Students will present case studies, provide formal presentations, participate in informal topic discussions, complete assigned projects, and perform and document pharmacist activities. Prerequisite: Successful completion of P1, P2, and P3 coursework (0-240-6)

PHRC 7750/7760/7770/7780—APPE: Elective I/Elective II/Elective III/Elective IV (Optional)
The Elective Advanced Pharmacy Practice Experience (APPE) is a six-week, full-time (minimum 40 hours per week), out-of-classroom, supervised experience that may emphasize direct or indirect patient care in an outpatient, inpatient, or office-based practice setting or nonpatient-care, pharmacy-related activity. Students complete a total of three elective experiences in practice specialty areas that will allow them to obtain focused experiences in a broad range of settings. Elective experiences include, but are not limited to, administration/leadership, critical care, infectious disease, managed care, centralized pharmacy practice, nutritional support, psychiatry, medication safety, informatics, cardiology, and specialty pharmacy. Students will be expected to communicate effectively with stakeholders verbally and in writing. Students may present patient cases, prepare formal education presentations, participate in informal topic discussions, complete assigned projects, and perform and document pharmacist activities. Prerequisite: Successful completion of all P1, P2, and P3 coursework (0-240-6)

PHRC 7801—Curricular Review I
The primary goal for the professional development capstone course series is to assess and strengthen students’ knowledge and skills developed during the pharmacy curriculum. In Curricular Review I, students review and assess their knowledge and skills in preparation for the NAPLEX. Prerequisite: P4/Adv P3 (Final Year) (16-0-1)

PHRC 7802—Curricular Review II
The primary goal for the professional development capstone course series is to assess and strengthen students’ knowledge and skills developed during the pharmacy curriculum. In Curricular Review II, students review and assess their knowledge and skills in preparation for the NAPLEX. Prerequisite: P4/Adv P3 (Final Year) (16-0-1)

PHRC 7803—Curricular Review III
Students will prepare for the NAPLEX by completing assigned practice problems, a required pre-NAPLEX examination, and an on-campus NAPLEX review course. Prerequisite: P4/Adv P3 (Final Year) (32-0-2)

PHRE (Elective) Courses
PHRE 5001—Curricular Practical Training (CPT)
Pharmacy is a knowledge- and skill-based profession that optimizes professional interactions with health care team members and the patient. Students may desire to gain additional experience over what is offered through the IPPEs and APPEs prior to graduation. This course offers students additional opportunities to observe and emulate the roles and responsibilities of pharmacists in a pharmacy setting, as well as learn to effectively communicate with patients, pharmacists, and health care providers, and gain knowledge of the role of the pharmacist. Students will participate in a pharmacy environment to expand their knowledge of regulations; medication preparation; distribution; and interactions with insurers, prescribers, and patients. (0-48-1)

PHRE 5105—Overview of Consulting Pharmacy Practice
This course focuses on the consulting pharmacy practice in long-term facilities. It provides an overview of geriatric consulting statutes that regulate the activity of the consultant pharmacist, the HCFA survey guidelines, and the types of facilities required to have a consultant pharmacist. Students will apply the Pharmacists’ Patient Care Process in addressing geriatric patient medication-related needs in this setting. Prerequisite: P3 standing (32-0-2)

PHRE 5107—Current Topics in Pharmaceutical Sciences
This course covers special topics selected by faculty members and visiting scientists. The goal of each topic is to provide
the student with an understanding of, and an appreciation for, current problems and procedures underlying the pharmaceutical sciences discipline. Prerequisite: Topic dependent, please see course coordinator for details. ([16–32]-0-[1–2])

PHRE 5113—Current Topics in Pharmaceutical Sciences
This course covers special topics selected by faculty members and visiting scientists. The goal of each topic is to provide the student with an understanding of, and an appreciation for, current problems and procedures underlying the pharmaceutical sciences discipline. Prerequisite: Topic dependent, please see course coordinator for details. ([16–32]-0-[1–2])

PHRE 5117—Cardiovascular Risk Factors
This course explores the pharmacist’s role in cardiovascular disease risk management. It addresses the major cardiovascular risk factors and the rationale of prevention, lifestyle modifications, and current evidence-based therapies for the treatment of common cardiovascular risk factors. Students will learn the essential skills to successfully assess risk, promote cardiovascular disease prevention, and encourage patient adherence to therapy. Students who successfully complete the course will receive an advanced professional training certificate of achievement from the American Pharmacist Association on Cardiovascular Disease Risk Management. (32–0–2)

PHRE 5123—Individualized Pharmacotherapy
This course gives an overview of the field of “individualized (or personalized) pharmacotherapy,” which involves the systematic use of information about each individual patient to select or optimize the patient’s preventative and pharmacotherapeutic care. The course discusses individual differences in drug response to tailor drug therapy based on each patient’s needs. Prerequisite: P3 Standing (16–0–1)

PHRE 5151—Introduction to Herbal Medicine
Pharmacy has a rich history in the study and use of herbal medicines. This course will briefly explore the history of botanical medicine, the properties of the herbs, their various applications in the treatment of disease, and how to ensure the safe use of herbal products. (32–0–2)

PHRE 5205—Introductory Spanish for Pharmacists
This course provides non-Spanish speakers with the first steps in speaking Spanish to better communicate with patients and caregivers whose primary language is Spanish. The course provides an introduction to the basic Spanish terms and phrases frequently used during patient-pharmacist interactions, and culturally appropriate strategies for communicating with Hispanic patients and families. (32–0–2)

PHRE 5209—Advanced Pharmacokinetics*
This course explains the model development techniques that can be utilized for complex pharmacodynamics systems. Advanced data analysis techniques and modern pharmacokinetic theory will be discussed in conjunction with PK/PD literature. (48–0–3)

PHRE 5213—Epidemiology of Drug Use, Abuse, and Misuse*
This course is designed to introduce doctoral students to the epidemiology of drug use, misuse, and abuse. The course focuses on drug use, misuse, and abuse as social phenomena and deals with the history of drug use and regulatory attempts in America; pharmacology and use patterns related to specific drugs; use, abuse, and misuse as medical, psychological, and social concepts; drug importation, manufacture, and distribution (including both the legal and illegal drug industries); perspectives on the etiology of drug use/abuse; drug abuse prevention and educational programs; and approaches to drug abuse treatment. (48–0–3)

PHRE 5215—Advanced Pharmaceutical Compounding
The course will provide advanced training in the art, science, and technology of pharmaceutical compounding. (32–0–2)

PHRE 5221—Introduction to Molecular Medicine
This course introduces content important to understanding the genetic basis of diseases, their identification, and their treatment. Additionally, the developing areas of cancer immune therapies and gene surgeries are covered. For students who may not possess a thorough knowledge of molecular biology and developing technologies, the course involves class presentations and other activities for developing a better understanding of the genetic basis of disease. (32–0–2)

PHRE 5223—Drugs of Abuse
This course covers types of substances abused, methods and routes of administration, the pertinent toxicokinetics, the pharmacological/toxicological mechanisms, and the clinical manifestations of drug abuse. Treatment of intoxication and withdrawal, societal impact of drug abuse, legal implications, and current trends of substance abuse are also discussed. Prerequisite: P3 Standing. (32–0–2)

PHRE 5227—Pharmacoethics
This course is designed to introduce students to bioethical issues encountered in health care, with emphasis on ethical problems related to pharmacy. Students will explore issues arising from advances in biotechnology, resource allocation, research using human subjects, informed consent, and the right to privacy as they impact on the legal rights and responsibilities of patients, health care providers, and government policy makers. (32–0–2)

*This course is for Ph.D. and M.S. in Pharmaceutical Sciences students only.
PHRE 5243—Fundamentals of Pharmacognosy
This course provides an overview of medicinal drugs derived from plants and other natural sources. The major classes of medicinally active natural products, their origin (nomenclature + taxonomy), structure, biosynthesis, and mode of action will be covered. The naturally derived constituents and their therapeutic efficacy will be discussed. (32-0-2)

PHRE 5245—Geriatric Patient Care Management
This course addresses real-life pharmacotherapeutic cases related to geriatric patients. The course requires the application of the knowledge acquired from all previous courses in the curriculum. The course is organized and sequenced based on disease states that include problems ranging from therapeutic to social-behavioral issues related to the disease state. The course will allow students to integrate the knowledge and apply the skills obtained from all previous courses to develop decision-making and disease management processes. This course is an online elective course that utilizes the case study teaching method. **Prerequisite:** P3 Standing (32-0-2)

PHRE 5301—Measuring, Improving, and Reporting Quality of Care in Pharmacy Practice
This course explores optimizing patient outcomes by improving the quality of the Medication-Use Process. It focuses on the knowledge, skills, and methods which, if applied effectively, can assure a high-quality and safe patient and family health care experience in a variety of practice settings. The purpose of this course is to develop, integrate, and apply knowledge about quality improvement, performance measurement, and the transformation of the U.S. health care system to a value-based system. Students will gain familiarity with the concepts of quality improvement, patient safety, and medication error prevention and how these concepts can be used in collaboration with patients, physicians, other health care professionals, administrators, and regulators. (32-0-2)

PHRE 5303—Pharmacy Practice and Biotechnology/Pharmaceutical Industries
This course provides the student with a detailed overview of the pharmaceutical and biotechnology industries in the 21st century, focusing on pharmacy practice aspects of the sector. Students will follow a real drug/biologic through inception forecasting and planning, preclinical and clinical development, intellectual property protection assignment, supply chain logistics, pricing, and sales and marketing, culminating in a symposium (PharmaCon) where students will present their product launch to representatives from the pharmaceutical and biotechnology industries. The course examines drug safety and legal risks to practice, technological advances of the industry, economic and financial drivers of success, and population-based health care. It also covers a wide landscape of evolving ethical issues in the marketplace and provides insight and guidance for students seeking pharmacy practice careers in the pharmaceutical and biotechnology industries. (32-0-2)

PHRE 5305—Pharmacy Practice in Managed Care
Students will learn and apply managed care pharmacy practice theory to offer medication therapy management, patient education and counseling, and provider recommendations to optimize patient outcomes. The course is delivered using online and experiential learning provided at the ACORN SEED Center. Professional and leadership skills are reinforced while students work in an interdisciplinary team developing problem-solving skills, effective communication strategies, and team collaboration. Students will use telephonic and remote patient-monitoring systems and will use the electronic health record databases to perform drug utilization reviews, medication reconciliation, and transitions of care. (16-48-2)

PHRE 5311—Pharmaceutical Marketing
This course provides students with a working knowledge of analysis, planning, and control of marketing efforts crucial to roles as managers and leaders in the pharmacy profession. Students learn about marketing management, customer behavior, design and management of service processes, and customer loyalty and satisfaction. Students will think in concrete terms and apply marketing knowledge as they develop marketing strategies for a pharmacy product or service. (32-0-2)

PHRE 5345—Pharmacists, Pharmaceuticals, and the Media
This course will explore how various forms of media have portrayed pharmacists over the years. It will also investigate how pharmaceuticals and other drugs are reported by the press and are presented by the entertainment industry. Students will discuss the content of articles. The phenomena and occurrence of drug effects (drug-taking experiences) are examined, integrating information from both pharmaceutical and social sciences, to study how and why drugs are used. Historical and cross-cultural examples are employed in this dialogue on the nature and meaning of drug-taking experiences and their influence on drug-taking behaviors. **Prerequisite:** P3 Standing (32-0-2)

PHRE 5351—Contemporary Issues in Pharmacy*
This course is designed to explore a broad spectrum of contemporary issues related to pharmacy practice, pharmaceutical industry, third-party payment, and health policy. It will also increase student awareness and understanding of changes in pharmacy practices and its impact on the U.S. health care system. (48-0-3)

*This course is for Ph.D. and M.S. in Pharmaceutical Sciences students only.
PHRE 5353—Contemporary Topics in Pharmacy
This course provides a broad spectrum of contemporary issues related to pharmacy practice, pharmaceutical industry, third-party payment, and health policy. It aims to increase student awareness and understanding of the changes in pharmacy practice and its impacts on the U.S. health care system. (32-0-2)

PHRE 5389—Pharmacy Law of Puerto Rico
This course covers the laws, regulations, and administrative orders that regulate the practice of the pharmacy profession; the occupation of a pharmacy technician; and the manufacture, distribution, and dispensing or dispatch of medications in Puerto Rico. Special emphasis will be given to the dispensing of controlled substances in accordance with applicable local and federal legislation. In addition, general aspects of professional law and ethics will be covered. (32-0-2)

PHRE 5391—The Nuclear Pharmacy Experience
This course covers and explains what a nuclear pharmacy is and the responsibilities, activities, and knowledge required in order to function as a nuclear pharmacist. The course places emphasis on radiopharmaceuticals (radioactive medication), their mechanisms of action, dose range, method of compounding, and ultimate role in the diagnosis of diseases and/or therapy. (32-0-2)

PHRE 5401—Current Topics in Sociobehavioral and Administrative Pharmacy
Specialized topics dealing with current issues, procedures, and policies related to sociobehavioral pharmacy are covered in this course. (16-48)-0-[1-3]

PHRE 5411—Current Topics in Pharmacy Practice
This course discusses topics on current issues, procedures, and policies related to pharmacy practice. Topics can vary from semester to semester. (32-0-2)

PHRE 5417—Veterinary Pharmacotherapy
This course is structured to provide pharmacy students with the necessary knowledge to be able to confidently prepare and dispense animal prescriptions and offer counseling to pet owners regarding these medications. Common diseases that affect canines and felines (small animals) will be discussed, as well as current pharmacotherapeutic approaches. Similarities and differences between humans and animals related to specific disease states will be discussed. Pharmacotherapeutic approaches to be discussed include human-labeled medications that are used extra-label in animals, medications that have both human-labeled and veterinary-labeled formulations, and medications exclusively approved to treat medical conditions in animals. OTC product use in animals will also be presented to better prepare pharmacy students for those unexpected questions asked by pet owners. Other topics include specific regulations regarding medications in animals, compounding, preventatives, pet insurance, and alternative medicine approaches. (32-0-2)

PHRE 5427—Introduction to Pharmacometrics: Modeling and Simulation (IPMS)
IPMS will expose the student to cutting-edge tools and techniques used to answer complicated problems in drug development and utilization. IPMS leverages information and knowledge from core biomedical and pharmaceutical courses together with mathematical modeling and simulation and clinical data from patients or published literature. Students will be required to synthesize the data to create models and perform simulations to answer problems with drug therapy. The course also includes hands-on training using standard modeling and simulation software. Prerequisite: P3 Standing (32-0-2)

PHRE 5429—Antimicrobial Stewardship
Antimicrobial stewardship aims to optimize clinical outcomes while minimizing unintended consequences of antimicrobial use, including development of drug toxicity, selection of pathogenic organisms, and emergence of antimicrobial resistance. Principles of antimicrobial stewardship and concepts related to the management of infectious pathogens are the emphasis of this course. Upon completion of this course, students will be prepared to practice as a pharmacist in the forthcoming post-antibiotic era. (32-0-2)

PHRE 5431—Oncologic Treatments and Pharmacogenomics
This hybrid course introduces the basic molecular concepts of cancer and pharmacogenomics in the context of cancer treatment. It presents the current methodologies used in cutting-edge oncology for the treatment of two of the most common types of cancer: breast and colon. The standard-of-care combinatorial regimens will be presented, as well as the treatment scenarios that are applied to advanced-stage and recurrent disease. Drugs that have increased patient tolerance to these genotoxic regimens will also be discussed. Finally, the application of next-generation sequencing of tumor DNA or RNA to determine which of the more than 300 druggable mutations exist in these tumors will be discussed, primarily in the cancer-recurrence setting. Prognostic tests based on RNA expression from tumors will be covered. Discussion of the rationale for insurance coverage of pharmacogenomics will be covered as well. The impact of oncologic pharmacogenomics on future clinical trials will also be examined. (32-0-2)

PHRE 5445—Leadership, Engagement, and Development (LEAD)
This course provides an in-depth look at the behaviors and skills needed to be an effective leader. Students are exposed to a variety of leadership theories and styles within the context of student leadership development. Communication styles, teamwork, cultural competence, and conflict management
are examined within the interpersonal context. Course materials and activities challenge students to connect theory to practice and enhance communication skills through the use of student presentations on topics related to collaborative and interprofessional experiences. (16-0-1)

**PHRE 5447—Regulatory Affairs**
This course provides an exposure to the important and critical area of drug regulatory matters. It describes the role of federal laws, regulations, and the structure and operation of the U.S. Food and Drug Administration. It also compares similar agencies in other countries. (32-0-2)

**PHRE 5511—Survey of Complementary Therapies**
This course provides students with information about complementary therapies that are frequently seen, or could be recommended, for various disease states. Nutritional supplements, herbal remedies, homeopathic remedies, and others will be studied. The proper dosing, side effects, and drug and disease state interactions will also be considered in recommending these therapies. (32-0-2)

**PHRE 5513—Special Population Needs and the Role of the Pharmacist**
This course uses the framework of social determinants of health and the ecological model and provides a holistic perspective to vulnerable and special populations. Students will have an opportunity to explore the needs of special populations from a pharmacist's perspective, enabling students to self-assess their preconceived knowledge and gain a new perspective to practice pharmacy. Students will acquire knowledge about factors that influence and intersect with vulnerable populations. Students are expected to design an intervention for a population of their interests, applying the knowledge and skills they have acquired. This is an online course that requires students to work independently and with other class members to complete a project. (32-0-2)

**PHRE 5515—Health Disparities and Chronic Diseases: The Role of the Pharmacist**
This course presents the main causes and pathways to health disparities in the United States. It focuses on chronic diseases, such as diabetes, cancer, and cardiovascular diseases. Emphasis is given to disparities associated to access to medication, access to pharmacy services, and to adherence. Students will learn about pharmacy-led interventions aimed at reducing health disparities. They will be expected to use epidemiological data to study the disparities and to formulate recommendations to the pharmacy field. Students will be assessed through hands-on, structured assignments. (32-0-2)

**PHRE 5517—Biologics and Beyond**
This course introduces and familiarizes students with biologic drugs, FDA-approved biosimilars, antibody-drug conjugates, gene medicine products, and cell therapy products. Mechanisms of actions, disposition principles, dosing and product handling aspects, therapeutic use, drawbacks, and ongoing trials/research are discussed. Students will work in teams to study the characteristics of biologics by disease categories and drug types. (32-0-2)

**PHRE 5551—Nutrition and Wellness in Pharmacy Practice**
This course provides strategies to improve nutritional status, health, and wellness. It highlights nutritional wellness, foods, and diets that may be used to help maintain or improve health. It reviews epidemiological and genetic aspects of individuals, nutritional deficiencies, and environmental causes of illness and disease. Additionally, it presents the tools needed to conduct nutritional and environmental assessments, comprehend patients' anthropometrics, and provide nutritional guidance and wellness plans for patients. (32-0-2)

**PHRE 5619—Pharm.D./D.M.D. Interprofessional Experience**
This interprofessional education (IPE) course will allow pharmacy students and dental students to work together in caring for the HIV-infected population. Students will be conducting medication reconciliation for HIV-infected patients at a dental clinic. Students will observe dental procedures and provide education on medication efficacy, medication side effects, and the importance of medication adherence to dental students. Students will also educate patients on proper oral hygiene and medication adherence. Students will be expected to be at the dental clinic approximately four hours per week for 10 weeks. Didactic lectures will address overall health management of patients with HIV infections. **Prerequisite:** P3 Standing (16-48-2)

**PHRE 5637—History of Pharmacy**
This course provides an overview of the history of pharmacy as a profession and provides experience in interpreting and analyzing historical pharmacy data and information from historical sources and references. It will primarily focus on American pharmacy from the colonial times to present day. Topics will include the evolution of practice, changes in education and licensure requirements, the development of professional organizations, the growth of the pharmaceutical industry, and the role of pharmacy in contemporary health care practice. In addition, the course will include an introduction to pharmacy artifacts and the integral role they played in the development of pharmacy in the United States. The course will help students apply wisdom about pharmacy's past to guide evolving changes in the pharmacy profession. (32-0-2)
PHRE 5639—Clinical Neuropsychopharmacology
This course incorporates didactic lecture, classroom discussion of cases, student presentations, and clinical monitoring of a patient with a neurological or a psychiatric disorder. The course is designed to introduce students to advanced concepts in the pharmaceutical care and medication management of a patient with a mental and/or neurological illness. **Prerequisite:** P3 Standing (32-0-2)

PHRE 5641—Applied Secondary Database Analysis
This course gives students the opportunity to apply the skills learned in the research design and biostatistics courses by completing a secondary data analysis research project using a federal database. Students will write a basic research protocol and become familiar with the basic structure and methodology of the United States National Health and Nutrition Examination Survey (NHANES) database. Students will prepare a dataset, conduct descriptive and basic statistical analyses using SPSS, write an abstract, and deliver a presentation to a small audience. (32-0-2)

PHRE 5643—Parenteral Medication Therapies
This course exposes students to topics and skills that expand their knowledge of the use of intravenous therapies in the management of diseases. The student will learn both didactically and in small-group, hands-on activities. After completion of this course, the student should be more prepared to compound, evaluate, and monitor IV therapies. (16-48-2)

PHRE 5645—Special Population Needs and the Role of the Pharmacist
This course uses the social determinants of health and the ecological model as framework. It provides a holistic perspective to vulnerable and special populations. Students will explore the needs of special populations from the pharmacist perspective. This course will enable students to self-assess their preconceived knowledge and gain a new perspective to practice pharmacy. Students will acquire knowledge about factors that influence and intersect with vulnerable populations. Students are expected to design an intervention for a population of their interests, applying the knowledge and skills acquired. (32-0-2)

PHRE 5993—Literature Research in Pharmaceutical Sciences
The course involves the directed reading, evaluation, and analysis of scientific literature (papers and reviews) in the fields of pharmacology, pharmaceutics, biopharmaceutics, pharmacokinetics, drug delivery systems, pharmaceutical technology, biotechnology, toxicology, and others. It involves thorough reading and assimilation of scientific information and preparing reports and/or manuscripts as agreed between the adviser and advisee. Through a mutual agreement between faculty members and students, a specific area of research within a field will be selected according to the interest of student and faculty member. Under the direct supervision of a faculty member, the student will be trained on the retrieval of scientific information, will be mentored to understand the findings of the paper(s), and will build a hypothesis of his or her own on the leading topic from various publications and reviews. Students will also be trained in how to write papers and reviews. (0-[144–192]-[3–4])

PHRE 5995—Research in Sociobehavioral and Administrative Pharmacy I
This research elective course is designed to provide students with fundamental understanding of issues surrounding research methodology in pharmacy, public health, and biomedical science researches. The course provides guidance to students through the complete research process, from formulation of research problem and hypothesis, to literature review, data collection and analysis, and summary of research report. (0-[48–144]-[1–3])

PHRE 5997—Research in Sociobehavioral and Administrative Pharmacy II
This research elective course is the continuation of the Research in Sociobehavioral and Administrative Pharmacy I elective course. It is designed to provide guidance to students through the complete research processes, from formulation of a topic to data collection and analysis, to completion of a final report. The amount and nature of the work to be done for this research elective course will be determined by the individual faculty research adviser. **Prerequisite:** PHRE 5995 (0-[48–192]-[1–4])

PHRE 5999—Research in the Pharmaceutical Sciences
In this course, students work under the direction/supervision of one or more faculty members in a research laboratory. Students are involved in planning and executing an approved research project using basic techniques of scientific research. Students will be awarded 3 or 4 semester credits on the basis of 48 laboratory hours per credit. (0-[144–192]-[3–4])
**PHRE 6431—Team-Based Medication Management Practices**

This course provides student-pharmacists with broad-based exposure to patient-care activities that will prepare them to practice as part of an interprofessional team in an ambulatory care practice environment. Students will participate in various direct patient-care activities, including telephonic medication therapy management (MTM) services, adherence outreach, and transitional care management to help improve medication-related outcomes. The course will also emphasize interprofessional collaboration and cooperation, such that students will be able to demonstrate effective communication techniques, collect and analyze data, develop and implement treatment plans, provide education, provide instruction on patient self-management, and conduct appropriate follow-up. In addition to live lectures and online recordings, the student will be expected to be at the Adherence Transitions of Care and Medication Therapy Management (MTM) Center on the Fort Lauderdale/Davie campus for patient-care activities approximately four hours per week. Didactic lectures will address overall health management of patients including, but not limited to, MTM, adherence, and transitions of care. After successful completion of this course, students will complete a physician-precepted Advanced Pharmacy Practice Experience (APPE) ambulatory care rotation during their final year. 

**Prerequisite:** P3 Standing (16-48-2)

**PHRE 6997—Travel Study Program**

The program provides students with an overview, understanding, and appreciation for pharmaceutical and medical practices outside the United States. Visits to pharmacies, hospitals, and cultural sites in the region allow students to study and experience the history, culture, and health care practices of the country visited. (32-16-3)
Master of Science (M.S.) in Pharmaceutical Affairs

The Master of Science (M.S.) in Pharmaceutical Affairs is a one-year program designed for people interested in the acquisition of knowledge and skills in the health care and biomedical field. The degree prepares students for managerial positions in the pharmaceutical industry, health care systems, academia, managed care organizations, contract research organizations, and governmental and nongovernmental agencies. The M.S. in Pharmaceutical Affairs provides additional preparation prior to pursuing professional careers within the health care system, such as pharmacy, medicine, physician assistants, and nursing, among others. Graduates will be able to critically analyze issues related to the health care environment and act as leaders in the field.

Admissions Requirements
The M.S. in Pharmaceutical Affairs program bases its selection of candidates on academic performance, personal interviews, written applications, and letters of reference.

1. Prior to matriculation, applicants must have received a baccalaureate degree from a regionally accredited college or university. A baccalaureate degree in science fields—such as biology, biochemistry, chemistry, bioengineering, health care, or a related major—are acceptable.

2. Applicants must have completed their coursework at a regionally accredited college or university with a minimum cumulative GPA of 2.0 (recommended 2.5) on a 4.0 scale.

3. Pharmacy College Admission Test (PCAT) or Graduate Record Exam (GRE) scores are recommended, but no longer required. For those applicants who choose to submit official scores from the PCAT or GRE
   - PCAT scores must be no more than three years old at the time of application. Applicants should take the PCAT no later than June 1 prior to the expected date of matriculation. Candidates may register online at pcatweb.info, or call 800-622-3231 with any questions.
   - GRE Scores must be no more than three years old at the time of application. Applicants should take the GRE no later than April prior to the expected date of matriculation. You may register online at gre.org, or call (609) 921-9000 if you have any questions.

4. Two letters of reference from a pre-professional committee—or, if such a committee does not exist, letters of reference from one science professor and one liberal arts professor—are necessary.

Foreign Graduates
Foreign graduates may be eligible for admission with
1. a Bachelor of Science degree or a bachelor’s degree in a related health care field from an accredited institution. See details below under foreign coursework.
2. completion of their bachelor’s degree coursework with a minimum cumulative GPA of 2.0 on a 4.0 scale (recommended 2.5)

Application Procedures
The Office of Admissions processes applications on a rolling basis; therefore, it is in the best interest of the applicant to apply early. The PharmGrad application process may take up to six weeks to complete.

1. Apply to PharmGrad electronically through Pharmgrad.org.
   - Deadline to apply is May 3.

2. Send supporting documents to PharmGrad.
   - official transcripts from all colleges and universities attended (submitted directly to PharmGrad by the college or university and/or foreign credential evaluation service)
   - two letters of reference
   - official PCAT and/or GRE scores (recommended, not required)
   - proof of English proficiency (required for nonnative English speakers)

3. Submit a nonrefundable application fee of $50 (U.S.).

4. Submit a supplemental NSU application (received online via an emailed link that is sent once NSU has applicant’s PharmGrad application). The deadline for the supplemental application is June 15.

Proof of English proficiency, if applicable, is required of applicants. The following standardized tests currently satisfy NSU College of Pharmacy English requirements for nonnative English speakers:

- Test of English as a Foreign Language (TOEFL)*: minimum score of 213 on a computer-based or 80 on the Internet-based test (toefl.org)
- International English Language Testing System (IELTS)*: minimum score of 6.0 on the test module (ielts.org)

* TOEFL and IELTS scores may be no more than two years old at the time of the interview.
Candidates who have taken college courses in the United States may also prove English proficiency by completing, with a minimum cumulative GPA of 2.0 on a 4.0 scale, two college-level English composition courses at a regionally accredited college or university in the United States.

All admissions materials and foreign evaluations must be mailed to

Nova Southeastern University
Enrollment Processing Services (EPS)
College of Pharmacy Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

Interview Process
A personal interview is part of the admissions process; however, being interviewed is not a guarantee of admission. Upon receipt of the completed application, a review will be made to determine if the applicant will be granted an interview. Not all applicants will be granted an interview. The Office of Admissions will notify selected applicants for interviews. Interviews may be conducted using online platforms in the event the applicant cannot attend an in-person interview.

Notice of Acceptance
Notice of acceptance or other action by the committee on admissions will be on a “rolling” or periodic schedule. Early completion of the application process is in the best interest of the applicant. Admission to the program is contingent upon meeting all the requirements prior to the first day of the semester.

Transcripts
Upon acceptance, final and official transcripts from all colleges and universities attended, and/or final and official documents, must be received within 90 calendar days from the start of the semester. If not received by that time, the student will not be allowed to continue class attendance. Financial aid will not be disbursed to a student until all the required documents are received and the student is fully admitted.

Foreign Coursework
Coursework taken at foreign institutions must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.

- World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org
- Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org
- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, WI 53203-3470
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University.

All admissions materials and foreign evaluations must be mailed to

Nova Southeastern University
Enrollment Processing Services (EPS)
College of Pharmacy Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

Program Requirements
Students must have a personal computer or a tablet device for assignments and assessments and have an active account with an Internet service provider. In addition, students must have ongoing access to a computer capable of connecting to the Internet and playing streaming video files. Online course notes and discussions will be provided to the student through an online course management system. NSU will provide access to email, online databases, and library resources.

Tuition: M.S. in Pharmaceutical Affairs Program
All tuition and fees are subject to change by the board of trustees without notice.

Tuition for 2020–2021 will be posted online at pharmacy.nova.edu.

Fees and Deposit—All Programs
- Acceptance and Preregistration Deposit—$1,000. This deposit is required to reserve the accepted applicant’s place in the entering, first-year class. This deposit will be deducted from the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is due within three weeks of an applicant’s acceptance.
- Health Professions Division General Access Fee—$145 per annum.
- NSU Student Services Fee—$1,500 per annum.
- Registration Fee—$30 per semester.
- Late Payment Fee—$100. All tuition and fees not paid within 30 days after the start of the semester will incur this fee.
- College of Pharmacy Fees—Additional fees may be incurred for college-approved activities. These fees are estimated at $500 over the course of the program.
The first semester’s tuition and fees, less the $1,000 deposit, are due on or before the first day of classes. Tuition for each subsequent semester is due on or before the first day of classes. Students will not be permitted to register or attend classes until their financial obligations have been met. The financial ability of applicants to complete their training at the college is important. Applicants should have specific plans for financing their professional education. This should include tuition, fees, an iPad/personal computer, computer-related expenses, health insurance, books, printing, required equipment, and living and other miscellaneous expenses.

Each student is required to carry adequate personal medical and hospital insurance. For more information about NSU’s required health insurance, visit the website at nova.edu/bursar/health-insurance.

Course of Study
The one-year degree program will provide a strong science foundation for those interested in pursuing doctoral-level graduate programs in pharmacy and other health care or science fields. Students will be better prepared to further pursue the professional doctoral-level career paths currently being offered nationwide.

Some courses may be offered in a BlendFlex model, which includes synchronous and asynchronous online learning, as well as on-campus learning and videoconferencing. Some courses will be combined with existing Pharm.D. and graduate courses, while others will be stand-alone, master’s degree-specific courses. M.S. students may be assessed differently when appropriate.

The program must be completed within two academic years from the date of matriculation.

Note: Completion of this program does not ensure prerequisite requirements needed to apply for health care-related degrees such as pharmacy. Students applying for these degrees after completing their M.S. in Pharmaceutical Affairs, must comply with admissions requirements to those programs.

International/Student Visa Information
It is the applicant’s responsibility to contact the Office of International Students and Scholars for information on immigration regulations and student visa requirements at Nova Southeastern University
Attention: Office of International Students and Scholars
3301 College Avenue
Fort Lauderdale, FL 33314-7796
(954) 262-7240
800-541-6682, ext. 27240
Fax: (954) 262-3846
Email: intl@nsu.nova.edu
nova.edu/internationalaffairs/students

Graduation Requirements
To receive a degree, a student must fulfill the following requirements:

• be of good moral character
• successfully complete all curricular requirements and assessments with a minimum cumulative GPA of 2.0 on a 4.0 scale within four academic years
• satisfactorily meet all financial obligations to the university (to receive credentials)
• submit an application for degree/diploma to the registrar’s office by the posted deadline (Applications received after the deadline will not be considered for that year’s commencement ceremony.)
Curriculum Outline

The curriculum is currently under review and will be revised as needed. These courses are representative of the overall requirements of the program at the time of publication. Updates to the curriculum will be posted online at pharmacy.nova.edu.

<table>
<thead>
<tr>
<th>Fall/Winter/Summer</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HPH 7210 Bioethics: Principles of Life Science Research</td>
<td>3</td>
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<tr>
<td>PHRM 5001 Health Economics</td>
<td>3</td>
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<tr>
<td>PHRM 5810 Knowledge Skills for the Health Care Environment</td>
<td>2</td>
</tr>
<tr>
<td>PHRM 5820 Biochemical Basis of Drug Therapy</td>
<td>3</td>
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<tr>
<td>PHRM 5830 Fundamentals of Pharmacodynamics</td>
<td>2</td>
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<td>PHRM 5871 Evidence-Based Practice I</td>
<td>1</td>
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<tr>
<td>PHRM 5021 Population Health and Public Policy</td>
<td>3</td>
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<tr>
<td>PHRM 5840 Drug Medication and Society: History and Current Issues</td>
<td>2</td>
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<tr>
<td>PHRM 5921 Individualized Drug Therapy</td>
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<tr>
<td>PHRM 5940 Regulatory Affairs</td>
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<tr>
<td>PHRM 5972 Evidence-Based Practice II</td>
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<td><strong>Total Credits</strong></td>
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Master of Science (M.S.) in Pharmaceutical Affairs Course Descriptions

PHRM (Master’s Degree) and HPD Core Classes

Note: Listed at the end of each entry are lecture hours, laboratory hours, and credit hours.

HPH 7210—Bioethics: Principles of Life Science Research
This course provides a structured approach for identifying, analyzing, and resolving ethical issues in medicine and the life sciences. Students analyze and discuss traditional philosophical theories regarding the nature of moral good. They will apply these theories to critical issues and selected case studies involving experiments with human subjects, organ transplantation, in vitro fertilization, the use of animals in research, the collection and publication of research data, conflicts of interest, and other topics of current concern. Students will explore the personal values, professional standards, and institutional guidelines that define the roles and responsibilities of the health care practitioner and researcher. (48-0-3)

PHRM 5001—Health Economics
This course focuses on the application of economic analysis as it relates to provision of health care and emerging health care trends in the United States and throughout the world. The course also focuses on understanding how health care markets differ from other markets, specifically on the economics of the health care sector and its major players, e.g., the government, insurers, providers, and patients. Economic concepts and tools will be used to analyze the health care system, and to examine implications and issues in health policy. (48-0-3)

PHRM 5021—Population Health and Public Policy
This highly interactive course introduces students to: (1) the fundamental concepts and frameworks used for the study of population health and public policy; (2) the financing and managing of health systems at the local and international levels; and (3) the formulation and analysis of public health policies. The course will emphasize the intersection of public health and the determinant of drug use and pharmacy-related policies. Students will have the opportunity to analyze and critically evaluate existing health policies, public health actions, and reforms. Students are expected to contribute and participate in the discussion of current research, case studies, and policies. Student learning will be assessed through oral exams, written assignments, presentations, and an analytical paper. This course will provide skills for the conceptualization of research projects addressing current health issues related to pharmacy. (48-0-3)

PHRM 5810—Knowledge Skills for the Health Care Environment
This course provides skills and tools to help students be successful. These include study skills, time management, communication, teamwork, and active learning. Course materials and activities challenge students to connect theory to practice, enhancing skills through the use of reflective exercise, discussion boards, group activities, and student presentations. (32-0-2)

PHRM 5820—Biochemical Basis of Drug Therapy
This course focuses on the structure and function of vitamins, carbohydrates, proteins, hormones, nucleic acids, and lipids, as well as bioenergetics and major catabolic pathways at the cellular level. It establishes the biochemical basis for cell structure and emphasizes an integrated approach to the understanding of cellular metabolism; provides a biochemical, genetic, and molecular basis for understanding disease and drug functioning; and examines the mechanisms for genetic information flow in prokaryotic and eukaryotic cells. (48-0-3)

PHRM 5830—Fundamentals of Pharmacodynamics
This course applies the concepts of organic chemistry to understand drug action at the molecular level. It introduces students to basic pharmacological principles that explain drug effects as they pertain to mechanisms of action and drug disposition into different organs and tissues. In addition, it describes drug actions at physiological receptors, focusing on compounds that act on the autonomic nervous system. (32-0-2)

PHRM 5840—Drug Medication and Society: History and Current Issues
This course surveys the development of society’s drug utilization practices as medication throughout history, from ancient application of medicinal substances for healing purposes to modern medicinal compounds. Cultural, economic, political, and religious issues affecting drug medication practices are discussed. Current topics pertaining to the discovery, adaptation, production, distribution, and consequences of drug medication are explored. (32-0-2)
PHRM 5871—Evidence-Based Practice I
This is the first of a sequence that prepares the student to retrieve, evaluate, and use medical and scientific literature and other drug information resources. It is designed to prepare students to apply drug information skills for the delivery of patient-centered care, using evidence-based principles to improve outcomes. Students learn the strengths and weaknesses of the various references and how to apply their use in practice. Active learning experiences include retrieving scientific literature, utilizing electronic resources, performing literature searches, and formulating responses to basic drug information requests. (16-0-1)

PHRM 5921—Individualized Drug Therapy
This course explores the individualization of drug therapy. It provides students with the foundation in pharmacokinetic concepts and application. The principles involved in drug absorption, distribution, metabolism, and elimination in the human body are discussed and mechanisms and rates of these processes are studied. The influence of physiologic and biochemical process on the fate of drugs in the body are explored and pharmacokinetic principles are applied in the therapeutic monitoring of drugs. This course also provides students with a foundation on pharmacogenomic concepts. (64-0-4)

PHRM 5940—Regulatory Affairs
This course provides an exposure to the important and critical area of drug regulatory matters. It describes the role of federal laws, regulations, and the structure and operation of the U.S. Food and Drug Administration. It also compares similar agencies in other countries. (32-0-2)

PHRM 5972—Evidence-Based Practice II
This is the second of a sequence that prepares the student to retrieve, evaluate, and use medical and scientific literature and other drug information resources. This course is designed to expose students to the fundamentals of research design and methodology and applied biostatical data analysis. It focuses on familiarizing students with general methodologic approaches used in experimental design, statistical analysis of data, investigator’s responsibilities, ethical considerations in research, protection of human subjects, and Institutional Review Boards (IRBs). (32-0-2)

PHRM 5990—Integrative Capstone in Pharmaceutical Affairs
This course provides students with the opportunity to integrate and apply concepts and skills acquired throughout the M.S. in Pharmaceutical Affairs program to solve a pharmacy-related health issue. Students will select a current health challenge for analytical purposes and determine actions for its solution. They are expected to collectively gather data and information to evaluate and discuss the problem from different perspectives, using ideas and frameworks covered in previous courses, such as population health, health economics, bioethics, marketing, and regulatory affairs. Students will present their project at the end of the semester. (96-0-6)
Master of Science (M.S.) in Pharmaceutical Sciences

The M.S. in Pharmaceutical Sciences is a two-year graduate program with one of three unique areas of emphasis: 1) Molecular Medicine and Pharmacogenomics—centering on drug discovery principles, 2) Drug Development (Pharmaceutics)—focusing on drug delivery to the desired target, or 3) Social and Administrative Pharmacy—concerned with the interface between pharmacy and society (pharmacy outcomes).

The degree will prepare students for positions in academia or technological or managerial positions in the pharmaceutical industry, contract research organizations, managed care organizations, health care systems, and government agencies. Upon successful completion of the degree, students are prepared for further study in a doctoral program, medicine, or a health-related discipline.

Admissions Requirements
Candidates who have an earned degree in a field related to the sciences will be considered for the M.S. in Pharmaceutical Sciences Program. The college takes a holistic approach in the evaluation of applications, looking beyond grades and test scores, but also focusing on work, extracurricular activities, and life experiences.

Those students applying to the Drug Development (Pharmaceutics) or the Molecular Medicine and Pharmacogenomics sequences are required to have earned a Bachelor of Science degree in pharmacy, chemistry, biology, or a related scientific area. Students applying to the Social and Administrative Pharmacy sequence are required to have earned a Bachelor of Science degree in pharmacy, economics, statistics, public health, health services research, or other related fields.

1. Applicants must have earned a baccalaureate degree from a regionally accredited institution of higher education.
2. Applicants must have earned a minimum cumulative GPA of 3.0 on a 4.0 scale.
3. Applicants must submit official scores from the Graduate Record Examination (GRE) general test (verbal reasoning, quantitative reasoning, and analytical writing).
   • Scores must be less than five years old at time of application.
   • For more information, please visit gre.org.
4. Three letters of reference from professors or supervisors in the applicant’s field of study must be submitted.

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1. Apply to PharmGrad electronically through Pharmgrad.org.
   • Deadline to apply is May 3.
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   • Official transcripts from all colleges and universities attended (submitted directly to PharmGrad by the college or university and/or foreign credential evaluation service)
   • Three letters of reference
   • Official GRE scores
   • Proof of English proficiency (required for nonnative English speakers)
3. Submit a nonrefundable application fee of $50 (U.S.) and a supplemental application (received online via an emailed link that is sent once NSU has applicant’s PharmGrad application). The deadline for the supplemental application is June 15.

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• International English Language Testing System (IELTS)*: minimum score of 6.0 on the test module (ielts.org)
* TOEFL and IELTS scores may be no more than two years old at the time of the interview.

Candidates who have taken college courses in the United States may also prove English proficiency by completing, with a minimum GPA of 2.0 on a 4.0 scale, two college-level English composition courses at a regionally accredited college or university in the United States.

All application materials and foreign evaluations must be mailed to

Nova Southeastern University
Enrollment Processing Services (EPS)
College of Pharmacy Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

Interview Process
A personal interview is part of the admissions process; however, being interviewed is not a guarantee of admission. Upon receipt of a completed application, a review will be made to determine...
if the applicant will be granted an interview. Not all applicants will be granted an interview. The Office of Admissions will notify selected applicants for interviews.

**Notice of Acceptance**

Notice of acceptance or other action by the Committee on Admissions will be on a “rolling” or periodic schedule. Early completion of the application process is in the best interest of the applicant. Admission to the program is contingent upon successful completion of all prerequisite coursework prior to the first day of the semester. Proof of successful completion is required.

**Transcripts**

Upon acceptance, final and official transcripts from all colleges and universities attended, and/or final and official documents, must be received within 90 calendar days from the start of the semester. If not received by that time, the student will not be allowed to continue class attendance. Financial aid will not be disbursed to a student until all the required documents are received and the student is fully admitted.

**Foreign Coursework**

Coursework taken at foreign institutions must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.

- World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org
- Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org
- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, WI 53203-3470
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University.

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**Program Requirements**

All students must purchase an iPad for assignments and assessments and have an active account with an Internet service provider. In addition, students must have ongoing access to a computer capable of connecting to the Internet and playing streaming video files. Online course notes and discussions will be provided to the student through an online course management system. NSU will provide access to email, online databases, and library resources.

**Tuition: M.S. in Pharmaceutical Sciences Program**

All tuition and fees are subject to change by the board of trustees without notice.

Tuition for 2020–2021 will be posted online at pharmacy.nova.edu.

**Fees and Deposit—All Programs**

- Acceptance and Preregistration Deposit—$1,000. This deposit is required to reserve the accepted applicant’s place in the entering first-year class. The deposit will be deducted from the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is due within three weeks of an applicant’s acceptance.
- Health Professions Division General Access Fee—$145 per annum.
- NSU Student Services Fee—$1,500 per annum.
- Registration Fee—$30 per semester.
- Late Payment Fee—$100. All tuition and fees not paid within 30 days after the start of the semester will incur this fee.
- College of Pharmacy Fees—Additional fees will be incurred for college-approved activities. These fees are estimated at $1,000 over the course of the program.

The first semester’s tuition and fees, less the $1,000 deposit are due on or before the first day of classes. Tuition for each subsequent semester is due on or before the first day of classes. Students will not be permitted to register or attend classes until their financial obligations have been met. The financial ability of applicants to complete their training at the college is important. Applicants should have specific plans for financing their professional education. This should include tuition, fees, iPads, computer-related expenses, health insurance, books, printing, required equipment, and living and other miscellaneous expenses.

Each student is required to carry adequate personal medical and hospital insurance. For more information about NSU’s required health insurance, visit the website at nova.edu/bursar/health-insurance.
Course of Study

The two-year degree program will provide a strong science foundation for those interested in doctoral-level, graduate programs in pharmacy and other science fields. Students will be better prepared to further pursue the doctoral-level career paths currently being offered nationwide.

Some courses may be offered in a BlendFlex model, which includes synchronous and asynchronous online learning, as well as on-campus learning and videoconferencing. Some courses will be combined with existing graduate courses, while others will be stand-alone, master’s degree-specific courses. M.S. students may be assessed differently when appropriate. Each sequence has courses and emphasis specific to its discipline.

International/Student Visa Information

It is the applicant’s responsibility to contact the Office of International Students and Scholars for information on immigration regulations and student visa requirements at Nova Southeastern University.

Graduation Requirements

To receive a degree, students must fulfill the following requirements:

- be of good moral character
- successfully complete all curricular requirements and assessments with a minimum cumulative GPA of 3.0 on a 4.0 scale within four academic years
- satisfactorily meet all financial, library, and university obligations (to receive credentials)

Curriculum Outlines

The curriculum is currently under review and will be revised as needed. These courses are representative of the overall requirements of the program at the time of publication and are subject to change. Updates to the curriculum will be posted online at pharmacy.nova.edu.

Molecular Medicine and Pharmacogenomics

<table>
<thead>
<tr>
<th>First and Second Years</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Advanced Pharmacogenomics and Molecular Medicine</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Physical Pharmacy</td>
<td>3</td>
</tr>
<tr>
<td>Bioethics: Principles of Life Science Research*</td>
<td>3</td>
</tr>
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</tr>
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<td>3</td>
</tr>
<tr>
<td>Graduate Seminar**</td>
<td>4</td>
</tr>
<tr>
<td>Molecular and Cellular Pharmacodynamics</td>
<td>3</td>
</tr>
<tr>
<td>Pharmaceutical Sciences Research Design</td>
<td>1</td>
</tr>
<tr>
<td>Research Project</td>
<td>4</td>
</tr>
<tr>
<td>Research Techniques and Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>Scientific Writing*</td>
<td>1</td>
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<tr>
<td>Electives</td>
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Total Credits 37
**Drug Development (Pharmaceutics)**

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<tr>
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**Social and Administrative Pharmacy**

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<td>Graduate Seminar**</td>
<td>4</td>
</tr>
<tr>
<td>Health Economics</td>
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<tr>
<td>Pharmacoeconomics</td>
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</tr>
<tr>
<td>Pharmacy Management and Finance</td>
<td>3</td>
</tr>
<tr>
<td>Population Health and Public Policy</td>
<td>3</td>
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<td>1</td>
</tr>
<tr>
<td>Social Measurement and Techniques</td>
<td>3</td>
</tr>
<tr>
<td>Theories of Health-Seeking Behavior</td>
<td>3</td>
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<tr>
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</tr>
</tbody>
</table>

*HPD core courses  
**repeatable course
Master of Science (M.S.) in Pharmaceutical Sciences Course Descriptions

**PHRM (Master’s Degree) and HPD Core Classes**

Note: Listed at the end of each entry are lecture hours, laboratory hours, and credit hours.

**HPH 7210—Bioethics: Principles of Life Science Research**
This course provides a structured approach for identifying, analyzing, and resolving ethical issues in medicine and the life sciences. Students analyze and discuss traditional philosophical theories regarding the nature of moral good. They will apply these theories to critical issues and selected case studies involving experiments with human subjects, organ transplantation, in vitro fertilization, the use of animals in research, the collection and publication of research data, conflicts of interest, and other topics of current concern. Students will explore the personal values, professional standards, and institutional guidelines that define the roles and responsibilities of the health care practitioner and researcher. (48-0-3)

**HPH 7610—Scientific Writing**
This course exposes students to, and provides practice in, various types of writing skills necessary for scientists and researchers, including research logs, internal reports, technical reports, abstracts, presentations and journal manuscripts, dissertation formats, and grant applications. Students are exposed to various search databases, style manuals, and publication outlets. (16-0-1)

**PHRM 5001—Health Economics**
This course will introduce students to the economic analysis of health care markets and the production of health. This course covers a variety of topics including the determinants of health; the supply of, and demand for, health care services; the impact of insurance on the demand for health care services; the role of government in health care markets; the market for pharmaceuticals; and the economic evaluation of health care programs. (48-0-3)

**PHRM 5030—Biostatistics**
This course introduces methods for presenting data in summary form, analyzing data, and designing experiments. It emphasizes the application of statistical ideas and methods to the analysis and interpretation of experiments and comparative data. Students will be able to assess a situation involving data analysis, state the null and alternative hypotheses proposed, decide on the correct statistical procedure to test the null hypothesis and the assumptions of the test used, calculate the statistic, assess its statistical significance, and interpret the data in light of the calculated results. (48-0-3)

**PHRM 5004—Advanced Physical Pharmacy**
This course presents application of underlying physical principles to formulate and to develop various pharmaceutical products. It describes physical principles in both solid and non-solid states. Students will learn how basic physical principles are applied in development of current and novel pharmaceutical solids, semi-solids, homogeneous, and heterogeneous systems. This course describes the importance, properties, and applications of different polymer systems, new drug carriers, and rheology modifiers in developing current and novel dosage forms. Drug stability and solubility and approaches to enhance the solubility of the poorly soluble drugs will also be discussed. (48-0-3)

**PHRM 5012—Clinical Drug Development: Advanced Pharmacokinetics and Biopharmaceutics**
This course deals with the principles that explain the processes of absorption, distribution, and elimination of drugs. The advances in pharmacokinetic modeling, compartmental analysis, model-independent methods, single and multiple dosing, protein binding, metabolite kinetics, interspecies scaling to translate animal data to humans, effect of disease states, and data analysis using relevant software will be discussed, as will applying the principles of biopharmaceutics and pharmacokinetics to the design of controlled release and targeted drug delivery systems. Emphasis is on bioequivalence and bioavailability of traditional pharmaceutical dosage forms and novel drug delivery systems including the assessment of biosimilars. (48-0-3)

**PHRM 5014—Molecular and Cellular Pharmacodynamics**
This course studies the considerations in operating and regulating cellular processes by manipulating receptors for therapeutic advantage through coupled signaling pathways. Recent developments in this technique, as it applies to the treatment of disease, will be presented. (48-0-3)

**PHRM 5020—Advanced Pharmacogenomics and Molecular Medicine**
This course is designed to educate students with an in-depth knowledge and understanding of the cellular and molecular bases that have evolved as the basis of human diseases. The course offers the contemporary molecular biological concepts to apply toward understanding molecular bases of individual variation, its application to drug response, and possible new interventions. Students will be able to understand and apply the knowledge of modern molecular biological techniques for diagnostics and detection of infection; gene defects; and fingerprinting; transgenesis; biopharming; immunotherapies; and the ever-developing field of gene therapy and regenerative medicine.
PHRM 5021—Population Health and Public Policy
This graduate-level, interactive course introduces students to: (1) the fundamental concepts and frameworks used for the study of population health and public policy; (2) the financing and managing of health systems at the local and international levels; and (3) the formulation and analysis of public health policies. The course will emphasize the intersection of public health and the determinants of drug use and pharmacy-related policies. Students will have the opportunity to analyze and critically evaluate existing health policies, public health actions; and reforms. The course will be highly interactive. Students are expected to contribute and participate in the discussion of current research, case studies, and policies. Student learning will be assessed through oral exams, written assignments, presentations, and an analytical paper. This course will provide skills for the conceptualization of research projects addressing current health issues related to pharmacy. (48-0-3)

PHRM 5025—Pharmacy Management and Finance
This course provides an overview of management theories, human resources, and financial management applied to pharmacy and health care institution operations. Elements of supervision, management, and leadership are discussed in an effort to help students develop the skills needed to operate a pharmacy effectively. Also covered are finance topics such as capital costs, profit analysis, cost structures, budgeting, payment for services rendered, and accounting. (48-0-3)

PHRM 5060—Pharmaceutical Sciences Research Design
This course provides an analysis of the study designs most commonly employed in experimental research with emphasis in basic and clinical pharmacological research. Upon completion of the course, students will understand the considerations that go into selecting qualitative, quantitative, and mixed methods of research design. The course prepares students to select the most appropriate design to better answer a specific research question, as well as to understand the strengths and limitations of such a design. (16-0-1)

PHRM 5203—Social Measurement and Techniques
This course introduces students to the concepts of advanced measurement theory and methods used in research. It acquaints students with cutting-edge models in measurement theory and methods, as well as with the application of computer software with which to implement those methodologies. After completing the course, students should be prepared to begin working on advanced applications of measurement in the sociobehavioral sciences. (48-0-3)

PHRM 5204—Research Techniques and Instrumentation
This course will provide students with a broad overview of technologies and instruments used in pharmaceutical sciences research. Topics covered include the fundamentals of spectroscopy and chromatography, basic protein and molecular biology techniques, and others. The course will allow students to read the literature with greater understanding as methodological terminology begins to have more meaning. (48-0-3)

PHRM 5209—Pharmacoeconomics
This course provides an overview of pharmacoeconomics and some of the health outcome measurements that apply to health/pharmacy-related disciplines. The course is designed to focus on methodological principles of pharmacoeconomics analyses and the strengths and weaknesses of specific methods. Practical examples for successful implementation of these concepts are discussed. (48-0-3)

PHRM 5211—Theories of Health-Seeking Behavior
This course covers social and behavioral theories related to medication use, health services utilization, provider-patient communication, and other health-seeking behaviors. Students will examine and apply select health behavior theories at the individual, interpersonal, and community level. They will examine research conducted using the theories, with emphasis in the pharmacy field. Students are expected to apply theories in defining research questions, research design, and data analysis. (48-0-3)

PHRM 5229—Product Development and Industrial Pharmacy
This course provides the student with the essential information about the various stages of the new drug approval process and drug development, including pre-formulation, comparison studies, suitability of pharmaceutical excipients, and formulation. Additionally, it provides the student with the principles of pharmaceutical processing, such as filtration, milling, mixing, drying, and compression of pharmaceutical solids. The course also deals with the production and quality control of tablets, capsules, liquid dosage forms, semi-solid dosage forms, and sterile products. Coverage includes the science of packaging materials, production management, quality assurance, and regulations in the pharmaceutical industry, including validation, good manufacturing practice, and FDA guidelines for stability of pharmaceutical dosage forms. (64-0-4)
PHRM 5700—Research Project
Under the direction of faculty members, students will craft a mentored research project that draws on the educational experiences of their specialized track and electives. This research is provided to develop increased independence for students, while still maintaining the structure and faculty member oversight necessary to ensure that learning goals are met. The research may be a combination of classroom, laboratory, field, or in silico study. This supervised experience will allow students to work on projects that complement classroom work in the context of a structured course. The project will be designed to include practical instruction on evidence-based study development, data collection, and scientific writing. (64-4-0)

PHRM 5801—Graduate Seminar
This course will equip students with the necessary tools to prepare and present lucid reports on their own research, as well as the research of others. The course will consist of weekly lectures that will be required of all graduate students throughout their course of study and research. Speakers will include faculty members and guests, as well as students presenting aspects of their research. (16-0-1)

M.S. in Pharmaceutical Sciences Elective Courses

PHRE 5023—Pharmaceutical Marketing
This course is intended to provide graduate students with an in-depth understanding of the global development and marketing of pharmaceuticals, with an emphasis on the U.S. system. (48-0-3)

PHRE 5108—Current Topics in Pharmaceutical Sciences
This course covers special topics selected by faculty members and visiting scientists. The goal of each topic is to provide the student with an understanding of, and an appreciation for, current problems and procedures underlying the pharmaceutical sciences discipline. (48-0-3)

PHRE 5207—Secondary Data Analysis of Pharmacy-Related Sources
This course guides the student through the intricacies of utilizing secondary data for research. The emphasis is on utilizing sources of previously collected data that deal with pharmacy-related issues, including administrative, sociobehavioral, and clinical themes. Methodological issues arising from the various analytic approaches (e.g., meta-analysis, case-control analysis, content analysis) will be identified and discussed. (48-0-3)

PHRE 5216—Polymers
This course presents basic concepts and properties of polymers as related to formulation, development, and design of pharmaceutical dosage forms and products. It describes how basic principles of polymers—structural, physical, chemical, and mechanical properties—can be utilized in modifying and developing current and novel pharmaceutical products. The course highlights important areas of polymer applications in controlled drug delivery, targeted drug delivery, tissue engineering, nanotechnology, and medical devices. (48-0-3)

PHRE 5222—Applied Pharmacology
Students will use pharmacological principles to study the effects of therapeutic agents on the central nervous system, the endocrine system, the gastrointestinal system, blood, and blood-forming organs. It will address the rationale for the use of therapeutic agents; their effects on cells, tissues, organ systems, and patients; the mechanisms underlying these effects; the therapeutic value of specific drug effects; the limitation of the use of the agents; and the adverse effects of drugs. (48-0-3)

PHRE 5224—Drugs of Abuse
This course covers types of substances abused, methods and routes of administration, the pertinent toxicokinetics, the pharmacological/toxicological mechanisms, and the clinical manifestations of drug abuse. Treatment of intoxication and withdrawal, societal impact of drug abuse, legal implications, and current trends of substance abuse are also discussed. (48-0-3)

PHRE 5228—Principles of Pharmaceutical Analysis
This course explores the fundamentals of pharmaceutical analysis. This includes the principles of pharmaceutical analysis techniques and their applications in the pharmaceutical research and development (both academic and industrial). It is crafted to provide students with a solid conceptual ground to understand how a particular analytical technique works, to enable students to critically evaluate instrumentation choices when needed, and to allow them to select the appropriate tools. (48-0-3)

PHRE 5391—The Nuclear Pharmacy Experience
This course covers and explains what a nuclear pharmacy is and the responsibilities, activities, and knowledge required in order to function as a nuclear pharmacist. It places emphasis on radiopharmaceuticals (radioactive medication), their mechanisms of action, dose ranges, methods of compounding, and ultimate role in the diagnosis and treatment of diseases. (32-0-2)
PHRE 5412—Current Topics in Pharmacy Practice
Topics on current issues, procedures, and policies related to pharmacy practice are discussed. Topics can vary from semester to semester. (48-0-3)

PHRE 5516—Health Disparities in Chronic Diseases
This course will present the main causes and pathways to health disparities in the United States. It will focus on chronic diseases, such as diabetes, cancer, and cardiovascular diseases. Emphasis will be given to disparities associated to access to medication, access to pharmacy services, and adherence. Students will learn about pharmacy-led interventions aimed at reducing health disparities. They will be expected to use epidemiological data to study the disparities and to formulate recommendation to the pharmacy field. Students will be assessed through hands-on structured assignments. (48-0-3)

PHRE 5702—Introduction to Research Project
In this course, M.S. students work under the supervision of one or more faculty members on a research project in pharmaceutical sciences. Students are involved in planning and executing an approved research project at the graduate level using basic techniques of scientific research. Students will be awarded three or four semester credits on the basis of 48 laboratory hours per credit hour. (0-[144–192]-[3–4])

PHRE 5999—Research in the Pharmaceutical Sciences
In this course, students work under the direction/supervision of one or more faculty members in a research laboratory. Students are involved in planning and executing an approved research project using basic techniques of scientific research. Students will be awarded 3 or 4 semester credits on the basis of 48 laboratory hours per credit. (0-[144–192]-[3–4])
Doctor of Philosophy (Ph.D.) in Pharmaceutical Sciences

Admissions Requirements
Candidates with degrees in fields related to the sciences will be considered for the Ph.D. in Pharmaceutical Sciences program. The College of Pharmacy takes a holistic approach in the evaluation of applications, looking beyond grades and test scores, but also focusing on work, extracurricular activities, and life experiences. Students in the Ph.D. program are eligible to apply for a concurrent degree in the M.S. in Pharmaceutical Sciences program.

Those students applying to the Drug Development (Pharmaceutics) or the Molecular Medicine and Pharmacogenomics sequences are required to have earned a Bachelor of Science degree in pharmacy, chemistry, biology, or a related scientific area. Students applying to the Social and Administrative Pharmacy sequence are required to have earned a Bachelor of Science degree in pharmacy, economics, statistics, public health, health services research, or other related fields.

1. Applicants must have earned a baccalaureate degree from a regionally accredited institution of higher education.
2. Applicants must have earned a minimum cumulative GPA of 3.0 on a 4.0 scale.
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• Health Professions Division General Access Fee—$145 per annum.

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Nova Southeastern University
Attention: Office of International Students and Scholars
3301 College Avenue
Fort Lauderdale, FL 33314-7796
(954) 262-7240
800-541-6682, ext. 27240
Fax: (954) 262-3846
Email: intl@nsu.nova.edu
nova.edu/internationalaffairs/students

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Upon acceptance, final and official transcripts from all colleges and universities attended, and/or final and official documents, must be received within 90 calendar days from the start of the semester. If not received by that time, the student will not be allowed to continue class attendance. Financial aid will not be distributed to a student until all the required documents are received and the student is fully admitted.

Foreign Coursework

Coursework taken at foreign institutions must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.

• World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org

• Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org

• Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, WI 53203-3470
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University.

All admissions materials and foreign evaluations must be mailed to

Nova Southeastern University
Enrollment Processing Service
3301 College Avenue
P.O. Box 299000
Fort Lauderdale, FL 33329-9905

Tuition: Ph.D. Program

All tuition and fees are subject to change by the board of trustees without notice.

Annual tuition for 2020–2021 will be posted online at pharmacy.nova.edu.
Graduation Requirements
To receive a Ph.D. degree, students must fulfill the following requirements:

• be of good moral character
• successfully complete the requirements of the curriculum within seven academic years with a minimum cumulative GPA of 3.0 on a 4.0 scale
• have one first author publication (accepted, in-press, or published)
• satisfactorily meet all financial, library, and university obligations (to receive credentials)

Program Description
Entering pharmacy graduate students must select one of three sequences to focus their graduate studies upon: Social and Administrative Pharmacy, Drug Development (Pharmaceutics), or Molecular Medicine and Pharmacogenomics. Research topics available to students are consistent with the expertise of faculty members in the College of Pharmacy (COP) at NSU. In addition, the Ph.D. program is consistent with the criteria for accreditation set by the Commission on Colleges of the Southern Association of Colleges and Schools.

Social and Administrative Pharmacy Sequence

Overview
The Social and Administrative Pharmacy sequence focuses on research skills and supporting coursework that address the dynamic and complex nature of the provision of pharmacy services. Students who select this sequence are expected to conduct their dissertation research in one of two tracks: 1) Sociobehavioral and Cultural Pharmacy or 2) Pharmacoeconomics and Outcomes. Students who pursue either track in this sequence are advised by faculty members in the Department of Sociobehavioral and Administrative Pharmacy, a group of researchers with expertise in pharmacoeconomics, health disparities and vulnerable populations, cultural competency, development and implementation of sustainable pharmacy services, patients’ decision making, pharmacy marketing, and outcomes research.

Course of Study
Students are required to take a minimum of 60 credits, at least 36 of which must be in didactic coursework. A minimum cumulative GPA of 3.0 must be maintained. Coursework aimed at filling academic gaps in a student’s background will not count toward program requirements. Both a written or comprehensive and an oral qualifying examination are required to advance to candidacy. Research, culminating in a successfully defended dissertation, is required of all students in their respective areas. Some courses may be offered in a BlendFlex model, which includes synchronous and asynchronous online learning, as well as on-campus learning and videoconferencing.

At the completion of this course of study and research, students will

• demonstrate the knowledge base expected at the Ph.D. level in their specialty
• design and conduct independent research that adds to the understanding of their specialty
• prepare and defend rational and structured proposals seeking support for their research
• effectively communicate the results of their own research
• be competitive for careers in academia, industry, government, or regulatory positions
# Social and Administrative Pharmacy Curriculum Sequence

The curriculum may be revised as needed. These courses are representative of the overall requirements of the program at the time of publication and are subject to change. Updates to the curriculum will be posted online at [pharmacy.nova.edu](http://pharmacy.nova.edu).

## First and Second Years

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Advanced Biostatistics I*</td>
<td>3</td>
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<tr>
<td>Advanced Biostatistics II*</td>
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<tr>
<td>Advanced Quantitative Methods</td>
<td>3</td>
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<tr>
<td>Bioethics: Principles of Life Science Research*</td>
<td>3</td>
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<tr>
<td>Graduate Research**</td>
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<td>Graduate Seminar**</td>
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<tr>
<td>Health Economics</td>
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<td>Pharmaceutical Marketing</td>
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<td>Pharmacoeconomics</td>
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<td>Pharmacy Management and Finance</td>
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<td>Population Health and Public Policy</td>
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<tr>
<td>Research Design*</td>
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<td>Research Funding and Proposal Development*</td>
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<tr>
<td>Scientific Writing*</td>
<td>1</td>
</tr>
<tr>
<td>Social Measurement and Techniques</td>
<td>3</td>
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<tr>
<td>Theories of Health-Seeking Behavior</td>
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<td>Elective(s)</td>
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<th>Course</th>
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<tbody>
<tr>
<td>Graduate Research</td>
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<tr>
<td>Dissertation Research**</td>
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<td>Graduate Seminar**</td>
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<td>Elective</td>
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## Fourth Year***

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<th>Course</th>
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<tr>
<td>Graduate Seminar**</td>
<td>2</td>
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<tr>
<td>Dissertation Research**</td>
<td>16</td>
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</tbody>
</table>

*HPD core course

**repeatable course

***Additional years may be required to complete the dissertation research. The curriculum for subsequent years is identical to the fourth year (maximum seven years allowed for Ph.D. completion).

**Notes:** • Qualifying exams will commence during the summer semester of the second year.
• Graduation from the program requires the preparation and successful defense of a dissertation.
Drug Development (Pharmaceutics) Sequence

Overview
The Drug Development (Pharmaceutics) sequence emphasizes the coursework, laboratory, and research skills that are integral to the theory and development of drug formulations. Students who pursue this sequence are advised by faculty members in the department of pharmaceutical sciences, a group with expertise in pharmaceutical-related disciplines. Particular areas of expertise include new dosage form design, advanced drug formulations, and tailor-made delivery technologies.

Course of Study
Students are required to take a minimum of 60 credits, at least 36 of which must be in didactic coursework. A minimum cumulative GPA of 3.0 must be maintained. Coursework aimed at filling academic gaps in a student’s background will not count toward program requirements. Both a written or comprehensive and an oral qualifying examination are required to advance to candidacy. Research, culminating in a successfully defended dissertation, is required of all students in their respective areas. Some courses may be offered in a BlendFlex model, which includes synchronous and asynchronous online learning, as well as on-campus learning and videoconferencing.

At the completion of this course of study and research, students will:
- demonstrate the knowledge base expected at the Ph.D. level in their specialty
- design and conduct independent research that adds to the understanding of their specialty
- prepare and defend rational and structured proposals seeking support for their research
- effectively communicate the results of their own research
- be competitive for careers in academia, industry, government, or regulatory positions

Drug Development (Pharmaceutics) Curriculum Sequence
The curriculum may be revised as needed. These courses are representative of the overall requirements of the program at the time of publication and are subject to change. Updates to the curriculum will be posted online at pharmacy.nova.edu.

<table>
<thead>
<tr>
<th>First and Second Years</th>
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<tbody>
<tr>
<td>Biostatistics</td>
<td>3</td>
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<tr>
<td>Advanced Pharmacokinetics and Biopharmaceutics</td>
<td>3</td>
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<tr>
<td>Advanced Physical Pharmacy</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Topics in Pharmaceutical Sciences</td>
<td>1</td>
</tr>
<tr>
<td>Bioethics: Principles of Life Science Research*</td>
<td>3</td>
</tr>
<tr>
<td>Graduate Research**</td>
<td>18</td>
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<tr>
<td>Graduate Seminar**</td>
<td>4</td>
</tr>
<tr>
<td>Pharmaceutical Sciences Research Design</td>
<td>3</td>
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<tr>
<td>Product Development and Industrial Pharmacy</td>
<td>4</td>
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<tr>
<td>Research Funding and Proposal Development*</td>
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<tr>
<td>Research/Internship</td>
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<td>Research Techniques and Instrumentation</td>
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<td>Scientific Writing*</td>
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<td>Elective(s)</td>
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### Third Year

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<tbody>
<tr>
<td>Advanced Topics in Pharmaceutical Sciences**</td>
<td>3</td>
</tr>
<tr>
<td>Dissertation Research**</td>
<td>24</td>
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<tr>
<td>Graduate Seminar**</td>
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### Fourth Year***

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</table>

*HPD core course  
**repeateable course  
***Additional years may be required to complete the dissertation research. The curriculum for subsequent years is identical to the fourth year (maximum seven years allowed for Ph.D. completion).

Note: * Graduation from the program requires the preparation and successful defense of a dissertation.

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### Molecular Medicine and Pharmacogenomics Sequence

#### Overview

The Molecular Medicine and Pharmacogenomics sequence emphasizes coursework, laboratory, and literature research skills that are integral to elucidation of the mechanism of action of drugs and the extent and characteristics of those actions. Students who pursue this sequence will be primarily under the tutelage of faculty members in the department of pharmaceutical sciences, a group with expertise in pharmacology, pharmacogenomics, toxicology, and biochemistry. Particular areas of expertise include cardiovascular pharmacology, neuropharmacology, and cancer pharmacology.

#### Course of Study

Students are required to take a minimum of 60 credits, at least 36 of which must be in didactic coursework. A minimum cumulative GPA of 3.0 must be maintained. Coursework aimed at filling academic gaps in a student’s background will not count toward program requirements. Both a written or comprehensive and an oral qualifying examination are required to advance to candidacy. Research, culminating in a successfully defended dissertation, is required of all students in their respective areas. Some courses may be offered in a BlendFlex model, which includes synchronous and asynchronous online learning, as well as on-campus learning and videoconferencing.

At the completion of this course of study and research, students will

- demonstrate the knowledge base expected at the Ph.D. level in their specialty
- design and conduct independent research that adds to the understanding of their specialty
- prepare and defend rational and structured proposals seeking support for their research
- effectively communicate the results of their own research
- be competitive for careers in academia, industry, government, or regulatory positions
## Molecular Medicine and Pharmacogenomics Curriculum Sequence

The curriculum may be revised to better meet the demands of the profession. These courses are representative of the overall requirements of the program at the time of publication and are subject to change. Updates to the curriculum will be posted online at [pharmacy.nova.edu](http://pharmacy.nova.edu).

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<tr>
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<tr>
<td>Journal Club</td>
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<tr>
<td>Molecular and Cellular Pharmacodynamics</td>
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<tr>
<td>Research Design</td>
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*HPD core course

**Repeatable course

***Additional years may be required to complete the dissertation research. The curriculum for subsequent years is identical to the fourth year (maximum seven years allowed for Ph.D. completion).

Note: • Graduation from the program requires the preparation and successful defense of a dissertation.
Ph.D. Program Course Descriptions

PHRP (Ph.D. Degree) and HPD Core Classes

Note: Listed at the end of each entry are lecture hours, laboratory hours, and credit hours.

HPH 7210—Bioethics: Principles of Life Science Research
This course provides a structured approach for identifying, analyzing, and resolving ethical issues in medicine and the life sciences. Students analyze and discuss traditional philosophical theories regarding the nature of moral good. They will apply these theories to critical issues and selected case studies involving experiments with human subjects, organ transplantation, in vitro fertilization, the use of animals in research, the collection and publication of research data, conflicts of interest, and other topics of current concern. Students will explore the personal values, professional standards, and institutional guidelines that define the roles and responsibilities of the health care practitioner and researcher. (48-0-3)

HPH 7320—Advanced Biostatistics I
This course is the first of a two-course sequence focusing on inferential statistics for students interested in conducting quantitative research in the health sciences. It enables students to gather data and apply experimental design models toward solving practical problems and improving the efficiency of formulating and providing health care services. (48-0-3)

HPH 7330—Advanced Biostatistics II
This course is the second of a two-course sequence focusing on inferential statistics for students interested in conducting quantitative research in the health sciences. It enables students to gather data and apply experimental design models toward solving practical problems and improving the efficiency of formulating and providing health care services. (48-0-3)

HPH 7400—Research Design
This course prepares students to evaluate pharmaceutical procedures and practices from a scientific viewpoint. Students will learn to identify issues requiring additional investigation, and to design research that efficiently and effectively addresses those issues. By the end of the course, the student will prepare a first draft of a research proposal. (48-0-3)

HPH 7610—Scientific Writing
This course exposes students to, and provides practice in, various types of writing skills necessary for scientists and researchers, including research logs, internal reports, technical reports, abstracts, presentations and journal manuscripts, dissertation formats, and grant applications. Students are exposed to various search databases, style manuals, and publication outlets. (46-0-1)

HPH 7620—Research Funding and Proposal Development
This course provides an overview of the process of conceptualizing, developing, writing, and submitting research grant applications to solicit extramural support for research efforts. It will describe the process through which federal grant applications are evaluated and scored and through which funding decisions are made. (16-0-1)

Ph.D. Program Courses

PHRP 8301—Graduate Research
This course introduces students to the fundamental tenets of pharmaceutical sciences research at the graduate level. This course is required each semester until students become degree candidates. Students will work on a one-on-one basis with their faculty mentor to become familiar with the research interests, literature, and laboratory techniques of the mentor. (48-0-3)

PHRP 7001—Health Economics
This course will introduce students to the economic analysis of health care markets and the production of health. This course covers a variety of topics including the determinants of health; the supply of, and demand for, health care services; the impact of insurance on the demand for health care services; the role of government in health care markets; the market for pharmaceuticals; and the economic evaluation of health care programs. This course focuses on the application of economic analysis as it relates to provision of health care and emerging health care trends in the United States and throughout the world. It also focuses on understanding how health care markets differ from other markets, specifically on the economics of the health care sector and its major players (e.g., the government, insurers, providers, and patients). Economic concepts and tools will be used to analyze the health care system and to examine implications and issues in health policy. (48-0-3)

PHRP 7004—Advanced Physical Pharmacy
This course presents application of underlying physical principles to formulate and develop various pharmaceutical products. It describes physical principles in both solid and non-solid states. Students will learn how basic physical principles are applied in development of current and novel pharmaceutical solids, semi-solids, and homogeneous and heterogeneous systems. Moreover, the course describes the importance, properties, and application of different polymer systems, new drug carriers, and rheology modifiers in developing current and novel dosage forms. Drug stability and solubility and approaches to enhance the solubility of poorly soluble drugs will also be discussed. (48-0-3)
This course will apply the principles of organic chemistry, biochemistry, physiology, and pathophysiology to understand drug actions at the receptor, cellular, and systems levels under physiological and pathological conditions. Special emphasis will be placed on students’ understanding of determinants of drug absorption, distribution, physiological receptors, drug-receptor interaction, drug metabolism, and elimination. This course will also focus on the drugs that act on the autonomic nervous system, cardiovascular system, and blood components as well. The rationale for the use of these therapeutic agents; their effects on cells, tissues, organ systems, and patients; the mechanisms underlying these effects; the therapeutic value of specific drug effects; and the adverse effects of the drugs will be addressed as well. (64-0-4)

PHRP 7012—Clinical Drug Development: Advanced Pharmacokinetics and Biopharmaceutics
This course deals with the principles that explain the processes of absorption, distribution, and elimination of drugs. The advances in pharmacokinetic modeling, compartmental analysis, model-independent methods, single and multiple dosing, protein binding, metabolite kinetics, interspecies scaling to translate animal data to humans, effect of disease states, and data analysis using relevant software will be discussed, applying the principles of biopharmaceutics and pharmacokinetics to the design of controlled release and targeted drug delivery systems. Emphasis is on bioequivalence and bioavailability of traditional pharmaceutical dosage forms and novel drug delivery systems, including the assessment of biosimilars. (48-0-3)

PHRP 7020—Experimental Statistics and Informatics
This course provides an overview of the principles of experimental statistics and informatics that are relevant to the experimental design of studies, as well as interpretation and processing of the information garnered from these studies, in the biomedical sciences, but particularly in the area of molecular medicine and pharmacogenomics. (16-0-1)

PHRP 7021—Population Health and Public Policy
This highly interactive course introduces students to: (1) the fundamental concepts and frameworks used for the study of population health and public policy; (2) the financing and managing of health systems at the local and international levels; and (3) the formulation and analysis of public health policies. The course will emphasize the intersection of public health and the determinants of drug use and pharmacy-related policies. Students will analyze and critically evaluate existing health policies, public health actions, and reforms. Students are expected to contribute and participate in the discussion of current research, case studies, and policies. Student learning will be assessed through oral exams, written assignments, presentations, and an analytical paper. This course will provide skills for the conceptualization of research projects addressing current health issues related to pharmacy. (48-0-3)

PHRP 7023—Pharmaceutical Marketing
This course is intended to provide the graduate student with an in-depth understanding of the global development and marketing of pharmaceuticals with an emphasis on the U.S. system. (48-0-3)

PHRP 7025—Pharmacy Management and Finance
This course provides an overview of management theories, human resources, and financial management applied to pharmacy and health care institution operations. Elements of supervision, management, and leadership are discussed in an effort to help students develop the skills needed to operate a pharmacy effectively. Also covered are finance topics such as capital costs, profit analysis, cost structures, budgeting, payment for services rendered, and accounting. (48-0-3)

PHRP 7030—Biostatistics
This course introduces methods for presenting data in summary form, analyzing data, and designing experiments. It emphasizes the application of statistical ideas and methods to the analysis and interpretation of experiments and comparative data. Students will be able to assess a situation involving data analysis, state the null and alternative hypotheses proposed, decide on the correct statistical procedure to test the null hypothesis and the assumptions of the test used, calculate the statistic, assess its statistical significance, and interpret the data in light of the calculated results. (48-0-03)

PHRP 7060—Pharmaceutical Sciences Research Design
The purpose of this course is to provide an analysis of the study designs most commonly employed in experimental research with emphasis in basic and clinical pharmacological research. Completion of the course is expected to enable students to understand the considerations that go into selecting qualitative, quantitative, and mixed methods of research design. The course prepares students to select the most appropriate design to better answer a specific research question, as well as to understand the strengths and limitations of such design. (16-0-1)

PHRP 7114—Molecular and Cellular Pharmacodynamics
This course is a study of the considerations in operating and regulating cellular processes by manipulating receptors for therapeutic advantage through coupled signaling pathways. Recent developments in this technique as it applies to the treatment of disease will be presented. (48-0-3)

PHRP 7203—Social Measurement and Techniques
This course introduces students to the concepts of advanced measurement theory and methods used in research. It acquaints students with cutting-edge models in measurement theory and methods, as well as with the application of
The course offers the contemporary molecular biological bases that have evolved as the basis of human diseases. This course is designed to educate students with an in-depth and molecular medicine analysis.

PHRP 7220—Advanced Pharmacogenomics
This course will examine research conducted using the theories, with emphasis in the pharmacy field. Students are expected to apply theories in defining research questions, in research design, and in data analysis.

PHRP 7221—Theories of Health-Seeking Behavior
This course covers social and behavioral theories related to medication use, health services utilization, provider patient communication, and other health-seeking behaviors. Students will examine and apply select health behavior theories at the individual, interpersonal, and community level. They will examine research conducted using the theories, with emphasis in the pharmacy field. Students are expected to apply theories in defining research questions, in research design, and in data analysis.

PHRP 7222—Advanced Pharmacogenomics and Molecular Medicine
This course is designed to educate students with an in-depth knowledge and understanding of the cellular and molecular bases that have evolved as the basis of human diseases. The course offers the contemporary molecular biological concepts to apply toward understanding molecular bases of individual variation, its application to drug response, and possible new interventions. Students will be able to understand and apply the knowledge of modern molecular biological techniques for diagnostics and detection of infection; gene defects; fingerprinting, transgenesis, biopharming, and immunotherapies; and the ever-developing field of gene therapy and regenerative medicine.

PHRP 7224—Research Techniques and Instrumentation
This course will augment the student’s rotation experiences with a broader view of state-of-the-art technologies and instruments used in pharmaceutical sciences research. It will allow the student to read the literature with greater understanding as methodological terminology begins to have more meaning. It is meant to be a broad survey of technologies, not provide a deep background in any specific technology.

PHRP 7205—Advanced Quantitative Methods
This course exposes students to selected advanced empirical methods useful in social, behavioral, economic, and administrative research and provides them with hands-on experience in conducting empirical research. Within this context, this course covers a variety of topics including linear programming, network models, utility and game theory, panel data methods, instrumental variables methods, and propensity score matching approaches. The course will be presented in an application context. Examples from social, behavioral, economic, and administrative studies will be used to illustrate key ideas and methods. Prerequisites: HPH 7300 and HPH 7310 (48-0-3)

PHRP 7209—Pharmacoeconomics
This course provides an overview of pharmacoeconomics and some of the health outcome measurements that apply to health/pharmacy-related disciplines. The course is designed to focus on methodological principles of pharmacoeconomics analyses and the strengths and weaknesses of specific methods. Practical examples for successful implementation of these concepts are discussed.

PHRP 7226—Journal Club
This course provides graduate students with an opportunity to critically read, interpret, and present research literature. The audience will be fellow peers, postdoctoral students and faculty members. Students will prepare and present high-quality written and oral critiques of peer-reviewed publications in the biomedical field. This course will help students stay abreast of current knowledge in their, as well as their colleagues, fields of research; develop presentation skills; and promote interdisciplinary interactions.

PHRP 7221—Advanced Graduate Research
This research course is design to provide guidance to students through the complete research process, from formulation of a topic to data collection and analysis to completion of a final report. Students are encouraged to present research findings at appropriate professional conferences.

PHRP 7222—Applied Pharmacology
Students will use pharmacological principles to study the effects of therapeutic agents on the central nervous system, the endocrine system, the gastrointestinal system, blood, and blood-forming organs. The course will address the rationale for the use of therapeutic agents; their effects on cells, tissues, organ systems, and patients; the mechanisms underlying these effects; the therapeutic value of specific drug effects; the limitation of the use of the agents; and the adverse effects of drugs.

PHRP 7229—Product Development and Industrial Pharmacy
This course provides the student with the essential information about the various stages of the new drug approval process and drug development, including pre-formulation, comparison studies, suitability of pharmaceutical excipients, and formulation. Additionally, this course provides the student with the principles of pharmaceutical processing, such as filtration, milling, mixing, drying, and compression of pharmaceutical solids. It also deals with the production and quality control of tablets, capsules, liquid dosage forms, semi-solid dosage forms, and sterile products. Coverage includes the science of packaging materials, production management, quality assurance, and regulations in the pharmaceutical industry, including validation, good manufacturing practice, and FDA guidelines for stability of pharmaceutical dosage forms.
innovation is an integral task of a pharmaceutical formulation real case patenting and litigation studies. Since novelty and are expected to learn the basics by reviewing and practicing is focused only on pharmaceutical patents, and the students evaluation, and patent invalidity/infringement/litigations. It laws, patent structure, patent literatures, patenting process/patent This course is intended to teach students the basics of patent PHRE 7035—Pharmaceutical Patents and Litigations Elective Courses PHRP 7216—Pharmaceutical Polymers This course presents basic concepts and properties of polymers as related to formulation, development, and design of pharmaceutical dosage forms and products. It describes how basic principles of polymers—structural, physical, chemical, and mechanical properties—can be utilized in modifying and developing current and novel pharmaceutical products. Moreover, the course highlights important areas of polymer applications in controlled drug delivery, targeted drug delivery, tissue engineering, nanotechnology, and medical devices. (48-0-3)}
PHRE 7223—Drugs of Abuse
This course covers types of substances abused, methods and routes of administration, the pertinent toxicokinetics, the pharmacological/toxicological mechanisms, and the clinical manifestations of drug abuse. Treatment of intoxication and withdrawal, societal impact of drug abuse, legal implications, and current trends of substance abuse will also be discussed. (48-0-3)

PHRE 7252—Fundamentals of Pharmacognosy
This course exposes graduate students to the field of pharmacognosy, with an emphasis on medicinal products derived from plants and other natural sources. The major classes of medicinally active natural products, their origin (nomenclature + taxonomy), structure, biosynthesis, and mode of action will be covered. The naturally derived constituents and their therapeutic efficacy will be discussed. Students will be required to develop a monograph for a bioactive plant or marine species, including a comprehensive summary of the peer-reviewed research available regarding its pharmacological profile. (48-0-3)

PHRE 7340—Role of Pharmacy in Adolescent Health
In this course, students will analyze different health situations that youth face during adolescence, from risky behaviors to chronic illnesses. It is an interactive course in which students will have the opportunity to explore, in depth, issues regarding adolescent health from human development, ecological, and cultural perspectives. The students will explore how pharmacists can contribute to the promotion or maintenance of adolescent health, the prevention of disease, and the management of chronic diseases. Students will be expected to prepare a literature review and design health promotion and education strategies on an issue of their choice. (48-0-3)

PHRE 7350—Contemporary Issues in Pharmacy
This course is designed to explore a broad spectrum of contemporary issues related to pharmacy practice, pharmaceutical industry, third-party payment, and health policy. It aims to increase student awareness and understanding of the change in pharmacy practices and their impacts to the U.S. health care system. (48-0-3)

PHRE 7411—Current Topics in Pharmacy Practice
Topics on current issues, procedures, and policies related to pharmacy practice are discussed. Topics can vary from semester to semester. (48-0-3)

PHRE 7431—Oncologic Treatments and Pharmacogenomics
This hybrid course introduces the basic molecular concepts of cancer and pharmacogenomics in the context of cancer treatment. It presents the current methodologies used in cutting-edge oncology for the treatment of two of the most common types of cancer: breast and colon. The standard-of-care combinatorial regimens will be presented, as well as the treatment scenarios that are applied to advanced-stage and recurrent disease. Drugs that have increased patient tolerance to these genotoxic regimens will also be discussed. Finally, the application of next-generation sequencing of tumor DNA or RNA to determine which of the more than 300 druggable mutations exist in these tumors will be discussed, primarily in the cancer-recurrence setting. Prognostic tests based on RNA expression from tumors will be covered. Discussion of the rationale for insurance coverage of pharmacogenomic variability will be covered as well. The impact of oncologic pharmacogenomics on future clinical trials will also be examined. (43-0-3)

PHRE 7447—Regulatory Affairs
This course provides an exposure to the important and critical area of drug regulatory matters. It describes the role of federal laws, regulations, and the structure and operation of the U.S. Food and Drug Administration. It also compares similar agencies in other countries. (43-0-3)

PHRE 7515—Health Disparities and Chronic Diseases: The Role of the Pharmacist
This course presents the main causes and pathways to health disparities in the United States. It focuses on chronic diseases, such as diabetes, cancer, and cardiovascular diseases. Emphasis is given to disparities associated with access to medication, access to pharmacy services, and adherence. Students will learn about pharmacy-led interventions aimed at reducing health disparities. They will be expected to use epidemiological data to study the disparities and to formulate recommendations to the pharmacy field. Students will be assessed through hands-on structured assignments. (48-0-3)
Student Organizations

Student Government Association (SGA)
Student Government Association (SGA) is the official voice of all students. The organization is open to all students and welcomes proposals and participation from the entire student body. Its responsibilities include collecting and expressing student opinion, dispensing funds for student activities, acting as liaison for the student body, promoting pharmacy, supporting organization and class activities, and working to improve the quality of life for students at the College of Pharmacy.

Other Organizations and Fraternities
Many student organizations addressing various professional and practice-related interests are also open for student membership including

- Academy of Managed Care Pharmacy (AMCP)
- Alpha Zeta Omega (AZO)
- American Pharmacists Association—Academy of Student Pharmacists (APhA-ASP)
- American Society of Consultant Pharmacists (ASCP)
- Christian Pharmacists Fellowship International (CPFI)
- Class Councils
- College of Psychiatric and Neurologic Pharmacists (CPNP)
- Industry Pharmacists Organization (IPhO)
- International Pharmaceutical Students’ Association (IPSA)
- International Society for Pharmacoeconomics and Outcomes Research (ISPOR)
- Jewish Pharmacy Student Organization (JPSO)
- Kappa Psi (ΚΨ)
- National Community Pharmacists Association (NCPA)
- Ph.D. Graduate Pharmacy Association (PGPA)
- Phi Delta Chi (PDC)
- Phi Lambda Sigma (PLS)
- Rho Chi
- Student College of Clinical Pharmacy (SCCP)
- Student National Pharmaceutical Association (SNPhA)
- Student Society of Health-System Pharmacists (SSHP)

College of Pharmacy Faculty

PHARMACEUTICAL SCIENCES
Interim Chair and Associate Professor: A. M. Castejon
Associate Professors: R. Ansari, J. Latimer, A. Lympopoulos, Y. Kwon
Assistant Professors: J. Gutiérrez-Rocca, D. Mastropietro, E. Nieves, M. Trivedi
Clinical Assistant Professors: J. Czerwinska, D. Gazze
Academic Facilitators/Instructors: R. Rodríguez-Millan, J. Varela
Research Associate/Instructor: T. Havranek

PHARMACY PRACTICE
Chair and Associate Professor: M. Seamon
Professor: J. Rey
Associate Professors: C. A. Luque, R. McGory, K. Sando, E. Sherman, D. Singh-Franco, W. Wolowich
Clinical Assistant Professors: A. Aleu, E. Byrne, F. Colón-Pratts, T. Gangoo-Dookan, B. Hierholzer, M. Pansuria, D. Pino, G. P. Ramos Otero, J. Riskin, S. Rivera
Academic Facilitator/Instructors: M. Ishak, O. Elharar

SOCIOBEHAVIORAL AND ADMINISTRATIVE PHARMACY
Chair and Associate Professor: S. E. Rabionet
Associate Professors: N. Khanfar, I. Popovici, A. Perez Rivera, J. Sanchez
Assistant Professors: G. Alvarez, G. Armayor, G. Silva-Suarez
Instructor: D. DaCosta, R. S. Nappi

College of Pharmacy
College of Optometry
Mission Statement
The mission of the College of Optometry is to educate and train optometric physicians to practice at the highest level of proficiency, integrity, and professionalism and to provide a multidisciplinary environment that encourages and supports scholarship, community service, and lifelong learning.

Administration
Linda Rouse, O.D., M.B.A., FAAO
Interim Dean
Assistant Dean for Finance and Operations
Josephine Shallo-Hoffmann, Ph.D., FAAO
Associate Dean for Academic Affairs
Nicole Patterson, O.D., M.S., FAAO
Assistant Dean for Student Affairs
Cristina Llerena Law, O.D., Ph.D., FAAO
Chair, Didactic Education
Kenneth Seger, O.D., M.Sc., FAAO
Chair, Clinical Education

Optometry
Sight is one of our most precious gifts and the optometric physician is dedicated to the preservation and enhancement of this gift. The optometric physician, through academic and clinical training, is able to examine, diagnose, treat, and manage disorders and diseases of the visual system and associated structures. Optometry is constantly evolving as a profession to enable optometric physicians to broaden their scope as the primary eye-care practitioner.

The profession of optometry offers many challenges and rewards to those willing to devote themselves to serving others through a lifetime of study and dedication to excellence.

Today’s optometrists practice in urban and rural communities throughout the nation, in individual or group practices, hospital settings, centers for vision research, and in the public health service. They also take part in teaching, research, and public health. Nova Southeastern University College of Optometry stands alone as the only optometric academic institution in the state of Florida.

Furthermore, the college benefits from the integrated multidisciplinary health care programs of the university’s Health Professions Division, represented by optometry, osteopathic medicine, dental medicine, pharmacy, and allied health and nursing. Nova Southeastern University takes pride in the optometry degree program, which provides a strong didactic and clinical education.

Accreditation
The Doctor of Optometry Program at the Nova Southeastern University College of Optometry is fully accredited by The Accreditation Council on Optometric Education (ACOE). The ACOE (243 North Lindbergh Avenue, St. Louis, Missouri; telephone number 800-365-2219) is the accrediting body for professional degree programs offered by all optometric institutions in the United States.

Admissions Requirements
The College of Optometry selects students based on the candidate’s application content, preprofessional academic performance, Optometry Admissions Test (OAT) scores, letters of evaluation, and a personal interview. The requirements are summarized below.

1. Minimum of 90 semester credit hours
Prior to matriculation, applicants must have completed a minimum of 90 semester hours (30 of which must be taken at a four-year institution) of specified coursework at a regionally accredited college or university. Only exceptional candidates for admission will be considered without a Bachelor of Science degree. There is no requirement that a student must have majored in a specific area; however, a background in biological sciences is recommended. The dean is empowered to evaluate the total qualifications of every student and to consider any unusual circumstances.

2. Prerequisite course requirements
The college requires the students to earn a grade of 2.0 or better in each of the following required subjects:
- calculus—3 semester hours
- physics, including laboratory—8 semester hours
- biology, including laboratory—8 semester hours
• general chemistry, including laboratory—8 semester hours
• organic chemistry, including laboratory—4 semester hours
• microbiology—3 semester hours
• biochemistry—3 semester hours
• anatomy/physiology—3 semester hours
• social/behavioral sciences or humanities courses, in any combination—15 semester hours
• English (composition, literature)—6 semester hours

Note: Upon review of a student’s individual case, the committee on admissions may require additional coursework and testing as a condition of acceptance.

3. Optometry Admission Test
All applicants are required to submit official Optometry Admission Test scores (must be no more than two years old).

Application Process
The college participates in the Optometry Centralized Application Service (OptomCAS) for the receipt and processing of all applications. OptomCAS takes no part in the selection of students. The Office of Admissions works on a rolling admissions basis. Applications are accepted from July 1 to April 1 via the OptomCAS centralized application service. Entering students are admitted to the program for the fall term only. Each applicant must submit a completed application from OptomCAS, the supplemental application, and a nonrefundable fee of $50. Since applications received early in the application cycle will be given priority consideration, it is in the best interest of the prospective student to complete the applications early.

Listed below are the necessary steps to complete the application process.

The application for admission must be submitted electronically through an interactive, web-based application, which can be accessed at optomcas.org.

This application includes
• completed OptomCAS application
• official transcripts from the registrars of all colleges and universities attended submitted electronically or mailed directly by the college or university
• OAT scores (must be no more than two years old)
• letters of recommendation according to the OptomCAS procedures (may be submitted electronically or mailed directly to OptomCAS)

Upon completion of this centralized application, Nova Southeastern University’s College of Optometry requires a secondary application. This application will be sent to the applicant via email upon notification from OptomCAS. The email will contain a link to access the secondary application online.

The applicant should submit the following materials to NSU:
• completed secondary application
• nonrefundable application fee of $50

The deadline date for submitting the secondary application for NSU’s College of Optometry is April 1.

Optometry Admission Test
All applicants are required to take the Optometry Admission Test. This online examination evaluates an applicant in the following areas: quantitative reasoning, reading comprehension, biology, general chemistry, physics, and organic chemistry. It can be taken any time by making an appointment with a Prometric Testing Center. Applicants must wait 90 days before repeating test administrations.

Test information is available at
Optometry Admission Test
211 East Chicago Avenue
Chicago, IL 60611
Telephone: 800-232-2678
Website: ada.org/oat

Interview Process
A personal interview is a part of the application process. However, being interviewed is not a guarantee of admission. Upon completion of the applicant’s file, a review will be made to determine if the candidate will be granted an interview. Not all applicants will be granted an interview, and only those applicants whose files are complete will be considered. The Office of Admissions will notify selected candidates of the date and time of the interview.

Notice of Acceptance
Notice of acceptance will be on a rolling or periodic schedule. Early completion of the application process is in the best interest of the student.

Reapplicants
If you are reapplying to Nova Southeastern University’s College of Optometry, please take time to answer these additional questions. In order to fully consider your application, it will be necessary for you to submit the answers to these questions (on a separate sheet of paper) with your secondary application.

• Why are you interested in reapplying to Nova Southeastern University’s College of Optometry?
• What have you been doing since your last application to Nova Southeastern University’s College of Optometry?
• What changes in your application make you a more competitive candidate?
Core Performance Standards for Admission and Progress

Intellectual, Conceptual, Integrative, and Qualitative Abilities

These abilities include measurement, calculation, reasoning, analysis, and syntheses. Problem solving—a critical skill—requires all of these intellectual abilities. Candidates and students must have critical thinking ability sufficient for good clinical judgment. This is necessary to identify cause-effect relationships in clinical situations and to develop plans of care. In addition, candidates and students should be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures. An individual is expected to be able to perform multiple tasks in a diverse, dynamic, highly competitive, and challenging learning environment. Examples include, but are not limited to, identification of cause-effect relationships in clinical situations, development of treatment plans, transferring knowledge from one situation to another, evaluating outcomes, problem solving, prioritizing, and using short- and long-term memory. All individuals are expected to meet their program requirements on a satisfactory level as determined by HPD administration or the applicable college/program administration.

Interpersonal Communication

Candidates and students must be able to interact and communicate effectively, with respect to policies, protocols, and process—with faculty and staff members, students, patients, patient surrogates, and administration—during the student’s educational program. They must be able to communicate effectively and sensitively with patients. Communication includes not only speech, but also reading and writing. Candidates and students must also be able to communicate effectively and efficiently in all written forms with all members of the health care team. They must have interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds.

A student must have sufficient proficiency with English to retrieve information from texts and lectures and communicate concepts on written exams and patient charts; elicit patient backgrounds; describe patient changes in moods, activity, and posture; and coordinate patient care with all members of the health care team. A student must be able to communicate or provide communication in lay language so that patients and their families can understand the patient’s conditions, treatment options, and instructions. The student must be able to accurately enter information in the patient’s electronic health record, according to his or her program’s requirements.

Motor Skills

Candidates and students must have sufficient motor function to execute movements reasonably required to provide general care and emergency treatment to patients. Examples of emergency treatment reasonably required of some health care professionals are cardiopulmonary resuscitation (CPR), administration of intravenous medication, the application of pressure to stop bleeding, the opening of obstructed airways, and the ability to calibrate and use various pieces of equipment. Such actions require coordination of both gross and fine muscular movements, equilibrium, and functional use of the senses of touch and vision.

Strength and Mobility

Candidates and students must have sufficient mobility to attend emergency codes and to perform such maneuvers as CPR when required. They much have the physical ability to move sufficiently from room to room and maneuver in small places.

Hearing

Candidates and students must have sufficient auditory ability to monitor and assess health needs. They must be able to hear information given by the patient in answer to inquiries; to hear cries for help; to hear features in an examination, such as the auscultatory sounds; and to monitor equipment.

Visual

Candidates and students must have visual ability sufficient for observation, assessment, and rendering of treatment necessary in patient care. It must be consistent in many cases with being able to assess asymmetry, range of motion, and tissue texture changes. Students must have sufficient visual ability to use ophthalmologic instruments. It is necessary to have adequate visual capabilities for proper evaluation and treatment integration. Candidates and students must be able to observe the patient and the patient’s responses, including body language and features of the examination and treatment. A student must also possess the visual acuity to read charts, records, radiographs, small print, and handwritten notation.

Tactile

Candidates and students must have sufficient tactile ability for physical assessment. They must be able to perform palpation and functions of physical examination and/or those related to therapeutic intervention. The student must be able to use tactile senses to diagnose directly by palpation and indirectly by sensations transmitted through instruments.

Behavioral and Social Attributes

Candidates and students must possess the emotional health required for full use of their intellectual abilities; the exercise of good judgment; the ability to take responsibility for their own actions with respect to policies, protocols, and process with faculty and staff members, students, patients, patient surrogates, and administration during the student’s educational program; the prompt completion of all responsibilities attendant to the diagnosis, care, and treatment...
of patients; and the development of mature, sensitive, and effective relationships with the patients. Candidates and students must be able to physically tolerate taxing workloads, to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in the clinical problems of many patients. Compassion, diversity, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities that will be assessed during the admissions and education process.

ASCO Functional Guidelines
The ability to meet these guidelines, along with other criteria established by the Association of Schools and Colleges of Optometry, is necessary for graduation from an optometric professional program. Visit https://www.optomcas.org/overview/asco-functional-guidelines for more information.

Tuition and Fees
• Tuition for 2019–2020 (subject to change by the board of trustees without notice) will be posted on our website (optometry.nova.edu/od/admissions/expenses.html). A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.

• Eligible students must request in-state tuition on their application. For tuition purposes, a student’s Florida residency status (in-state or out-of-state) will be determined at initial matriculation and will remain the same throughout the entire enrollment of the student at NSU. Accordingly, tuition will not be adjusted as a result of any change in residency status after initial enrollment registration.

• Acceptance Fee is $250. This fee is required to reserve the accepted applicant’s place in the entering first-year class. This advance payment will be deducted from the first tuition payment, but is not refundable in case of withdrawal. It is payable within two weeks of the applicant’s acceptance.

• Deposit is $750, due April 15, under the same terms as the acceptance fee.

• College Laboratory/Equipment Fee is $50 per year, due at time of registration.

The financial ability of applicants to complete their training is important because of the limited number of positions available. Applicants should have specific plans for financing four years of professional education. This should include provision for tuition, living expenses, books and equipment, travel, and miscellaneous expenses.

Financial Aid
The function of the Student Financial Assistance Program at Nova Southeastern University is to help as many qualified students as possible to complete their optometric education. Various loans, scholarships, and grants are available to qualified students to help ease the high cost of an optometric education. These financial assistance programs are described in a variety of separate university publications.

Undergraduate/O.D. Dual Admission Program
Nova Southeastern University Health Professions Division has established a dual admission program with the NSU Halmos College of Natural Sciences and Oceanography for a select number of highly motivated, qualified students interested in pursuing both undergraduate and professional studies in optometry. This allows students to receive their doctoral degree in optometry in seven years.

Students must maintain a minimum 3.0 GPA and achieve acceptable scores on the Optometry Admission Test (OAT). Students will spend three years in the undergraduate school and will be awarded a B.S. degree from the Halmos College upon completion of the first year of professional education at the NSU College of Optometry. Students will receive the O.D. (Doctor of Optometry) degree after four years of training at NSU’s College of Optometry.

For information and requirements, please contact
Nova Southeastern University
Halmos College of Natural Sciences and Oceanography
Office of Admissions
3301 College Avenue
Fort Lauderdale, FL 33314-7796

Transfer Students
Circumstances may warrant that a student enrolled in one optometric college seeks to transfer to another institution. Any individual wishing to transfer to Nova Southeastern University’s College of Optometry must meet the following criteria.

The applicant must
1. complete a formal application (supplemental application) to the NSU College of Optometry Office of Admissions by April 1
2. meet all admissions requirements to NSU College of Optometry, which include submitting official transcripts of all college courses taken, NBEO scores (if taken), and letters of evaluation
3. be in good standing at the transferring institution as documented by a letter from the dean of the transferring institution
4. supply a written statement outlining reasons for request for transfer
5. complete a personal interview

Upon approval of a transfer request, the students will be notified in writing of their standing at NSU and the requirements that they must complete.
Before being permitted to enter clinical rotations at NSU, the transferring student will have to complete and pass the preclinical proficiency examination administered by the NSU College of Optometry.

Decisions on transfer applications are made by the dean’s office. The decision will be based on factors that include, but are not limited to, academic record, circumstances leading to the transfer request, available space, and admissions standards. The College of Optometry will evaluate such credit and grant that which is appropriate. Send application and documentation to

Nova Southeastern University
Enrollment Processing Services
College of Optometry, Office of Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

Promotion, Suspension, Dismissal, and Readmission

The policies for promotion, suspension, dismissal, and readmission are outlined in the College of Optometry Student Handbook, which is revised, updated, and distributed annually to all optometry students.

Requirements for Graduation

In order to be eligible for the degree of Doctor of Optometry, each student shall

1. have satisfactorily completed the program of study required for the degree, including all assignments, as outlined in this catalog
2. have satisfactorily met all financial and library obligations
3. have passed Part I and taken Part II of the National Board Examination (international students can be exempted from taking Part II by the dean of student affairs or his designee), documented by sending a copy of test scores, certified by the NBEO, to the dean or his designee
4. have obtained a baccalaureate degree

Note: Upon the successful completion of the second year of optometric study, the College of Optometry may award a baccalaureate degree to those who do not possess a baccalaureate degree, and who have completed 90 credit hours of undergraduate work.

5. attend, in person, the commencement program, at which time the degree is conferred

The college reserves the right, and the student, by his or her act of matriculation, concedes to the college the right to require withdrawal at any time the college deems it necessary to safeguard its standards of scholarship, professional behavior, and compliance with regulations or for other reasons as are reasonably appropriate.

Course of Study

The Doctor of Optometry degree is awarded after successful completion of four years of professional study. The didactic focus of the first two years is in the basic sciences, including biochemistry, microbiology, anatomy, physiology, pharmacology, optics, and the vision sciences. Some of the basic science courses are taught in combined classes with other health care students. Concurrently, students initiate the study of general optometric theory and methods; general pathology; and the diagnosis, treatment, and management of binocular vision anomalies and ocular disease in preparation for direct patient care in our primary care clinic.

In the third academic year, students study contact lenses, pediatric, geriatric, and rehabilitative optometry and develop a deeper understanding and ability to diagnose, treat, and manage increasingly complex conditions concerning anomalies of vision development and ocular disease. Additionally, students begin training in the primary care clinic by providing direct patient eye care.

The fourth year of the academic program is entirely clinical with intensive training in university-based or affiliated primary, secondary, and tertiary care facilities. These include clinics dealing with contact lenses, pediatrics, binocular vision, low vision, and geriatric issues. Students also receive training in medical/surgical tertiary care settings. By the completion of the program, our students have been trained to be optometric physicians capable of providing quality eye care.

Extended (Five-Year) Doctor of Optometry Degree

The College of Optometry has instituted an extended program leading to the Doctor of Optometry (O.D.) degree. The extended program is designed for individuals who are returning to school after an absence, are changing professional fields, or who require a lighter course load initially because of family or other obligations. Students in the extended program take courses with the full time students but with a reduced course load. Coursework covered in the first two years of the traditional full-time program is covered in three years in the extended program. The last two years of both programs are identical. The curriculum and graduation requirements for the extended and full-time programs are the same. The enrollment for the extended program is limited. The dean of the College of Optometry will make the final determination on eligibility for the extended program.

Tuition for 2020–2021 (subject to change by the board of trustees) will be posted on our website (optometry.nova.edu/od/admissions/expenses.html). Tuition reverts to the regular rate for the fourth and fifth years.
Student Organizations

The College of Optometry Student Government Association (OSGA) is the official voice of all optometry students. The OSGA welcomes input and participation from the entire student body. Its responsibilities include collecting and expressing student opinion, dispensing funds for student activities, acting as liaison for the student body, promoting optometry, supporting club and class activities, and working to improve the quality of life for students at the College of Optometry.

Other Organizations—Many other student organizations addressing various professional and practice-related interests are open for student membership, including the following:

- American Academy of Optometry
- American Optometric Student Association (AOSA)
- Beta Sigma Kappa (BSK)
- Canadian Association of Optometry Students (CAOS)
- College of Optometrists in Vision Development (COVD)
- Contact Lens and Cornea Society (CLKS)
- Fellowship of Christian Optometrists (FCO) International
- Florida Optometric Student Association (FOSA)
- Gold Key International Optometric Honor Society
- National Optometric Student Association (NOSA)
- Nova Optometric Practice Management Association (NOPMA)
- Optometric Student Association for Ocular Disease (OSAOD)
- Sports Vision and Concussion Club (SVCC)
- Student Volunteer Optometric Services to Humanity (VOSH)
- Vision Rehabilitation Club (VRC)
- Honors Program

Core Courses

- CVR 7200—Clinical Research Ethics
- CVR 7300—Fundamentals of Biostatistics
- CVR 7310—Principle of Statistical Inference
- CVR 7400—Clinical Research Design
- CVR 7500—Information Science for Clinical Research
- CVR 7600—Introduction to Research Funding and Proposal Development
- CVR 7700—Presentation, Evaluation, and Publication of Clinical Vision Research
- CVR 7800—Ethical and Legal Issues in Human Subject Research
- CVR 8210—Visual Health and International Development
- CVR 8220—Epidemiology

To be admitted to the Master of Science in Clinical Vision Research program, applicants must have completed one of the following:

- earned a previous clinical (e.g., O.D., D.O., M.D.) or graduate degree
- earned a baccalaureate degree with a minimum grade point average of 3.0
- NSU third-year optometry students who have passed part I of the NBEO

Applicants with coursework taken at institutions outside of the United States must have the coursework evaluated for United States equivalence.

Applicants whose grade point average is below 3.0 must achieve a minimum average score of 1100 on the Graduate Record Examination (GRE). An average score in the 50th percentile or higher on either the OAT or MCAT may be substituted.

Applicants from countries in which English is not the official language are required to submit scores from the Test of English as a Foreign Language (TOEFL) with a score of 79.

For further information regarding the program, call (954) 262-1101 or 877-640-0218 or access our website at optometry.nova.edu/cvr, where an application can be downloaded.

Applications should be sent to

Nova Southeastern University
Enrollment Processing Services
College of Optometry, Graduate Program Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

Tuition for 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (optometry.nova.edu/od/admissions/expenses.html).
### Traditional Four-Year Program Curriculum Outline

The curriculum is revised and modified frequently to meet the demands of the profession. These courses are representative of the overall requirements of the program at the time of publication.

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<th>Lecture</th>
<th>Laboratory</th>
<th>Semester Hours</th>
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**Total Semester Hours: 36.5**

### Fourth Year—Fall and Winter Terms***

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**Fourth Year Total Semester Hours: 35.0/36.0**

* Successful completion of these courses can lead to a Bachelor of Science degree in Vision Science.
** This course is offered to part of the class each semester.
*** Three-month terms—order of courses will vary. Timing of clinical externships will vary based upon student selections and clinic schedules. This curriculum represents the courses at the time of the printing of this catalog and is subject to change.
* This course is a service learning course.

### Extended Program Curriculum Outline

#### First Year—Fall Term

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**First Year—Winter Term**

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College of Optometry
### Third Year—Fall Term

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<td>Optometric Theory and Methods III</td>
<td>2.0</td>
</tr>
<tr>
<td>OPTL 3624</td>
<td>Optometric Theory and Methods III Lab</td>
<td>1.5</td>
</tr>
<tr>
<td>OPT 4322*</td>
<td>Introduction to Binocular Vision</td>
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</tbody>
</table>

**Total Semester Hours:** 15.5

### Third Year—Winter Term

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>OPT 4122*</td>
<td>Ocular Pharmacology</td>
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<tr>
<td>OPT 4234*</td>
<td>Ophthalmic Optics II</td>
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<td>OPTL 4234*</td>
<td>Ophthalmic Optics II Lab</td>
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<tr>
<td>OPT 4433</td>
<td>Anomalies of Binocular Vision I</td>
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<tr>
<td>OPTL 4433</td>
<td>Anomalies of Binocular Vision I Lab</td>
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<tr>
<td>OPT 4524</td>
<td>Optometric Theory and Methods IV</td>
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<td>OPTL 4524</td>
<td>Optometric Theory and Methods IV Lab</td>
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<tr>
<td>OPT 4634</td>
<td>Diagnosis and Pharmacological Management of Glaucoma and Vitreoretinal Disease</td>
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**Total Semester Hours:** 17.5

### Third Year—Summer Term

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>OPT 1612*</td>
<td>Health Systems, Economics, Policy, and Ethics</td>
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<tr>
<td>OPT 4721*</td>
<td>Nutrition in Eye Care</td>
<td>1.0</td>
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<tr>
<td>OPT 5322</td>
<td>Clinical Medicine: Diagnostic and Pharmacological Management of Systemic Diseases</td>
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<tr>
<td>OPT 5411*</td>
<td>Clinical Gerontology</td>
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<tr>
<td>OPTL 5412</td>
<td>Physical Diagnosis: Testing, Pharmacological Aspects, and Injection Technique</td>
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<td>OPT 7111</td>
<td>Primary Care Clinic I</td>
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<tr>
<td>OPT 7112</td>
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<tr>
<td>OPT 7151</td>
<td>Optical Service Rotation I</td>
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<tr>
<td>OPT 7181</td>
<td>Seminars in Laser and Surgical Ophthalmic Care</td>
<td>1.0</td>
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<tr>
<td>OPT 9997**</td>
<td>Advanced Care Clinic Elective</td>
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**Total Semester Hours:** 11.5/12.5**
### Fourth Year—Fall Term

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>OPT 5022</td>
<td>Anomalies of Binocular Vision II</td>
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<td>OPTL 5022</td>
<td>Anomalies of Binocular Vision II Lab</td>
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<tr>
<td>OPT 5122</td>
<td>Contact Lenses I</td>
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<td>Contact Lenses I Lab</td>
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<tr>
<td>OPT 6233</td>
<td>Neuro-Eye Disease: Diagnostic, Medical and Pharmacological Management</td>
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<tr>
<td>OPT 6322</td>
<td>Rehabilitative Optometry: Low Vision</td>
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<td>Rehabilitative Optometry: Low Vision Lab</td>
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<td>OPT 7122</td>
<td>Primary Care Clinic II</td>
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<tr>
<td>OPT 7161</td>
<td>Optical Services Rotation II</td>
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<tr>
<td>OPT 7999</td>
<td>Board Preparation</td>
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<tr>
<td>OPT 9991</td>
<td>Sports and Performance Vision in Primary and Tertiary Optometric Practice (elective)</td>
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<tr>
<td>OPT 9997**</td>
<td>Advanced Care Clinic Elective</td>
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**Total Semester Hours:** 16/17**

### Fourth Year—Winter Term

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>OPT 5233</td>
<td>Ocular and Systemic Eye Disease: Diagnostic, Medical, and Pharmacological Management</td>
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<tr>
<td>OPT 6122</td>
<td>Contact Lenses II</td>
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<tr>
<td>OPTL 6122</td>
<td>Contact Lenses II Lab</td>
<td>1.0</td>
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<tr>
<td>OPT 6633</td>
<td>Pediatric Optometry and Learning-Related Vision Problems</td>
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<tr>
<td>OPTL 6633</td>
<td>Pediatric Optometry and Learning-Related Vision Problems Lab</td>
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<tr>
<td>OPT 7132</td>
<td>Primary Care Clinic III</td>
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<tr>
<td>OPT 7171</td>
<td>Optical Services III</td>
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<td>OPT 9997**</td>
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<td>OPT 9998</td>
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**Total Semester Hours:** 13.5/14.5**
### Fourth Year—Summer Term***

<table>
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<tbody>
<tr>
<td>OPT 6522</td>
<td>Practice Management</td>
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<tr>
<td>OPT 7146</td>
<td>Primary Care Clinical Externship</td>
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</tr>
<tr>
<td>OPT 7214</td>
<td>Cornea and Contact Lens Externship</td>
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<tr>
<td>OPT 7224</td>
<td>Pediatric and Binocular Vision Externship</td>
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<tr>
<td>OPT 7233</td>
<td>Vision Rehab. and Geriatric Externship</td>
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</tr>
<tr>
<td>OPT 7308</td>
<td>Medical and Surgical Care Externship</td>
<td>8.0</td>
</tr>
<tr>
<td>OPT 7408</td>
<td>Clinical Elective Externship</td>
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</tr>
<tr>
<td>OPT 7501*</td>
<td>Current Topics in Practice Management</td>
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**Total Semester Hours:** 36.5

### Fifth Year—Fall and Winter Terms***

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Semester Hours</th>
</tr>
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<tbody>
<tr>
<td>OPT 6522</td>
<td>Practice Management</td>
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<tr>
<td>OPT 7146</td>
<td>Primary Care Clinical Externship</td>
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<tr>
<td>OPT 7214</td>
<td>Cornea and Contact Lens Externship</td>
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<tr>
<td>OPT 7224</td>
<td>Pediatric and Binocular Vision Externship</td>
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<tr>
<td>OPT 7233</td>
<td>Vision Rehabilitation and Geriatric Externship</td>
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<td>OPT 7308</td>
<td>Medical and Surgical Care Clinical Externship</td>
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<tr>
<td>OPT 7408</td>
<td>Clinical Elective Externship</td>
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<tr>
<td>OPT 7501*</td>
<td>Current Topics in Practice Management</td>
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<tr>
<td>OPT 9991</td>
<td>Sports and Performance Vision in Primary and Tertiary Optometric Practice (elective)</td>
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</table>

**Total Semester Hours:** 35.0/36.0

* Successful completion of these courses can lead to a Bachelor of Science degree in Vision Science.

** Timing of clinical externships will vary based upon student selections and clinic schedules. This curriculum represents the courses at the time of the printing of this catalog and is subject to change.

* This course is a service learning course.

*** Three-month terms—order of courses will vary. Timing of clinical externships will vary based upon student selections and clinic schedules. This curriculum represents the courses at the time of the printing of this catalog and is subject to change.
College of Optometry Course Descriptions

Note: Listed at the end of each entry are lecture hours, laboratory hours, and semester hours.

Medical Sciences
The following courses listed are taught by College of Medical Sciences faculty members.

OPTC 1134—Gross Anatomy: Head and Neck
This course presents the study of the general anatomical and functional features of the major systems of the human body. These include the skeletal system, muscular system, peripheral nervous system, respiratory system, cardiovascular system, digestive system, and urogenital system. In addition, the latter part of the course includes a detailed study of the anatomical and functional features of the head and neck region.

This course is intended to prepare students in the knowledge, skills, and attributes needed of an entry-to-practice Doctor of Optometry. While this course should also help students prepare for licensing examinations, such as those administered by the NBEO, nothing in this course, including the lectures and discussions, coursework, study guides, teaching notes, electronically posted information, or other materials, should be believed or understood to utilize actual confidential examination items from licensing examinations. For example, throughout this course, the instructors may indicate points of emphasis for NBEO study and preparatory work. This instructional approach does not reflect knowledge of actual NBEO examination items, but represents a suggested area of focus based entirely upon the NBEO content outline/matrix. All materials in this course have been prepared in good faith to comply with the highest ethical standards of the profession. (54-36-4)

OPT 1323—Microbiology
The microbiology course for optometry includes both the basic aspects of human immunology and the most important microbial pathogens involved in diseases of the eye. The basic biology of microorganisms is covered, followed by a general medical approach to each disease. (36-0-2)

OPTC 2023—General Neuroanatomy
This course will examine the structural, functional, and developmental features of the human nervous system with reference to different disease states. (36-18-2.5)

OPTC 2144—General Physiology
The purpose of this course is to provide the student with an understanding of various factors and processes responsible for the development, progression, and procreation of life. The material of the course will be presented in accordance with an organ systems approach with particular emphasis on applications of the discussed principles to the specific clinical examples and disorders that affect eyes and vision. The areas covered will include cellular physiology, skeletal and smooth muscle, the cardiovascular system, the nervous and sensory systems, the renal system, the respiratory system, the gastrointestinal system, and the endocrine system. (72-0-4)

OPTC 3244—General Pharmacology I
This course will provide the student with a thorough understanding of the classes of drugs commonly used in clinical practice. Emphasis will be on the mechanism of action, clinical indications, side effects, important drug interactions, and the basic pharmacokinetics of each drug class. (36-0-2)

OPTC 4022—General Pharmacology II
This course will provide the students with a thorough understanding of the classes of drugs commonly used in clinical settings. Emphasis will be on the mechanism of action, clinical indications, side effects, important drug interactions, and the basic pharmacokinetics of each drug class. (27-0-1.5)

Optometric Basic Sciences

OPT 1443—Theoretical Optics I
The course covers principles of geometric optics, examples, and optometric applications. The major topics are the propagation of light, laws of reflection and refraction, prisms, refraction at curved surfaces, object-image relationships in thin lenses and cylindrical lenses, reflection at plane, and curved surfaces. The emphasis is to apply required laws, principles, relationships, and formulas to solve problems. (54-0-3)

OPTL 1443—Theoretical Optics I Lab
The purpose of this course is to apply and demonstrate concepts presented in Theoretical Optics I Lecture (OPT 1443). This includes learning how to set up an experiment in the area of geometrical optics, collect and plot data, and use that data in calculations to identify unknown variables. (0-36-1)
OPT 1511*—Psychophysical Methodology
Principles of classical psychophysical methodologies are detailed. These include demonstrations and exercises performed by the students. The fundamentals of signal detection and Fourier analysis are introduced in terms of their application to the clinical practice of optometry. (18-0-1)

OPT 1612—Health Systems, Economics, Policy, and Ethics
This course discusses the organization of clinical and public health systems; public health responsibilities for optometrists; health services financing; the health workforce; health policy; licensing and regulation of optometry; ethical issues in optometry; disaster preparedness; abuse reporting and infectious disease control; and current issues in public health optometry. (36-0-2)

OPT 1721—Clinical Optometric Procedures
This course is designed to introduce first-year students in the extended optometry program to basic clinical skills. Students will become familiar with optometric equipment in the lab. Additionally, they will be required to observe third- and fourth-year student physicians performing clinical examinations. The skills learned in this class will then be utilized when the students participate in vision screenings and Optometric Theory and Methods Lab during their second year. (18-0-1)

OPT 1724—Optometric Theory and Methods I
This course begins the optometric theory and methods sequence. Topics covered include basic clinical anatomy and optics, visual acuity, case history, refractive conditions, prescription writing, keratometry, retinoscopy, basic biomicroscopy of the anterior segment, and case analysis. Basic color vision, extraocular motility, and stereo acuity theory and testing are also presented. (36-0-2)

OPTL 1724*—Optometric Theory and Methods I Lab
This lab gives the student practical experience with techniques presented in OPT 1724. Students will be performing case history, visual acuity and IPD measurement, keratometry, retinoscopy, monocular subjective refraction, color vision testing, stereo acuity testing, EOM testing, and basic biomicroscopy of the anterior segment. (0-72-2)

OPT 1831—Contemporary Issues in Optometry
This course introduces optometry’s past to help students understand the present and future of the optometric profession. History, professional ethics, current practice modes, and professional organizations will be covered. (18-0-1)

OPT 2223*—Theoretical Optics II Lab
The purpose of this course is to apply and demonstrate concepts presented in Theoretical Optics II Lecture (OPT 2223). This includes learning how to set up experiments in the areas of geometrical and physical optics, collect and plot data, and use that data in calculations to identify unknown variables. (0-18-1)

OPT 2323*—Visual Optics
This course focuses on studying the eye as an optical system, including optical and physical components of the eye. Schematic eye models, refractive error correction, dioptrics of the eye, stimulus to accommodation, retinal image size and quality, Purkinje images, entoptic phenomena, presbyopia, aphakia, intraocular implants, and ocular radiation effects will be discussed. (36-0-2)

OPT 2422*—Ocular Anatomy
The composing elements of the globe and orbit are described in detail, with particular attention to their relatively spatial positions. The embryological development of such a complex system is also explained. (36-0-2)

OPT 2522*—Visual Neurophysiology
This course will go over the concepts of visual neurophysiology needed to understand normal visual perception; probable sources of visual sensory symptoms associated with various eye and CNS diseases; the underlying principles of new, clinical diagnostic tests for eye and CNS diseases; and current neurophysiological research as it relates to the clinical practice of optometry. (36-0-2)

OPT 2622*—Ocular Motility
The aim of this course is to provide an introduction to the ocular motor systems and normal eye movement physiology. The ocular motor systems and the laws relating to it are detailed in terms of normal neurophysiology and neuroanatomy. Information from basic research on eye movements is synthesized to detail normal eye movements and differentiate them from pathology. (36-0-2)

OPT 2724—Optometric Theory and Methods II
This course continues the optometric theory and methods sequence with emphasis on intermediate clinical procedures. Topics covered include cover test, near point of conversion, near refraction and presbyopia, objective and subjective refraction, phorias and vergences, and introductory case analysis. (36-0-2)
OPTL 2724—Optometric Theory and Methods II Lab
Application and skills necessary to perform ocular examinations stressed in OPT 2724. (0-54-1.5)

OPTL 3021—Optometric Simulation Lab
This is the first course in a sequence that introduces the student to augmented reality simulation medicine. This course will teach students both the mechanical technique and introduce the basic anatomy and pathophysiology of the retina using an augmented reality binocular indirect ophthalmoscope simulator. At the end of the course, students should understand how to get a focused image of the eight principle quadrants of the retina and how to move their view around the retinal periphery. The basic anatomy and pathophysiology of the retina will be reviewed in the summer semester. Case-based diagnostic training using augmented reality simulation will be implemented alongside pathology and clinical courses later in the curriculum. (0-72-2)

OPT 3122*—Ocular Physiology
The functions of each composing element of the globe and orbit are detailed. The mechanisms to achieve such functions are also explained. (36-0-2)

OPT 3344A*—Psychophysics/Monocular Sensory Processes I
This course introduces the student, who is familiar with the mechanisms of visual neurophysiology, to various monocular aspects of visual function. It is a review of the product of visual function, namely, perception of the world around. Success in this course will depend, in part, upon the student’s knowledge of psychophysical testing and optics provided in earlier coursework. This course is restricted to monocular aspects of relationships between the physical world and the individual’s perception of it.

Students will review psychophysical methods and visual neurophysiology, then discuss dark and light adaptation. Luminance efficiency will be looked at, followed by spatial and temporal brightness perception. Flicker sensitivity will be introduced, as well as the fundamental theories behind visual field testing. The course will cover recent developments in the understanding of nonimage-forming, photosensitive, retinal ganglion cells and, as part of the visual field section, the phenomena of “blindsight.” Students will finish with a large section dealing with color vision: past and current understanding of color perception, what is normal and abnormal, and how it is tested. (36-0-2)

OPT 3344B*—Psychophysics/Monocular Sensory Processes II
This course is a continuation of MSP I and includes motion perception and form and pattern recognition. Theories of visual perception are discussed. Normal development, including the emmetropization process, is emphasized. Facial recognition is introduced. The course culminates in a study of art as a way to apply our knowledge of visual sensory processing and perception. (36-0-2)

OPT 3434*—Ophthalmic Optics I
Theoretical and practical aspects of corrective lens design in the optical correction of ametropia: physical and optical characteristics of ophthalmic lens materials, aberrations, specifications of lens powers, ophthalmic prism, lens decentration, and multifocal lens design. Selection of lenses and frames. (54-0-3)

OPTL 3434*—Ophthalmic Optics I Lab
This course offers hands-on training in the use of the lensometer to neutralize single-vision lenses, segmented multifocals, and prisms, as well as the use of the lens clock to measure surface power and base curve. Introduction to the extensive variety of lenses, coatings, and frames available is also provided, so the most appropriate ones can be recommended, based on a patient’s prescription and lifestyle needs. (0-36-1)

OPT 3534—Ocular Disease of the Anterior Segment: Diagnosis and Pharmacological Management
This course examines principles of diagnosis and management of infectious, inflammatory, congenital, hereditary, and traumatic conditions of the anterior segment of the eye. Topical and systemic pharmacological treatments are emphasized. (54-0-3)

OPT 3624—Optometric Theory and Methods III
This course continues the optometric theory and methods sequence with emphasis on intermediate clinical procedures. Topics covered include binocular indirect ophthalmoscopy, fundus biomicroscopy, gonioscopy, and dilation and irrigation. This course will allow students to increase clinical case analysis and efficiency, as well as the time spent with electronic medical record keeping. (36-0-2)

OPTL 3624—Optometric Theory and Methods III Lab
Application and skills necessary to perform clinical testing using examination procedures stressed in OPT 3624. (54-0-3)

OPT 4122*—Ocular Pharmacology
Drugs used in the eye or capable of exerting a pharmacological or toxicological effect on the eye; routes of administration, pathophysiologic processes, and treatment regimens. (36-0-2)

OPT 4234*—Ophthalmic Optics II
This course is the second semester of the two-semester ophthalmic optics tract, which explores both the theoretical and practical aspects of corrective lens design. Topics this semester include absorbptive lenses and lens coatings, prescribing for
anisometropia and aniseikonia, optical principles of low vision devices, optics of contact lenses, and vision in the workplace and protective eyewear. (54-0-3)

OPTL 4234*—Ophthalmic Optics II Lab
This course offers hands-on training in measuring frame dimensions, pupillary distance, segment height, fitting center height, and vertex distance, as well as fabricating and adjusting spectacles and making simple frame repairs. An introduction to the extensive variety of progressive addition lenses available, and the methods for correcting vertical imbalance, is also provided. (0-36-1)

OPT 4322*—Introduction to Binocular Vision
Sensory aspects of binocular vision, neurophysiological foundations. Visual direction, the horopter, binocular fusion, rivalry, stereopsis, aniseikonia, motion in depth, binocular visual neurophysiology, normal development of binocular vision, strabismic and anisometropic amblyopia, and normal and anomalous retinal correspondence. Clinical, research-oriented tests and treatments for abnormal binocular visual function. (36-0-2)

OPT 4433—Anomalies of Binocular Vision I
The primary goal of this course is to prepare the student, as a primary care optometric physician, to recognize, examine, and properly manage patients with functional ocular motor, accommodative, and vergence disorders. Accommodative and vergence mechanisms, such as lens prescribing and vision therapy, are also discussed, along with a logical, evidence-based approach to the treatment of non-strabismic binocular vision disorders. (54-0-3)

OPTL 4433—Anomalies of Binocular Vision I Lab
Application of concepts and material presented in Anomalies of Binocular Vision I lecture OPT 4433. (0-36-1)

OPT 4524—Optometric Theory and Methods IV
This course is intended to assist students in the mastery of knowledge needed by a Doctor of Optometry. While this course should help you prepare for future licensing exams, nothing in this course, including the lectures and discussions, coursework, study guides, teaching notes, or other materials, should be believed or understood to use actual confidential exam items from licensing exams. All material in this course has been prepared in good faith to comply with the highest ethical standards of the profession. (36-0-2)

OPTL 4524—Optometric Theory and Methods IV Lab
This course provides practical experience with advanced optometric testing procedures including three-mirror and scleral depression and automated visual fields, as well as trial frame experience. Students will practice with electronic health records and incorporating the techniques of a comprehensive exam into an efficient and complete exam sequence. Practice time for the preclinical proficiency exam will be included. (0-54-1.5)

OPT 4634—Diagnosis and Pharmacological Management of Glaucoma and Vitreoretinal Disease
This course examines the diagnosis and management of diseases of the ocular posterior segment, including glaucoma and diseases of the retina, vitreous, and posterior uvea. The course is weighted 40 percent glaucoma and 60 percent vitreoretinal disease. Emphasis is placed upon the advanced optometric management of these diseases. The role of the optometrist in the therapeutic management of these diseases is maximized to the fullest extent of optometric training. (72-0-4)

OPT 4721—Nutrition in Eye Care
This course will include a basic overview of human nutrition, including macro- and micro-nutrients in the diet. A specific emphasis will be placed on nutrients with respect to ocular health, including the carotenoids; the essential fatty acids omega 3 and 6; vitamins A, C, D, and E, and the B vitamins; zinc, selenium, and other trace elements; and other nutrients known to play a role in ocular disease (coenzyme Q10, alpha lipoic acid, taurine, magnesium, etc.). We will examine nutrition from an evidence-based perspective, using landmark studies as a framework for discussion. Body mass index, glycemic index, and obesity will be discussed as they relate to systemic and ocular disease. (18-0-1)

OPT 4811—Epidemiology
A study of basic principles of epidemiology with emphasis on the epidemiology of vision disorders. Topics include disease models, rates and indices, descriptive and analytic studies, screening concepts, major eye studies, control of infectious disease, investigation of an outbreak, epidemiology of vision disorders, and the use of epidemiology in clinical decision making. (18-0-1)

OPT 4951—Community Outreach
This course discusses the social and behavioral determinants of health and disease; population trends and emerging needs; cultural aspects in eye care; health promotion, education, and prevention; and community program planning, monitoring, evaluation, and theory of screening. (18-0-1)

OPT 5022—Anomalies of Binocular Vision II
Etiology and visual effects of strabismus and amblyopia. Covers testing, analysis; diagnosis; management of strabismus and amblyopia; and use of lenses, prisms, and vision therapy to ameliorate strabismus and amblyopia. (36-0-2)

OPTL 5022—Anomalies of Binocular Vision II Lab
Application of concepts and material presented in Anomalies of Binocular Vision II lecture OPT 5022. (0-36-1)
College of Optometry
OPTL 6633—Pediatric Optometry and Optometric Management of Learning-Related Vision Problems
This lab course includes infant, toddler, and preschool optometric examinations; developmental testing; computerized oculomotor diagnostic testing; visual perceptual testing; visual perceptual assessment; and management. (0-18-0.5)

OPT 7999—Board Preparation (elective)
This course consists of a review of the basic medical sciences in preparation for Part I of the National Board of Examiners in Optometry Examination (NBEO). It will provide a review of the didactic material presented in the first three years of optometry school, with an emphasis on topics such as ocular anatomy, ocular disease, and ocular and general pharmacology. This course will guide students in their preparation and create a study strategy for success. (18-0-1)

OPT 9991—Sports and Performance Vision in Primary and Tertiary Optometric Practice (elective)
The theory and practice of sports vision is presented in detail. The course emphasizes exploration of research supporting sports vision optometric services; analysis of visual and environmental task demands in sports; testing and evaluation techniques and procedures for athletes; treatment and management of sports-related ocular injuries and sports-related traumatic brain injuries (concussion); and optometric intervention approaches, including lenses, tints, vision training/rehabilitation for sports-vision enhancement, and rehabilitation. Practice management strategies for implementation of sports vision services will also be discussed. Additionally, the course will include a hands-on component to aid with application of material taught in areas of sports vision assessment and vision training for enhancement of sports vision performance and vision rehabilitation. This will allow for practical application and further practice of testing procedures and therapeutic techniques. (18-0-1)

OPT 9997—Advanced Care Clinic Elective
This course deals with patient examinations in an advanced ophthalmic care setting under the supervision of appropriately credentialed faculty members. Clinical care is delivered in either the glaucoma service or diabetes and macular disease service with subsequent discussion of pathophysiologic, differential diagnoses, and patient-appropriate management. Integration of didactic knowledge with clinical care is emphasized. (0-8-1)

OPT 9998—Board Review
This course consists of a review of the basic medical sciences in preparation for Part I of the National Board of Examiners in Optometry Examination (NBEO). It will provide a review of the didactic material presented in the first three years of optometry school, with an emphasis on topics such as ocular anatomy, ocular disease, and ocular and general pharmacology. This course will guide students in their preparation and create a study strategy for success. (18-0-1)

Optometry Clinical Education

OPT 7111—Primary Care Clinic I
Patient examinations in a primary care setting under supervision of residents, faculty members: refractive conditions, visual system disorders. Grand rounds, journal reviews, case reports, and advanced ophthalmic techniques. Also included in this course is a review and discussion of patient data leading to proper clinical diagnosis and patient management. Emphasizes integration of knowledge gained in didactic courses with clinical examples. (0-80-2.5)

OPT 7112—Clinic Conference
Adjunct to Primary Care Clinic I. Review and discussion of patient data leading to proper clinical diagnosis and patient management. Lectures and small group discussions emphasize integration of knowledge gained in didactic courses with clinical case examples. (10-0-1)

OPT 7122—Primary Care Clinic II
Continuation of Primary Care Clinic I. (0-144-2.5)

OPT 7132—Primary Care Clinic III
This course provides experience in a clinical setting for students, under the direct supervision of certified optometric physicians, to evaluate and manage the vision disorders and ocular health conditions of patients. This includes refractive, binocular, ocular health, and visual pathway conditions. In addition, the student will learn to apply appropriate management and treatment protocols. (0-144-2.5)

OPT 7146—Primary Care Clinical Externship
The clinical program provides direct patient-care experience in primary care optometric practice with an emphasis on primary care under the supervision of clinical preceptors. Assignments related to independent learning will further contribute to the students’ learning. (0-320-5.5)

OPT 7151—Optical Services Rotation I
In this introductory rotation in the clinic’s optical service, the third-year student begins to apply ophthalmic dispensing procedures learned during the second year Ophthalmic Optics lecture and laboratory to the day-to-day workings of the optical. The purpose of the student’s presence in the optical is to expand and reinforce his or her knowledge of ophthalmic optics and its application and significance in patient care. (0-24-0.5)

OPT 7161—Optical Rotation II
This second optical rotation allows the third-year student to apply a greater scope of learned ophthalmic dispensing procedures to the day-to-day workings of the optical. The purpose of this rotation is to reinforce the knowledge of ophthalmic optics and its application and significance in patient care. (0-36-0.5)
OPT 7181—Seminars in Laser and Surgical Ophthalmic Care
This course is a series of learning modules encompassing surgical and laser procedures of the ocular adnexa, anterior segment, and posterior segment of the eye. Patient selection and preparation, preoperative care, and postoperative care will be emphasized. Surgical techniques, procedures, complications, and expected outcomes will be presented by experts in each respective area. (18-0-1)

OPT 7171—Optical Rotation III
In this third rotation in the clinic’s optical dispensary, the third-year student continues to apply his or her learned ophthalmic dispensing procedures to the day-to-day workings of the optical, building on the experience of the previous semesters and working more independently. Additionally, practice management concepts are introduced. The purpose of this rotation is to expand and enhance the student’s knowledge of ophthalmic optics and its application in patient care by meeting the visual needs of patients. (0-36-0.5)

OPT 7214—Cornea and Contact Lens Externship
The clinical program provides experience in cornea and contact lens patient care and practice management and emphasizes the use of special tests, procedures, and scholarly activities relevant to this specialty. (0-240-4)

OPT 7224—Pediatric and Binocular Vision Externship
This clinical program provides exposure to pediatric optometry and binocular vision patient care with emphasis on diagnosis and treatment of functional vision disorders. It includes administration of specialty test procedures and vision therapy for the enhancement of functional skills. (0-240-4)

OPT 7233—Vision Rehabilitation and Geriatrics Externship
Low vision rehabilitation and geriatric vision care in traditional and educational settings for the visually impaired. Exposure to vision-enhancing devices. (0-160-2.5)

OPT 7308—Medical/Surgical Clinical Externship
Diagnosis, management, and treatment of patients in a medical/surgical setting. Pre- and post-operative care, evaluation and comanagement of patients with systemic health anomalies and medical conditions such as glaucoma. Observation of medical eye care. (0-480-8)

OPT 7408—Clinical Elective Rotation
An opportunity for the student to gain additional clinic experience from a choice of primary care, secondary care, or tertiary care clinic sites. (0-480-8)

OPT 7501—Current Topics in Practice Management
Explore current practice options in optometry including starting from scratch, purchasing or joining a practice, and practice valuation. Learn the proper techniques for successful coding and billing in today’s managed care economy. Understand the importance of patient communication, networking, community involvement, and third party participation. Analyze today’s market and the student’s personal financial goals to develop a plan for successful practice. (18-0-1)

*Successful completion of these courses can lead to a Bachelor of Science degree in Vision Science.
Dr. Pallavi Patel College of Health Care Sciences
Vision
The Dr. Pallavi Patel College of Health Care Sciences will be recognized as a local, national, and international leader in health-care education through excellence and innovation in teaching, scholarship, and service.

Mission
The Dr. Pallavi Patel College of Health Care Sciences strives to provide professionals with the skills necessary for the diagnosis, treatment, and prevention of disease and disability in order to assure optimum health conditions in the community and beyond. With an unwavering commitment to ethical practice and in support of the Nova Southeastern University Core Values, the college endeavors to advance research, scholarship, and the development of leadership skills utilizing traditional educational methods, distance learning, and innovative combinations of both to achieve its educational goals.

Administration
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Dean

Peter L. Taylor, Ph.D.
Executive Associate Dean, Academic and External Affairs

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Associate Dean and Chair, Department of Physician Assistant

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Associate Dean and Chair, Department of Health and Human Performance

Sandrine Gaillard-Kenney, Ed.D., M.A.
Associate Dean
Interim Director, Doctor of Health Science Program

Terry Morrow Nelson, Ph.D., M.S.
Assistant Dean, Student Affairs

Brianna Black Kent, Ph.D., M.Ed., R.N.
Assistant Dean, Professional Development and Education

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Chair, Department of Speech-Language Pathology
Director, M.S. in Speech-Language Pathology Program

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Chair, Department of Occupational Therapy

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Chair, Department of Cardiopulmonary Sciences

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Chair, Department of Audiology

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Interim Director, Ph.D. in Health Science Program

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Chair and Assistant Professor, Anesthesiologist Assistant Programs—Fort Lauderdale, Tampa Bay, and Jacksonville

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Director, Occupational Therapy Dr.O.T. Program

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Director, Physician Assistant—Fort Lauderdale

Jose Antonio, Ph.D.
Director, Exercise and Sport Science Program

Llalando L. Austin II, Ed.D., CAA
Director, Anesthesiologist Assistant—Tampa Bay

Charlene Bolton, D.H.Sc., M.P.A.S., PA-C
Director, Physician Assistant—Jacksonville

Director, Physician Assistant—Orlando

Jennifer Canbek, Ph.D., M.S., PT, NCS
Director, Professional Doctor of Physical Therapy Program—Fort Lauderdale

Ricardo C. Carrasco, Ph.D., OTR/L, FAOTA
Director, Occupational Therapy Doctorate Program—Tampa Bay

M. Samuel Cheng, Sc.D., M.S., PT
Director, Physical Therapy Ph.D. Program
Dr. Pallavi Patel College of Health Care Sciences Programs

The college is committed to providing the highest quality education to students in a variety of health care disciplines. The college offers the following programs and degree options:

**Department of Anesthesia**
- Anesthesiologist Assistant, M.S., Fort Lauderdale
- Anesthesiologist Assistant, M.S., Jacksonville
- Anesthesiologist Assistant, M.S., Tampa Bay

**Department of Audiology**
- Audiology, Au.D., Fort Lauderdale
- Audiology, Au.D., United Kingdom

**Department of Cardiopulmonary Sciences**
- Respiratory Therapy, Postprofessional B.S.R.T., Online Program
- Respiratory Therapy, First-Professional B.S.R.T.

**Department of Health and Human Performance**
- Athletic Training, B.S.
- Exercise and Sport Science, B.S.
- Athletic Training, M.S.
- Sports Science, M.S., Fort Lauderdale

**Department of Health Sciences**
- Cardiovascular Sonography, B.S., Tampa Bay
- Medical Sonography, B.S., Fort Lauderdale
- Health Science, B.H.Sc.
- Health Science, M.H.Sc.
- Health Science, D.H.Sc.
- Health Science, M.H.Sc./D.H.Sc. Dual Degree
- Health Science, Ph.D.

**Department of Occupational Therapy**
- Occupational Therapy, M.O.T., Fort Lauderdale
- Occupational Therapy, O.T.D., Tampa Bay
- Occupational Therapy, Dr.O.T., Fort Lauderdale
- Occupational Therapy, Ph.D., Fort Lauderdale

**Department of Physical Therapy**
- Entry-Level D.P.T., Fort Lauderdale
- Entry-Level D.P.T., Tampa Bay
- Hybrid Entry-Level D.P.T., Tampa Bay
- Physical Therapy T-D.P.T.
- Physical Therapy, Ph.D.

**Department of Physician Assistant**
- Physician Assistant, M.M.S., Fort Lauderdale
- Physician Assistant, M.M.S., Fort Myers
- Physician Assistant, M.M.S., Jacksonville
- Physician Assistant, M.M.S., Orlando

**Department of Speech Language Pathology**
- Speech-Language and Communication Disorders, B.S.
- Speech-Language Pathology, M.S.
- Speech-Language Pathology, SLP.D.

**Core Performance Standards for Admission and Progress**

The Nova Southeastern University Health Professions Division is pledged to the admission and matriculation of qualified students and wishes to acknowledge awareness of laws that prohibit discrimination against anyone on the basis of race, color, religion or creed, sex, pregnancy status, national or ethnic origin, nondisqualifying disability, age, ancestry, marital status, sexual orientation, gender, gender identity, military service, veteran status, or political beliefs or affiliations.

Regarding those students with verifiable disabilities, the university will not discriminate against such individuals who are otherwise qualified, but will expect applicants and
students to meet certain minimal technical standards (core performance standards) as set forth herein, with or without reasonable accommodation. In adopting these standards, the university believes it must keep in mind the ultimate safety of the patients whom its graduates will eventually serve as well as the efficacy and safety in the learning environment. The standards reflect what the university believes are reasonable expectations required of health professions students and personnel in performing common functions. Any exceptions to such standards must be approved by the dean of the student’s particular college based upon appropriate circumstances.

The holders of health care degrees must have the knowledge and skills to function in a broad variety of clinical situations and to render a wide spectrum of patient care. In order to carry out the activities described below, candidates for Health Professions Division degrees must be able to integrate consistently, quickly, and accurately all information received, and they must have the ability to learn, integrate, analyze, and synthesize data.

Honor and integrity of the health professions student and health care professional is essential and depends on the exemplary behavior of the individual health care provider in his or her relations with patients, faculty members, and colleagues. This includes accountability to oneself and to relationships with fellow students, future colleagues, faculty members, patients, and members of the general public who come under the student’s care or contribute to his or her training and growth. This applies to personal conduct that reflects on the student’s honesty and integrity in both academic and nonacademic settings, whether or not involving an NSU-sponsored activity. All students must have the capacity to manage their lives and anticipate their own needs. Upon accepting admission to NSU, each student subscribes to and pledges complete honesty and integrity in both academic and nonacademic performance standards) as set forth herein, with or without reasonable accommodation as the efficacy and safety in the learning environment. The standards reflect what the university believes are reasonable expectations required of health professions students and personnel in performing common functions. Any exceptions to such standards must be approved by the dean of the student’s applicable college/program administration.

Students must be able to perform multiple tasks in a diverse, dynamic, highly competitive, and challenging environment. They must be able to think quickly and accurately in an organized manner, despite environmental distractions.

**Interpersonal Communication**
Candidates and students must be able to interact and communicate effectively—with respect to policies, protocols, and processes—with faculty and staff members, students, patients, patient surrogates, and administration during the student’s educational program. They must be able to communicate effectively and sensitively with patients. Communication includes not only speech, but also reading and writing. Candidates and students must also be able to communicate effectively and efficiently in all written forms with all members of the health care team. They must have interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds.

A student must have sufficient proficiency with English to retrieve information from texts and lectures and communicate concepts on written exams and patient charts; elicit patient backgrounds; describe patient changes in moods, activity, and posture; and coordinate patient care with all members of the health care team. A student must be able to communicate or provide communication in lay language so that patients and their families can understand the patient’s conditions, treatment options, and instructions. The student must be able to accurately enter information in the patient’s electronic health record, according to his or her program’s requirements.

**Motor Skills**
Candidates and students must have sufficient motor function to execute movements reasonably required to provide general care and emergency treatment to patients. Examples of emergency treatment reasonably required of some health care professionals are cardiopulmonary resuscitation (CPR), administration of intravenous medication, the application of pressure to stop bleeding, the opening of obstructed airways, and the ability to calibrate and use various pieces of equipment. Such actions require coordination of both gross and fine muscular movements, equilibrium, and functional...
use of the senses of touch and vision. Physical therapy and occupational therapy students must be able to position patients for treatment, as well as teach the functions involving gross and fine movements.

**Strength and Mobility**
Candidates and students must have sufficient mobility to attend emergency codes and to perform such maneuvers as CPR when required. They must have the physical ability to move sufficiently from room to room and to maneuver in small places. Physical therapy and occupational therapy students must be able to administer treatment in a variety of settings and positions and move patients when required.

**Hearing**
Candidates and students must have sufficient auditory ability to monitor and assess health needs. They must be able to hear information given by the patient in answer to inquiries; to hear cries for help; to hear features in an examination, such as the auscultatory sounds; and to monitor equipment.

**Visual**
Candidates and students must have visual ability sufficient for observation, assessment, and rendering of treatment necessary in patient care. It must be consistent in many cases with being able to assess asymmetry, range of motion, and tissue texture changes. Physician assistant students must have sufficient visual ability to use ophthalmologic instruments. It is necessary to have adequate visual capabilities for proper evaluation and treatment integration. Candidates and students must be able to observe the patient and the patient’s responses, including body language and features of the examination and treatment.

**Tactile**
Candidates and students must have sufficient tactile ability for physical assessment. They must be able to perform palpation and functions of physical examination and/or those related to therapeutic intervention.

**Sensory**
Physician assistants are required to have an enhanced ability to use their sensory skills. These enhanced tactile and proprioceptive sensory skills are essential for appropriate evaluation and treatment of patients.

**Behavioral and Social Attributes**
Candidates and students must possess the emotional health required for full use of their intellectual abilities; the exercise of good judgment; the ability to take responsibility for their own actions—with respect to policies, protocols, and processes—with faculty and staff members, students, patients, patient surrogates, and administration during the student’s educational program; the prompt completion of all responsibilities attendant to the diagnosis, care, and treatment of patients; and the development of mature, sensitive, and effective relationships with the patients. Candidates and students must be able to physically tolerate taxing workloads, to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in the clinical problems of many patients. Compassion, diversity, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities that will be assessed during the admissions and education process.

**Expenses and Financial Aid**
Students should anticipate spending approximately $3,000 for books and $25,000 per academic year for living expenses. The primary financial responsibility for a student’s education rests with the student and his or her family, but economic circumstances for some families may make it necessary for the student to obtain assistance from other sources. The purpose of the Student Financial Assistance Program at Nova Southeastern University is to help as many qualified students as possible to complete their health professions education. Various loans, scholarships, and grants are available to qualified students to help ease the high cost of a health professions education. These assistance programs are described in a variety of separate university publications. The demands of these programs limit the number of hours a student can work at an outside job. During the months of clinical rotations, it is difficult or impossible for the students to work.

**Transfer Credits**
Any students wishing to transfer from another university into a Dr. Pallavi Patel College of Health Care Sciences program must provide the following:

- official transcripts from all colleges or universities previously attended, sent directly to Nova Southeastern University
- a letter of recommendation to the department chair or program director of the program in which the applicant is currently enrolled

Transfer credits, if awarded, will be given pending transcript evaluation and for courses that are directly applicable to courses outlined in the curriculum of the allied health department or program in which the student is applying. All transfer credit decisions will be made at the discretion of the department chair or program director.

**Promotion, Suspension, Dismissal, and Readmission**
The policies for promotion, suspension, dismissal, and readmission are outlined in the *Dr. Pallavi Patel College of Health Care Sciences Student Handbook*, which is revised, updated, and distributed annually to all students.
Department of Anesthesia

Master of Science in Anesthesia—Fort Lauderdale

Anesthesiologist Assistants (AAs), also known as anesthetists, are highly educated and skilled allied health professionals who work under the supervision of physician anesthesiologists to develop and implement anesthesia care plans. AAs work exclusively within the anesthesia care team environment as described by the American Society of Anesthesiologists (ASA). AAs possess a premedical background and a baccalaureate degree, and also complete a comprehensive didactic and clinical program at the graduate level. AAs are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. The goal of AA education is to nurture the transformation of qualified student applicants into competent health care practitioners who aspire to practice in the anesthesia care team.

The 27-month AA course of study consists of an intensive academic and didactic program that will prepare the student to function within the anesthesia care team. The students will get an extensive clinical training experience that will consist of a minimum of 2,000 clinical hours that encompass all aspects of anesthesia care for the surgical patient. Upon completion of the course of study, students will have earned a Master of Science (M.S.) in Anesthesia degree from NSU.

Students are trained in state-of-the-art AA facilities. Our classroom features high-definition technology—providing crisp visual presentation of course materials—and video recording capabilities, which allow students to review course lectures. The student’s educational experience is enhanced by two of the largest fully functional operating rooms. The NSU AA programs are the only ones in the country to have four high-fidelity anesthesia simulators (two adult, one pediatric, and one infant). A student library, lounge, and study center area complete the AA facilities.

The first year of study focuses on the foundations of anesthesia practice through classroom, mock operating room scenarios and studies, and laboratory work. Clinical experience during the first year will increase as the year progresses. The senior year (semesters 5, 6, and 7) will consist of clinical rotations assigned in two-week and four-week intervals. During the senior year, clinical rotations are full time and involve all specialty areas in anesthesia, including general surgery, pediatrics, obstetrics and gynecology, otolaryngology, orthopedics, neurosurgery, ophthalmology, genito-urinary surgery, vascular surgery, cardiac surgery, thoracic surgery, transplantation, and trauma. Clinical rotations include days, evenings, nights, weekends, and on-call—depending upon the rotation.

Nova Southeastern University’s Master of Science in Anesthesia program will prepare the student for the national certification exam administered by the National Board of Medical Examiners under the auspices of the National Commission for the Certification of Anesthesiologist Assistants. The certification process involves successfully completing the Certifying Examination for Anesthesiologist Assistants for initial certification, registration of continuing medical education credits every two years, and successful completion of the Examination for Continued Demonstration of Qualifications every six years.

Accreditation
The Master of Science in Anesthesia program at NSU is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP: 25400 U.S. Highway 19 North, Suite 158, Clearwater, Florida 33763, 727-210-2350).

Mission
The mission of the M.S. in Anesthesia is to prepare students for lifelong learning and leadership roles that will benefit the health care community. The educational process will be committed to training and educating competent anesthetists who will embrace the anesthesia care team to provide safe, quality, and compassionate anesthesia care for all degrees of illness for the surgical patient.

Vision
The M.S. in Anesthesia at Nova Southeastern University will provide state-of-the-art educational facilities and environment, which will allow anesthesiologist assistant students to cultivate into health care providers who are driven by compassion and guided by science to provide the best and safest patient care. It will be locally, nationally, and internationally recognized as an authority and primary source for anesthesiologist assistant information and services related to promoting the practice of delivering safe and quality anesthesia as a member of the anesthesia care team. The faculty members and students will be recognized as leaders within the profession through our collective service to the American Academy of Anesthesiologist Assistants (AAAA) and other professional organizations.
The Master of Science in Anesthesia program is dedicated to developing a well-rounded practicing AA. The faculty and current students are dedicated to the following program objectives:

- develop vigilant, knowledgeable, skilled, and compassionate anesthesia care providers who are capable of functioning within the anesthesia care team model in the delivery of all perioperative anesthesia services
- inspire and prepare the future leaders in our profession for service in local, state, and national organizations that shall advance the utilization and practice of anesthesiologist assistants
- advance anesthesiologist assistant education through the application of state-of-the-art technology and evidence-based learning practices that continue to support our student learning objectives
- develop highly skilled, interdisciplinary, and culturally sensitive faculty members who model professionalism and exemplify ethical practice, effective communication, and organizational leadership
- support the mission and goals of Nova Southeastern University—including our department, college, and division—in the provision of scholarship, service, teaching, and patient care

Admissions Requirements
Prospective Master of Science in Anesthesia students are selected by the Committee on Admissions (COA), which considers the overall qualities of the applicant. Areas of consideration include interpersonal skills, personal motivation, knowledge and understanding of the AA profession and the anesthesia care team, academic performance and level of achievement, life experiences, and recommendations. Personal interviews are offered to the most qualified applicants to assess interpersonal and communication skills, altruistic attitude, maturity, and commitment to the AA profession and anesthesia care team model.

Other requirements include
1. baccalaureate degree from a nationally recognized and regionally accredited college or university, including above average performance in courses required in a premed curriculum (refer to the following required courses)

Required Courses
- General biology with lab or Anatomy and physiology with lab (two semesters)
- General chemistry with lab (two semesters)
- Organic chemistry with lab (one semester)
- Biochemistry (one semester)
- General physics with lab (two semesters)
- Calculus (one semester)
- English composition (one semester)

Preferred Courses—Not Required
- Anatomy with lab (one semester)
- Physiology (one semester)
- Organic chemistry (a second semester)
- Microbiology* (one semester)
- Cell and molecular biology* (one semester)

One semester is equal to 1.5 quarter hours.

Note: A grade of 2.0 (C) or better is required in all prerequisite classes.

*An advanced course in Microbiology or Cellular and Molecular Biology is preferred and would meet one semester of the General Biology requirement.

2. official transcripts of all undergraduate and graduate coursework
3. a minimum cumulative GPA of 2.75 on a 4.0 grading scale; minimum GPA of 3.0 preferred
4. Graduate Record Examination (GRE) or Medical College Admissions Test (MCAT) scores (taken within the past five years) taken early enough for official scores to be received by admissions office by the supplemental application due date of February 15

The NSU code number is 5522. GRE information can be obtained from gre.org. Information for the MCAT is at aamc.org/students/mcat.

5. three letters of recommendation from people familiar with applicant’s prior academic performance, potential, character, work habits, and suitability for graduate study leading into a career in clinical practice
6. at least eight hours of documented anesthesia exposure by observation in the operating room
7. summary of an article published in a current anesthesia journal

The applicant who has graduated from a college or university in a country where English is not the primary language, regardless of United States residency status, must have a Test of English as a Foreign Language (TOEFL) score of 600 or higher for the written test (or equivalent score for the computer-based test), an International English Language Testing System (IELTS) score of 6.0, or a Pearson Test of English—Academic (PTE-Academic) score of 54. An official set of scores must be sent to Nova Southeastern University directly from the Educational Testing Service in Princeton, New Jersey.
Computer Requirements
All students are required to have a computer with the following minimum specifications:

- Pentium or AMD at 1.00 GHz or equivalent Macintosh processor
- 2 GB RAM
- video and monitor capable of 1024 x 768 resolution or better
- full duplex sound card and speakers
- high-speed wireless Internet connection with Internet service provider
- Windows XP or NT or MAC OS
- Microsoft Office 2000 with PowerPoint, Word, and Excel minimum
- printer capability

Application Procedures
Applicants for admission must submit to EPS, or be responsible for submission of
1. a completed application form, along with a $50, nonrefundable application fee, accepted July 15 to March 15
2. A completed online applications application
The Master of Science in Anesthesia program has partnered with CASAA, the Central Application Service for Anesthesiologist Assistants. To apply, visit our page on the CASAA website, casaa.liaisoncas.com.
3. three evaluation forms—supplied in the application package or by request—from supervisors or colleagues, clinical or non-clinical
4. official transcripts sent directly from all previously attended undergraduate, professional, and graduate institutions
5. all coursework from international institution(s), if applicant attended or is a graduate of any international institution(s)
Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed following.
- World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org
- Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org
- Educational Credential Evaluators, Inc.
  101 West Pleasant Street, Suite 200
  Milwaukee, WI 53212-3963
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University, Enrollment Processing Services, Dr. Pallavi Patel College of Health Care Sciences, Department of Anesthesia Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, FL 33329-9905.
6. complete résumé or curriculum vitae
7. copies of national and professional certifications or licenses by a recognized certifying body (if applicable)
8. summary of an article published in a current anesthesia journal (form supplied in application package)
9. evidence of eight hours documented anesthesia exposure (form supplied in application packet)
The Committee on Admissions will not consider an application until all required fees, credentials, transcripts, and evaluations have been received by the EPS.

Personal Interviews
Once your application is complete, the Committee on Admissions will decide whether or not your application is strong enough to warrant an invitation for a personal interview. Interviews are conducted at the Nova Southeastern University main location and are by invitation only. Interviews will be held from November through March. An invitation to interview is not a guarantee of admission. Notice of acceptance or action by the committee on admissions will be on a rolling or periodic schedule; therefore early completion of the application is in the best interest of the student.

Tuition and Fees
Tuition for 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (nova.edu/chcs/healthsciences/anesthesia/index.html). A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.

1. Acceptance Fee—$500. This fee is required to reserve the accepted applicant’s place in the entering first year class, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance.
2. Deposit—$250. This is due February 15, under the same terms as the Acceptance Fee.
3. Preregistration Fee—$250. This is due April 15, under the same terms as the Acceptance Fee.
The first semester’s tuition and fees, less the $1,000 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met. The financial ability of applicants to complete their training at the college is important because of the limited number of positions available in each class. Applicants should have specific plans for financing 27 months of professional education. This should include tuition, living expenses, books, equipment, and miscellaneous expenses. Each student is required to carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

4. Anesthesiologist Assistant Clinic Support Charge—$475/semester.

Requirements for Graduation
In order to be eligible to graduate with the Master of Science in Anesthesia degree, students must

• successfully complete all academic and clinical courses and degree requirements
• satisfactorily meet all financial and library obligations
• attend in person the commencement program at which the degree is conferred

M.S. in Anesthesia—Fort Lauderdale Curriculum

Start Date: June
Length: 27 months
Degree: Master of Science in Anesthesia
Total Credit Hours: 117
Total Clinical Hours: 2,000

All courses with the MHS prefix (except MHS 5103) will be taken online.

<table>
<thead>
<tr>
<th>Summer—Semester I Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANES 5048 Medical Terminology</td>
<td>1</td>
</tr>
<tr>
<td>ANES 5081 Introduction to Clinical Anesthesia</td>
<td>2</td>
</tr>
<tr>
<td>ANES 5301 Anesthesia Laboratory I</td>
<td>3</td>
</tr>
<tr>
<td>ANES 5328 ECG for Anesthesiologist Assistants</td>
<td>2</td>
</tr>
<tr>
<td>PHS 5400 Physiology</td>
<td>3</td>
</tr>
<tr>
<td>ANA 5420 Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>ANES 5621 Principles of Airway Management I</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Credits 18**

<table>
<thead>
<tr>
<th>Fall—Semester II Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANES 5302 Anesthesia Laboratory II</td>
<td>3</td>
</tr>
<tr>
<td>ANES 5462 Pharmacology for Anesthesia I</td>
<td>2</td>
</tr>
<tr>
<td>ANES 5601 Applied Physiology for Anesthesia Practice I</td>
<td>3</td>
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<tr>
<td>ANES 5622 Principles of Airway Management II</td>
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</tbody>
</table>
ANES 5801 Instrumentation and Monitoring 2
ANES 5901 Anesthesia Principles and Practices I 2
ANES 5104* Principles of Life Support 3
MHS 5205 Writing for Medical Publication 3

Total Credits 20

*Basic Life Support Certification and Advanced Cardiac Lifesaving will be obtained during this semester.

<table>
<thead>
<tr>
<th>Winter—Semester III Courses</th>
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<tbody>
<tr>
<td>ANES 5001 Clinical Anesthesia I</td>
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<td>ANES 5902 Anesthesia Principles and Practices II</td>
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<tr>
<td>ANES 5101 Student Lecture Series I</td>
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Total Credits 15

Minimum clinical experience: 150 hours (anesthesia rotations in hospital)

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<tr>
<th>Summer—Semester IV Courses</th>
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<tr>
<td>ANES 5000 Professional Issues in Anesthesiologist Assistant Practice</td>
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<tr>
<td>ANES 5002 Clinical Anesthesia II</td>
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<td>ANES 5304 Anesthesia Laboratory IV</td>
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<td>ANES 5903 Anesthesia Principle and Practices III</td>
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<td>ANES 5107 Internship</td>
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<tr>
<td>ANES 5603 Applied Physiology for Anesthesia Practice</td>
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<tr>
<td>ANES 5500 Ultrasound-Guided Regional Anesthesia and Vascular Access</td>
<td>3</td>
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<tr>
<td>ANES 5102 Student Lecture Series II</td>
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</tbody>
</table>

Total Credits 22

Minimum clinical experience: 144 hours (anesthesia rotations in hospital)

Pediatric Advanced Cardiac Lifesaving will be obtained during this semester.
Clinical Year, Fall—Semester V Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ANES 6001</td>
<td>Clinical Anesthesia III</td>
<td>13</td>
</tr>
</tbody>
</table>

**Total Credits 13**

Minimum clinical experience: 675 hours (anesthesia rotations in hospital)

Clinical Year, Winter—Semester VI Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ANES 6002</td>
<td>Clinical Anesthesia IV</td>
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<tr>
<td>ANES 6110</td>
<td>Anesthesia Review</td>
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</table>

**Total Credits 17**

Minimum clinical experience: 675 hours (anesthesia rotations in hospital)

Clinical Year, Summer—Semester VII Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ANES 6003</td>
<td>Clinical Anesthesia V</td>
<td>12</td>
</tr>
</tbody>
</table>

**Total Credits 12**

Minimum clinical experience: 356 hours (anesthesia rotations in hospital)

Curriculum is subject to change as directed by the department.
M.S. in Anesthesia—Fort Lauderdale Course Descriptions

ANES 5000—Professional Issues in Anesthesiologist Assistant Practice
As providers within the dynamic U.S. health care system, anesthesiologist assistants must possess the ability to exhibit professionalism in a wide range of clinical and nonclinical settings. This course will provide learners with an overview of contemporary and historical practice issues relevant to the anesthesiologist assistant. (2 credits)

ANES 5001—Clinical Anesthesia I
Developmental skills and foundations of the clinical practice of anesthesia are gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Participation and responsibilities increase through the year as knowledge and skills develop. (3 credits)

ANES 5002—Clinical Anesthesia II
This course is a continuation of ANES 5001. Developmental skills and foundations of the clinical practice of anesthesia are gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Participation and responsibilities increase through the year as knowledge and skills develop. (3 credits)

ANES 5081—Introduction to Clinical Anesthesia
Prepares and educates the student to work within the anesthesia care team. Introduction to induction, maintenance, and emergence from anesthesia. Includes history of anesthesia, types of anesthesia, universal precautions and infection control, layout of the operating room, sterile fields and techniques, interacting with patients, starting intravenous catheters and arterial cannulae, obtaining arterial blood samples, and application of ASA-standard monitors. Students will use an anesthesia simulator to gain the basic knowledge and usage of monitors. (2 credits)

ANES 5107—Internship
Students will complete 80 hours of internship in an area of interest within a health care organization outside of their regular places of employment. The final product of this internship is an in-depth SWOT analysis of the unit or health care organization. The internship site requires prior Department of Anesthesia faculty member approval. (5 credits)

ANES 5048—Medical Terminology
This is a self-study, online course. Use of medical language for appropriate and accurate communication in patient care. Course includes terminology and symbols, word formation, body systems and disease terms, abbreviations, and procedures. (1 credit)

ANES 5301—Anesthesia Laboratory I
A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students’ understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (3 credits)

ANES 5302—Anesthesia Laboratory II
This course is a continuation of ANES 5301. A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their
didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students’ understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (3 credits)

ANES 5303—Anesthesia Laboratory III
This course is a continuation of ANES 5302. A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students’ understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (3 credits)

ANES 5304—Anesthesia Laboratory IV
This course is a continuation of ANES 5303. A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students’ understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (3 credits)

ANES 5328—ECG for Anesthesiologist Assistants
This course presents a comprehensive approach to perioperative emergency and advanced cardiac life support, including monitoring, interpretation, and management of pathologic conditions affecting the circulatory and pulmonary systems. Relevant anatomy, physiology, neurophysiology, pharmacology, and medical equipment will be included. Emphasis is placed on rhythm strip analysis and evidenced-based perioperative applications. (2 credits)

PHS 5400—Physiology
Clinically relevant physiologic principles of the major organ systems covered in Anatomy. Pathological changes that occur in the human physiology in the disease process. (3 credits)

ANA 5420—Anatomy
Gross structures of the human body. Integrates topographic and radiographic anatomy to stress the application and importance of clinical anatomy. Develops the knowledge of the human anatomy necessary for the practice of the profession. (5 credits)

ANES 5462—Pharmacology for Anesthesia I
Emphasizes drugs specifically related to the practice of anesthesia, including inhaled anesthetics, opioids, barbiturates, benzodiazepines, anticholinesterases and anticholinergics, neuromuscular blockers, adrenergic agonists and antagonists, nonsteroidal anti-inflammatory drugs, antidysrhythmics, calcium channel blockers, diuretics, anticoagulants, antihistamines, and antimicrobials. (2 credits)

ANES 5463—Pharmacology for Anesthesia II
This course is a continuation of ANES 5462. Emphasizes drugs specifically related to the practice of anesthesia, including inhaled anesthetics, opioids, barbiturates, benzodiazepines, anticholinesterases and anticholinergics, neuromuscular blockers, adrenergic agonists and antagonists, nonsteroidal anti-inflammatory drugs, antidysrhythmics, calcium channel blockers, diuretics, anticoagulants, antihistamines, and antimicrobials. (2 credits)

ANES 5500—Ultrasound-Guided Regional Anesthesia
This course will allow students to develop key skills in the utilization of ultrasound technology for a range of practical skills, including regional anesthesia and vascular techniques. It will review the functional anatomy and physiology associated with the indication for regional anesthesia during the perioperative period. The pharmacological properties of local anesthetics will be emphasized in various regional anesthesia techniques as applied to the head, neck, upper and lower limbs, and trunk, as necessary. (3 credits)

ANES 5601—Applied Physiology for Anesthesia Practice I
This course offers pathophysiology in a systems approach—cardiovascular, pulmonary, renal, neuro, metabolic, and endocrine. It emphasizes hemodynamics, Starling forces, pulmonary responses, renal hemodynamics, temperature regulation, blood gases/pH, and maternal and fetal physiology. The course also emphasizes those systems that affect
evaluation and planning for anesthesia and that are affected by the administration of anesthesia. (3 credits)

ANES 5602—Applied Physiology for Anesthesia Practice II
This course is a continuation of ANES 5601, which offers pathophysiology in a systems approach—cardiovascular, pulmonary, renal, neuro, metabolic, and endocrine. It emphasizes hemodynamics, Starling forces, pulmonary responses, renal hemodynamics, temperature regulation, blood gases/pH, and maternal and fetal physiology. The course also emphasizes those systems that affect evaluation and planning for anesthesia and that are affected by the administration of anesthesia. (2 credits)

ANES 5801—Principles of Instrumentation and Patient Monitoring I
Practical principles, application, and interpretation of various monitoring modalities including ECG, invasive and noninvasive blood pressure, oximetry, cardiac output, respiratory gas analysis, respiration, and instrumentation as they pertain to anesthesia practice. Also includes intraoperative neurophysiology monitoring, temperature, renal function, coagulation/hemostasis, neuromuscular junction, transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (2 credits)

ANES 5603—Applied Physiology for Anesthesia Practice III
This course is a continuation of ANES 5602, which offers pathophysiology in a systems approach—cardiovascular, pulmonary, renal, neuro, metabolic, and endocrine. It emphasizes hemodynamics, Starling forces, pulmonary responses, renal hemodynamics, temperature regulation, blood gases/pH, and maternal and fetal physiology. The course also emphasizes those systems that affect evaluation and planning for anesthesia and that are affected by the administration of anesthesia. (3 credits)

ANES 5802—Instrumentation and Monitoring II
This course is a continuation of ANES 5801. Practical principles, application, and interpretation of various monitoring modalities, including ECG, invasive blood pressure, oximetry, cardiac output, respiratory gas analysis, respiration, and instrumentation, as they pertain to anesthesia practice will be discussed. The course also includes intraoperative neurophysiology monitoring, temperature, renal function, coagulation/hemostasis, neuromuscular junction, transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (1 credit)

ANES 5901—Anesthesia Principle and Practices I
Principles involved in the formulation of anesthetic plans based upon data obtained during the preoperative evaluation. Includes the formulation and practices of different anesthetic plans and techniques as related to specific surgical procedures and pathophysiology. (2 credits)

ANES 5902—Anesthesia Principle and Practices II
This course is a continuation of ANES 5901. Principles involved in the formulation of anesthetic plans based upon data obtained during the preoperative evaluation. Includes the formulation and practices of different anesthetic plans and techniques as related to specific surgical procedures and pathophysiology. (2 credits)

ANES 5903—Anesthesia Principle and Practices III
This course is a continuation of ANES 5901. It discusses the principles involved in the formulation of anesthetic plans based upon data obtained during the preoperative evaluation and includes the formulation and practices of different anesthetic plans and techniques as related to specific surgical procedures and pathophysiology. (2 credits)

ANES 6001—Clinical Anesthesia III
Encompasses the student’s clinical experience in required rotations through all sub-specialty areas of anesthesia. Clinical rotations are assigned in two-week and four-week intervals and will require being on-call during some nights and weekends. Clinical practice of anesthesia is gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Monthly required readings are assigned. Monthly comprehensive examinations are administered. Each course’s grade is composed of clinical evaluations and comprehensive examination scores. (13 credits)

ANES 6002—Clinical Anesthesia IV
This course is a continuation of ANES 6001. It encompasses the student’s clinical experience in required rotations through all sub-specialty areas of anesthesia. Clinical rotations are assigned in two-week and four-week intervals and will require being on-call during some nights and weekends. Clinical practice of anesthesia is gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Monthly required readings are assigned. Monthly comprehensive examinations are administered. Each course’s grade is composed of clinical evaluations and comprehensive examination scores. (15 credits)

ANES 6003—Clinical Anesthesia V
This course is a continuation of ANES 6002. It encompasses the student’s clinical experience in required rotations through all sub-specialty areas of anesthesia. Clinical rotations are assigned in two-week and four-week intervals and will require being on-call during some nights and weekends. Clinical practice of anesthesia is gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Monthly required readings
Anesthesiologist Assistants (AAs), also known as anesthetists, are highly educated and skilled allied health professionals who work under the supervision of physician anesthesiologists to develop and implement anesthesia care plans. AAs work exclusively within the anesthesia care team environment as described by the American Society of Anesthesiologists (ASA). AAs possess a premedical background and a baccalaureate degree, and also complete a comprehensive didactic and clinical program at the graduate level. AAs are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. The goal of AA education is to nurture the transformation of qualified student applicants into competent health care practitioners who aspire to practice in the anesthesia care team.

The 27-month AA course of study consists of an intensive academic and didactic program that will prepare the student to function within the anesthesia care team. The students will get an extensive clinical training experience that will consist of a minimum of 2,000 clinical hours that encompass all aspects of anesthesia care for the surgical patient. Upon completion of the course of study, students will have earned a Master of Science in Anesthesia degree from NSU.

Through close, personal interaction with highly qualified faculty members and the latest available anesthesia technology, the first year (semesters 1, 2, 3, and 4) encompasses an in-depth course of study in the fundamentals of anesthesia. Clinical experience during the first year will increase as the year progresses. The didactic curriculum, complemented by simulation learning, will provide the student with the necessary skills to meet the clinical objectives of the curriculum. The senior year (semesters 5, 6, and 7) will consist of clinical rotations assigned in two-week and four-week intervals. During the senior year, clinical rotations are full time and involve all specialty areas in anesthesia, including general surgery, pediatrics, obstetrics and gynecology, otolaryngology, orthopedics, neurosurgery, ophthalmology, genito-urinary...
surgery, vascular surgery, cardiac surgery, thoracic surgery, transplantation, and trauma. Clinical rotations include days, evenings, nights, weekends, and on-call—depending upon the rotation.

Nova Southeastern University's Master of Science in Anesthesia program will prepare the student for the national certification exam administered by the National Board of Medical Examiners under the auspices of the National Commission for the Certification of Anesthesiologist Assistants. The certification process involves successfully completing the Certifying Examination for Anesthesiologist Assistants for initial certification, registration of continuing medical education credits every two years, and successful completion of the Examination for Continued Demonstration of Qualifications every six years.

**Accreditation**

The Master of Science in Anesthesia program at NSU is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP: 25400 U.S. Highway 19 North, Suite 158, Clearwater, Florida 33763, 727-210-2350).

**Mission**

The mission of the Master of Science in Anesthesia is to prepare students for lifelong learning and leadership roles that will benefit the health care community. The educational process will be committed to training and educating competent anesthetists who will embrace the anesthesia care team to provide safe, quality, and compassionate anesthesia care for all degrees of illness for the surgical patient.

**Vision**

The Master of Science in Anesthesia at Nova Southeastern University will provide state-of-the-art educational facilities and environment, which will allow anesthesiologist assistant students to cultivate into health care providers who are driven by compassion and guided by science to provide the best and safest patient care. It will be locally, nationally, and internationally recognized as an authority and primary source for anesthesiologist assistant information and services related to promoting the practice of delivering safe and quality anesthesia as a member of the anesthesia care team. The faculty members and students will be recognized as leaders within the profession through our collective service to the American Academy of Anesthesiologist Assistants (AAAA) and other professional organizations.

The Master of Science in Anesthesia program is dedicated to developing a well-rounded practicing AA. The faculty and current students are dedicated to the following program objectives:

- develop vigilant, knowledgeable, skilled, and compassionate anesthesia care providers who are capable of functioning within the anesthesia care team model in the delivery of all perioperative anesthesia services
- inspire and prepare the future leaders in our profession for service in local, state, and national organizations that shall advance the utilization and practice of anesthesiologist assistants
- advance anesthesiologist assistant education through the application of state-of-the-art technology and evidence-based learning practices that continue to support our student learning objectives
- develop highly skilled, interdisciplinary, and culturally sensitive faculty members who model professionalism and exemplify ethical practice, effective communication, and organizational leadership
- support the mission and goals of Nova Southeastern University, including our department, college, and division, in the provision of scholarship, service, teaching, and patient care

**Admissions Requirements**

Prospective M.S. in Anesthesia students are selected by the Committee on Admissions (COA), which considers the overall qualities of the applicant. Areas of consideration include interpersonal skills, personal motivation, knowledge and understanding of the AA profession and the anesthesia care team, academic performance and level of achievement, life experiences, and recommendations. Personal interviews are offered to the most qualified applicants to assess interpersonal and communication skills, altruistic attitude, maturity, and commitment to the AA profession and anesthesia care team model.

**Other requirements include**

1. baccalaureate degree from a nationally recognized and accredited college or university, including above average performance in courses required in a premed curriculum (refer to the following required courses)

**Required**

- English (3 semester hours or 4 quarter hours)
- General biology with lab or Anatomy and physiology with lab (6 semester hours or 9 quarter hours)
- General chemistry with lab (6 semester hours or 9 quarter hours)
- Organic chemistry with lab (3 semester hours or 4 quarter hours)
- Biochemistry (3 semester hours or 4 quarter hours)
Computer Requirements
All students are required to have a computer with the following minimum specifications:

• Pentium or AMD at 1.00 GHz or equivalent Macintosh processor
• 256 megabytes RAM
• Video and monitor capable of 1024 x 768 resolution or better
• CD-ROM drive
• Full duplex sound card and speakers
• Internet connection with Internet service provider (DSL, cable, or satellite highly recommended)
• 800 x 600 or higher resolution
• Windows XP or NT or MAC OS or better
• Microsoft Office 2000 with PowerPoint, Word, and Excel minimum
• Printer capability

Application Procedures
Applicants for admission must submit to EPS, or be responsible for submission of:

1. a completed application form, along with a $50, nonrefundable application fee, accepted July 15 to February 15
2. three evaluation forms—supplied in the application package or by request—from supervisors or colleagues, clinical or non-clinical
3. Official transcripts sent directly from all previously attended undergraduate, professional, and graduate institutions
4. All coursework from international institution(s), if applicant attended or is a graduate of any international institution(s)
   Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed following.

• World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org

• Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org

2. Official transcripts of all undergraduate and graduate coursework
3. A minimum cumulative GPA of 2.75 on a 4.0 grading scale; minimum GPA of 3.0 preferred
4. Graduate Record Examination (GRE) or Medical College Admissions Test (MCAT) scores (taken within the past five years) taken early enough for official scores to be received by admissions office by the supplemental application due date of February 15

The NSU code number is 5522. GRE information can be obtained from gre.org. Information for the MCAT is at aamc.org/students/mcat.

5. Three letters of recommendation from people familiar with applicant’s prior academic performance, potential, character, work habits, and suitability for graduate study leading into a career in clinical practice
6. At least eight hours of documented anesthesia exposure by observation in the operating room
7. Summary of an article published in a current anesthesia journal

The applicant who has graduated from a college or university in a country where English is not the primary language, regardless of United States residency status, must have a Test of English as a Foreign Language (TOEFL) score of 600 or higher for the written test (or equivalent score for the computer-based test), an International English Language Testing System (IELTS) score of 6.0, or a Pearson Test of English—Academic (PTE-Academic) score of 54. An official set of scores must be sent to Nova Southeastern University directly from the Educational Testing Service in Princeton, New Jersey.

Advanced Placement and Transfer of Credits
Because of its highly integrated and compact curriculum, the anesthesiologist assistant (AA) programs require matriculants to complete the entire curriculum at the specified campus. No advanced placement, transfer of credit, or credit for experiential learning will be granted.
It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University, Enrollment Processing Services, Dr. Pallavi Patel College of Health Care Sciences, Department of Anesthesia Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, FL 33329-9905.

5. complete résumé or curriculum vitae
6. copies of national and professional certifications or licenses by a recognized certifying body (if applicable)
7. summary of an article published in a current anesthesia journal (form supplied in application package)
8. evidence of eight hours documented anesthesia exposure (form supplied in application packet)

The Committee on Admissions will not consider an application until all required fees, credentials, transcripts, and evaluations have been received by the EPS.

**Personal Interviews**

Once your application is complete, the Committee on Admissions will decide whether or not your application is strong enough to warrant an invitation for a personal interview. Interviews are conducted at the NSU Tampa Bay Regional Campus and are by invitation only. Interviews will be held from October through March. An invitation to interview is not a guarantee of admission. Notice of acceptance or action by the committee on admissions will be on a “rolling” or periodic schedule; therefore early completion of the application is in the best interest of the student.

**Tuition and Fees**

Tuition for 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (nova.edu/chcs/healthsciences/anesthesia/index.html). A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.

1. **Acceptance Fee—$500.** This fee is required to reserve the accepted applicant’s place in the entering first-year class, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance.

2. **Deposit—$250.** This is due February 15, under the same terms as the Acceptance Fee.

3. **Preregistration Fee—$250.** This is due April 15, under the same terms as the Acceptance Fee.

The first semester’s tuition and fees, less the $1,000 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met. The financial ability of applicants to complete their training at the college is important because of the limited number of positions available in each class. Applicants should have specific plans for financing 27 months of professional education. This should include tuition, living expenses, books, equipment, and miscellaneous expenses. Each student is required to carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

**Jewelry, Body Piercing, and Tattoos**

Only appropriate jewelry for professional business attire is permitted. Visible body jewelry, such as rings for the nose, eyebrow, lip, chin, cheek, or tongue, is NOT permitted. Tattoos must be covered by clothing.

**Requirements for Graduation**

In order to be eligible to graduate with the Master of Science in Anesthesia degree, students must

- successfully complete all academic and clinical courses and degree requirements
- satisfactorily meet all financial and library obligations
- attend in person the commencement program at which the degree is conferred
M.S. in Anesthesia—Tampa Bay Curriculum

Start Date: May
Length: 27 months
Degree: Master of Science in Anesthesia
Total Credit Hours: 117
Total Clinical Hours: 2,000
Note: All courses with the MHS prefix will be taken online.

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<tr>
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<tbody>
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<tr>
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<tr>
<td>PHST 5400 Physiology</td>
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<tr>
<td>MHS 5205 Writing for Medical Publication</td>
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</tr>
<tr>
<td>ANET 5104* Principles of Life Support</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

*Basic and Advanced Cardiac Lifesaving and Pediatric Advanced Lifesaving will be obtained during this semester.

<table>
<thead>
<tr>
<th>Winter—Semester III Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANET 5001 Clinical Anesthesia I</td>
<td>4</td>
</tr>
<tr>
<td>ANET 5463 Pharmacology for Anesthesia II</td>
<td>2</td>
</tr>
<tr>
<td>ANET 5303 Anesthesia Laboratory III</td>
<td>3</td>
</tr>
</tbody>
</table>
ANET  5602  Applied Physiology for Anesthesia Practice II    3
ANET  5902  Anesthesia Principles and Practices II    2
ANET  5102  Student Lecture Series II    1

**Total Credits 15**

Minimum clinical experience: 150 hours (anesthesia rotations in hospital)

### Summer—Semester IV Courses

<table>
<thead>
<tr>
<th>Course Code</th>
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<tr>
<td>ANET 5107</td>
<td>Internship</td>
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<tr>
<td>ANET 5000</td>
<td>Professional Issues in Anesthesiologist Assistant Practice</td>
<td>2</td>
</tr>
<tr>
<td>ANET 5002</td>
<td>Clinical Anesthesia II</td>
<td>3</td>
</tr>
<tr>
<td>ANET 5304</td>
<td>Anesthesia Laboratory IV</td>
<td>3</td>
</tr>
<tr>
<td>ANET 5602</td>
<td>Applied Physiology for Anesthesia Practice II</td>
<td>2</td>
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<tr>
<td>ANET 5903</td>
<td>Anesthesia Principles and Practices III</td>
<td>2</td>
</tr>
<tr>
<td>ANET 5500</td>
<td>Ultrasound-Guided Regional Anesthesia and Vascular Access</td>
<td>3</td>
</tr>
<tr>
<td>ANET 5103</td>
<td>Student Lecture Series III</td>
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</tbody>
</table>

**Total Credits 21**

Minimum clinical experience: 144 hours (anesthesia rotations in hospital)

### Clinical Year, Fall—Semester V Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>ANET 6000</td>
<td>Clinical Anesthesia III</td>
<td>13</td>
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</table>

**Total Credits 13**

Minimum clinical experience: 675 hours (anesthesia rotations in hospital)

### Clinical Year, Winter—Semester VI Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>ANET 6002</td>
<td>Clinical Anesthesia IV</td>
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<tr>
<td>ANET 6110</td>
<td>Anesthesia Review</td>
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</tbody>
</table>

**Total Credits 17**

Minimum clinical experience: 675 hours (anesthesia rotations in hospital)

### Clinical Year, Summer—Semester VII Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ANET 6003</td>
<td>Clinical Anesthesia V</td>
<td>12</td>
</tr>
</tbody>
</table>

**Total Credits 12**

Minimum clinical experience: 356 hours (anesthesia rotations in hospital)

Curriculum is subject to change as directed by the department.
M.S. in Anesthesia—Tampa Bay Course Descriptions

ANET 5000—Professional Issues in Anesthesiologist Assistant Practice
As providers within the dynamic U.S. health care system, anesthesiologist assistants must possess the ability to exhibit professionalism in a wide range of clinical and nonclinical settings. This course will provide learners with an overview of contemporary and historical practice issues relevant to the anesthesiologist assistant. (2 credits)

ANET 5001—Clinical Anesthesia I
Developmental skills and foundations of the clinical practice of anesthesia are gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Participation and responsibilities increase through the year as knowledge and skills develop. (4 credits)

ANET 5002—Clinical Anesthesia II
This course is a continuation of ANET 5001. Developmental skills and foundations of the clinical practice of anesthesia are gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Participation and responsibilities increase through the year as knowledge and skills develop. (3 credits)

ANET 5003—Clinical Anesthesia III
This course is a continuation of ANET 5002. Developmental skills and foundations of the clinical practice of anesthesia are gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Participation and responsibilities increase through the year as knowledge and skills develop. (13 credits)

ANET 5004—Clinical Anesthesia IV
This course is a continuation of ANET 5003. Developmental skills and foundations of the clinical practice of anesthesia are gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Participation and responsibilities increase through the year as knowledge and skills develop. (15 credits)

ANET 5005—Student Lecture Series I
This seminar-style course expands upon previous anesthesia coursework as part of a three-course series. Learners will research topics pertinent to the practice of anesthesia and participate in podium presentations of their findings using visual aids. Through the course activities, learners will develop their oral communications skills and ability to synthesize medical literature. Topics are assigned by the course instructor. (1 credit)

ANET 5006—Student Lecture Series II
This course is a continuation of ANET 5005 and will follow the same format. In this course of the student lecture series, learners will select their own topic of research with guidance from the course instructor. This course will develop the learners' ability to select an appropriate research topic, as well as expand their knowledge of anesthesia. Podium presentations using visual aids are required. (1 credit)

ANET 5007—Internship
Students will complete 80 hours of internship in an area of interest within a health care organization outside of their regular places of employment. The final product of this internship is an in-depth SWOT analysis of the unit or health care organization. The internship site requires prior Department of Anesthesia faculty member approval. (3 credits)

ANET 5008—Principles of Airway Management I
This course will provide an opportunity to learn and appreciate structure, function, pathophysiology, disease, and management of the human airway. The basic and advanced principles of elective and emergent airway management, including equipment and techniques, will be covered. Examination, recognition, techniques, and management involved in pediatric and adult difficult airways will be discussed. Course will correlate with laboratory work for a better understanding and use of bag/mask ventilation, oral and nasal airways, oral and nasal intubation techniques, lightwands, fiberoptic intubations, double lumen tubes, surgical airways, and application of laryngeal mask airway. (2 credits)

ANET 5009—Principles of Airway Management II
This course is a continuation of ANET 5008. This course will provide an opportunity to learn and appreciate structure, function, pathophysiology, disease, and management of the human airway. The basic and advanced principles of elective and emergent airway management, including equipment and techniques, will be covered. Examination, recognition, techniques, and management involved in pediatric and adult difficult airways will be discussed. Course will correlate with laboratory work for a better understanding and use of bag/mask ventilation, oral and nasal airways, oral and nasal intubation techniques, lightwands, fiberoptic intubations, double lumen tubes, surgical airways, and application of laryngeal mask airway. (2 credits)
double lumen tubes, surgical airways, and application of laryngeal mask airway. (2 credits)

**ANET 5048—Medical Terminology**
This is a self-study, online course. Use of medical language for appropriate and accurate communication in patient care. Course includes terminology and symbols, word formation, body systems and disease terms, abbreviations, and procedures. (1 credit)

**ANET 5081—Introduction to Clinical Anesthesia**
Prepares and educates the student to work within the anesthesia care team. Introduction to induction, maintenance, and emergence from anesthesia. Includes history of anesthesia, types of anesthesia, universal precautions and infection control, layout of the operating room, sterile fields and techniques, interacting with patients, starting intravenous catheters and arterial cannulae, obtaining arterial blood samples, and application of ASA-standard monitors. Students will use an anesthesia simulator to gain the basic knowledge and usage of monitors. (2 credits)

**ANET 5301—Anesthesia Laboratory I**
A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students’ understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (3 credits)

**ANET 5302—Anesthesia Laboratory II**
This course is a continuation of ANET 5301. A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students’ understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (3 credits)

**ANET 5303—Anesthesia Laboratory III**
This course is a continuation of ANET 5302. A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students’ understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (3 credits)

**ANET 5304—Anesthesia Laboratory IV**
This course is a continuation of ANET 5303. A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students’ understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (3 credits)

**ANET 5328—ECG for Anesthesiologist Assistants**
Basic and advanced ECG interpretation using simulators to understand an overview of heart anatomy, function, and neurophysiology. (2 credits)

**PHST 5400—Physiology**
Clinically relevant physiologic principles of the major organ systems covered in Anatomy. Pathological changes that occur in the human physiology in the disease process. (3 credits)

**ANAT 5420—Anatomy**
Gross structures of the human body. Integrates topographic and radiographic anatomy to stress the application and importance of clinical anatomy. Develops the knowledge of the human anatomy necessary for the practice of the profession. (5 credits)
ANET 5462—Pharmacology for Anesthesia I
Emphasizes drugs specifically related to the practice of anesthesia, including inhaled anesthetics, opioids, barbiturates, benzodiazepines, anticholinesterases and anticholinergic, neuromuscular blockers, adrenergic agonists and antagonists, nonsteroidal anti-inflammatory drugs, antidyshyrmatics, calcium channel blockers, diuretics, anticoagulants, antihistamines, and antimicrobials. (2 credits)

ANET 5463—Pharmacology for Anesthesia II
This course is a continuation of ANET 5462. Emphasizes drugs specifically related to the practice of anesthesia, including inhaled anesthetics, opioids, barbiturates, benzodiazepines, anticholinesterases and anticholinergic, neuromuscular blockers, adrenergic agonists and antagonists, nonsteroidal anti-inflammatory drugs, antidyshyrmatics, calcium channel blockers, diuretics, anticoagulants, antihistamines, and antimicrobials. (2 credits)

ANET 5500—Ultrasound-Guided Regional Anesthesia and Vascular Access
This course will allow students to develop key skills in the utilization of ultrasound technology for a range of practical skills, including regional anesthesia and vascular techniques. It will review the functional anatomy and physiology associated with the indication for regional anesthesia during the perioperative period. The pharmacological properties of local anesthetics will be emphasized in various regional anesthesia techniques as applied to the head, neck, upper and lower limbs, and trunk, as necessary. (3 credits)

ANET 5601—Applied Physiology for Anesthesia Practice I
Pathophysiology in a systems approach—cardiovascular, pulmonary, renal, neuro, metabolic, and endocrine. Emphasizing hemodynamics, Starling forces, pulmonary responses, renal hemodynamics, temperature regulation, blood gases/pH, and maternal and fetal physiology. Also emphasizes those systems that affect evaluation and planning for anesthesia and are affected by the administration of anesthesia. (3 credits)

ANET 5602—Applied Physiology for Anesthesia Practice II
This course is a continuation of ANET 5601. Pathophysiology in a systems approach—cardiovascular, pulmonary, renal, neuro, metabolic, and endocrine. Emphasizing hemodynamics, Starling forces, pulmonary responses, renal hemodynamics, temperature regulation, blood gases/pH, and maternal and fetal physiology. Also emphasizes those systems that affect evaluation and planning for anesthesia and are affected by the administration of anesthesia. (3 credits)

ANET 5603—Applied Physiology for Anesthesia Practice III
This course is a continuation of ANET 5602, which offers pathophysiology in a systems approach—cardiovascular, pulmonary, renal, neuro, metabolic, and endocrine. It emphasizes hemodynamics, Starling forces, pulmonary responses, renal hemodynamics, temperature regulation, blood gases/pH, and maternal and fetal physiology. The course also emphasizes those systems that effect evaluation and planning for anesthesia and that are affected by the administration of anesthesia. (2 credits)

ANET 5801—Principles of Instrumentation and Patient Monitoring I
Practical principles, application, and interpretation of various monitoring modalities including ECG, invasive and noninvasive blood pressure, oximetry, cardiac output, respiratory gas analysis, respiration, and instrumentation as they pertain to anesthesia practice. Also includes intraoperative neurophysiology monitoring, temperature, renal function, coagulation/hemostasis, neuromuscular junction, transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (2 credits)

ANET 5901—Anesthesia Principles and Practices I
Principles involved in the formulation of anesthetic plans based upon data obtained during the preoperative evaluation. Includes the formulation and practices of different anesthetic plans and techniques as related to specific surgical procedures and pathophysiology. (2 credits)

ANET 5902—Anesthesia Principle and Practices II
This course is a continuation of ANET 5901. Principles involved in the formulation of anesthetic plans based upon data obtained during the preoperative evaluation. Includes the formulation and practices of different anesthetic plans and techniques as related to specific surgical procedures and pathophysiology. (2 credits)

ANET 5903—Anesthesia Principles and Practices III
This course is a continuation of ANET 5902. It discusses the principles involved in the formulation of anesthetic plans based upon data obtained during the preoperative evaluation and includes the formulation and practices of different anesthetic plans and techniques as related to specific surgical procedures and pathophysiology. (2 credits)

ANET 6000—Clinical Anesthesia III
Encompasses the student’s clinical experience in required rotations through all sub-specialty areas of anesthesia. Clinical rotations are assigned in two-week and four-week intervals and will require being on-call during some nights and weekends. Clinical practice of anesthesia is gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Monthly required readings are assigned. Monthly comprehensive examinations are administered. Each course’s grade is composed of clinical evaluations and comprehensive examination scores. (13 credits)
ANET 6002—Clinical Anesthesia IV
This course is a continuation of ANET 6001. Encompasses the student's clinical experience in required rotations through all sub-specialty areas of anesthesia. Clinical rotations are assigned in two-week and four-week intervals and will require being on-call during some nights and weekends. Clinical practice of anesthesia is gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Monthly required readings are assigned. Monthly comprehensive examinations are administered. Each course's grade is composed of clinical evaluations and comprehensive examination scores. (15 credits)

ANET 6003—Clinical Anesthesia V
This course is a continuation of ANET 6002. Encompasses the student's clinical experience in required rotations through all sub-specialty areas of anesthesia. Clinical rotations are assigned in two-week and four-week intervals and will require being on-call during some nights and weekends. Clinical practice of anesthesia is gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Monthly required readings are assigned. Monthly comprehensive examinations are administered. Each course's grade is composed of clinical evaluations and comprehensive examination scores. (12 credits)

ANET 6110—Anesthesia Review
Lectures, required readings, and discussions with faculty members, visiting faculty members, and current residents on clinical and research topics. Includes correlation of case management and complications. (1 credit)

MHS 5103—Principles of Life Support
Provides for the certification in Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS). Courses will focus on assessment and management of adults, children, and infants in a cardiopulmonary crisis. Pediatric and Advanced Cardiac Lifesaving will be obtained during this semester. (3 credits)

MHS 5205—Writing for Medical Publications
This course provides a study and review of quality medical writing techniques, issues, and procedures with emphasis on cultivating personal style and content. Focus will be on writing for peer- and evidence-based publications. (3 credits)

For information about the NSU AA specialization, or to request an AA admissions application packet, please contact the NSU admissions office at:

Nova Southeastern University
Health Professions Division
Anesthesiologist Assistant
3200 South University Drive
Fort Lauderdale, FL 33328-2018
(954) 262-1101 or 800-356-0026, ext. 21101
https://healthsciences.nova.edu/healthsciences/anesthesia

Master of Science in Anesthesia—Jacksonville

Anesthesiologist Assistants (AAs), also known as anesthetists, are highly educated and skilled allied health professionals who work under the supervision of physician anesthesiologists to develop and implement anesthesia care plans. AAs work exclusively within the anesthesia care team environment as described by the American Society of Anesthesiologists (ASA). AAs possess a premedical background and a baccalaureate degree, and also complete a comprehensive didactic and clinical program at the graduate level. AAs are trained extensively in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. The goal of AA education is to nurture the transformation of qualified student applicants into competent health care practitioners who aspire to practice in the anesthesia care team.

The 27-month AA course of study consists of an intensive academic and didactic program that will prepare the student to function within the anesthesia care team. The students will get an extensive clinical training experience that will consist of a minimum of 2,000 clinical hours that encompass all aspects of anesthesia care for the surgical patient. Upon completion of the course of study, students will have earned a Master of Science in Anesthesia degree from NSU.

Through close, personal interaction with highly qualified faculty members and the latest available anesthesia technology, the first year (semesters 1, 2, 3, and 4) encompasses an in-depth course of study in the fundamentals of anesthesia. Clinical experience during the first year will increase as the year progresses. The didactic curriculum, complemented by simulation learning, will provide the student with the necessary skills to meet the clinical objectives of the curriculum. The senior year (semesters 5, 6, and 7) will consist of clinical rotations assigned in two-week and four-week intervals. During the senior year, clinical rotations are full time and involve all specialty areas in anesthesia, including general...
The Master of Science in Anesthesia program is dedicated to developing a well-rounded practicing AA. The faculty and current students are dedicated to the following program objectives:

• develop vigilant, knowledgeable, skilled, and compassionate anesthesia care providers who are capable of functioning within the anesthesia care team model in the delivery of all perioperative anesthesia services
• inspire and prepare the future leaders in our profession for service in local, state, and national organizations that shall advance the utilization and practice of anesthesiologist assistants
• advance anesthesiologist assistant education through the application of state-of-the-art technology and evidence-based learning practices that continue to support our student learning objectives
• develop highly skilled, interdisciplinary, and culturally sensitive faculty members who model professionalism and exemplify ethical practice, effective communication, and organizational leadership
• support the mission and goals of Nova Southeastern University, including our department, college, and division, in the provision of scholarship, service, teaching, and patient care

Accreditation
The Master of Science in Anesthesia program at NSU is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP: 25400 U.S. Highway 19 North, Suite 158, Clearwater, Florida 33763, 727-210-2350).

Mission
The mission of the Master of Science in Anesthesia is to prepare students for lifelong learning and leadership roles that will benefit the health care community. The educational process will be committed to training and educating competent anesthetists who will embrace the anesthesia care team to provide safe, quality, and compassionate anesthesia care for all degrees of illness for the surgical patient.

Vision
The Master of Science in Anesthesia at Nova Southeastern University will provide state-of-the-art educational facilities and environment, which will allow anesthesiologist assistant students to cultivate into health care providers who are driven by compassion and guided by science to provide the best and safest patient care. It will be locally, nationally, and internationally recognized as an authority and primary source for anesthesiologist assistant information and services related to promoting the practice of delivering safe and quality anesthesia as a member of the anesthesia care team. The faculty members and students will be recognized as leaders within the profession through our collective service to the American Academy of Anesthesiologist Assistants (AAAA) and other professional organizations.

Admissions Requirements
Prospective M.S. in Anesthesia students are selected by the Committee on Admissions (COA), which considers the overall qualities of the applicant. Areas of consideration include interpersonal skills, personal motivation, knowledge and understanding of the AA profession and the anesthesia care team, academic performance and level of achievement, life experiences, and recommendations. Personal interviews are offered to the most qualified applicants to assess interpersonal and communication skills, altruistic attitude, maturity, and commitment to the AA profession and anesthesia care team model.

Other requirements include
1. baccalaureate degree from a nationally recognized and accredited college or university, including above average performance in courses required in a premed curriculum (refer to the following required courses)

Required
• English (3 semester hours or 4 quarter hours)
• General biology with lab or Anatomy and physiology with lab (6 semester hours or 9 quarter hours)
• General chemistry with lab (6 semester hours or 9 quarter hours)
• Organic chemistry with lab (3 semester hours or 4 quarter hours)
• Biochemistry (3 semester hours or 4 quarter hours)
• General physics with lab (6 semester hours or 9 quarter hours)
• Calculus (3 semester hours or 4 quarter hours)

Preferred but not required
• Cell and molecular biology (1 semester hour)
• Organic chemistry II (a second semester)

Note: A grade of 2.0 (C) or better is required in all prerequisite classes.

2. official transcripts of all undergraduate and graduate coursework

3. a minimum cumulative GPA of 2.75 on a 4.0 grading scale; minimum GPA of 3.0 preferred

4. Graduate Record Examination (GRE) or Medical College Admissions Test (MCAT) scores (taken within the past five years) taken early enough for official scores to be received by admissions office by the supplemental application due date of February 15

The NSU code number is 5522. GRE information can be obtained from gre.org. Information for the MCAT is at aamc.org/students/mcat.

5. three letters of recommendation from people familiar with applicant’s prior academic performance, potential, character, work habits, and suitability for graduate study leading into a career in clinical practice

6. at least eight hours of documented anesthesia exposure by observation in the operating room

7. summary of an article published in a current anesthesia journal

The applicant who has graduated from a college or university in a country where English is not the primary language, regardless of United States residency status, must have a Test of English as a Foreign Language (TOEFL) score of 600 or higher for the written test (or equivalent score for the computer-based test), an International English Language Testing System (IELTS) score of 6.0, or a Pearson Test of English—Academic (PTE-Academic) score of 54. An official set of scores must be sent to Nova Southeastern University directly from the Educational Testing Service in Princeton, New Jersey.

Advanced Placement and Transfer of Credits

Because of its highly integrated and compact curriculum, the anesthesiologist assistant (AA) programs require matriculants to complete the entire curriculum at the specified campus. No advanced placement, transfer of credit, or credit for experiential learning will be granted.

Computer Requirements

All students are required to have a computer with the following minimum specifications:

• Pentium or AMD at 1.00 GHz or equivalent Macintosh processor
• 256 megabytes RAM
• video and monitor capable of 1024 x 768 resolution or better
• CD-ROM drive
• full duplex sound card and speakers
• Internet connection with Internet service provider (DSL, cable, or satellite highly recommended)
• 800 x 600 or higher resolution
• Windows XP or NT or MAC OS or better
• Microsoft Office 2000 with PowerPoint, Word, and Excel minimum
• printer capability

Application Procedures

Applicants for admission must submit to EPS, or be responsible for submission of

1. a completed application form, along with a $50, nonrefundable application fee, accepted July 15 to February 15

2. three evaluation forms—supplied in the application package or by request—from supervisors or colleagues, clinical or non-clinical

3. official transcripts sent directly from all previously attended undergraduate, professional, and graduate institutions

4. all coursework from international institution(s), if applicant attended or is a graduate of any international institution(s)

Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed following.

• World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966–6311 • wes.org
Tuition and Fees
Tuition for 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (nova.edu/chcs/healthsciences/anesthesia/index.html). A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.

1. Acceptance Fee—$500. This fee is required to reserve the accepted applicant’s place in the entering first-year class, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance.

2. Deposit—$250. This is due February 15, under the same terms as the Acceptance Fee.

3. Preregistration Fee—$250. This is due April 15, under the same terms as the Acceptance Fee.

The first semester’s tuition and fees, less the $1,000 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.

Personal Interviews
Once your application is complete, the Committee on Admissions will decide whether or not your application is strong enough to warrant an invitation for a personal interview. Interviews are conducted at the NSU Tampa Bay Regional Campus and are by invitation only. Interviews will be held from October through March. An invitation to interview is not a guarantee of admission. Notice of acceptance or action by the committee on admissions will be on a “rolling” or periodic schedule; therefore early completion of the application is in the best interest of the student.

Jewelry, Body Piercing, and Tattoos
Only appropriate jewelry for professional business attire is permitted. Visible body jewelry, such as rings for the nose, eyebrow, lip, chin, cheek, or tongue, is NOT permitted. Tattoos must be covered by clothing.

Requirements for Graduation
In order to be eligible to graduate with the Master of Science in Anesthesia degree, students must

• successfully complete all academic and clinical courses and degree requirements
• satisfactorily meet all financial and library obligations
• attend in person the commencement program at which the degree is conferred
# M.S. in Anesthesia—Jacksonville Curriculum

Start Date: May  
Length: 27 months  
Degree: Master of Science in Anesthesia  
Total Credit Hours: 117  
Total Clinical Hours: 2,000  
Note: All courses with the MHS prefix will be taken online.

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<tr>
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<th>Credits</th>
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<td>ANEJ 5621 Principles of Airway Management I</td>
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<tr>
<td>ANEJ 5081 Introduction to Clinical Anesthesia</td>
<td>2</td>
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<tr>
<td>ANEJ 5328 ECG for Anesthesiologist Assistants</td>
<td>2</td>
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<tr>
<td>ANAT 5420 Anatomy</td>
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<td>PHST 5400 Physiology</td>
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<td>ANEJ 5301 Anesthesia Laboratory I</td>
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Total Credits: 18

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<td>ANEJ 5601 Applied Physiology for Anesthesia Practice I</td>
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<td>ANEJ 5462 Pharmacology for Anesthesia I</td>
<td>2</td>
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<tr>
<td>ANEJ 5901 Anesthesia Principles and Practices I</td>
<td>2</td>
</tr>
<tr>
<td>ANEJ 5622 Principles of Airway Management II</td>
<td>2</td>
</tr>
<tr>
<td>ANEJ 5801 Principles of Instrumentation and Patient Monitoring I</td>
<td>2</td>
</tr>
<tr>
<td>ANEJ 5101 Student Lecture Series I</td>
<td>1</td>
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<tr>
<td>MHS 5205 Writing for Medical Publication</td>
<td>3</td>
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<tr>
<td>ANEJ 5104* Principles of Life Support</td>
<td>3</td>
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</table>

Total Credits: 21

*Basic and Advanced Cardiac Lifesaving and Pediatric Advanced Lifesaving will be obtained during this semester.

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<thead>
<tr>
<th>Winter—Semester III Courses</th>
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<tbody>
<tr>
<td>ANEJ 5001 Clinical Anesthesia I</td>
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<tr>
<td>ANEJ 5463 Pharmacology for Anesthesia II</td>
<td>2</td>
</tr>
<tr>
<td>ANEJ 5303 Anesthesia Laboratory III</td>
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</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>ANEJ 5602</td>
<td>Applied Physiology for Anesthesia Practice II</td>
</tr>
<tr>
<td>ANEJ 5902</td>
<td>Anesthesia Principles and Practices II</td>
</tr>
<tr>
<td>ANEJ 5102</td>
<td>Student Lecture Series II</td>
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Minimum clinical experience: 150 hours (anesthesia rotations in hospital)

### Summer—Semester IV Courses

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<tr>
<td>ANEJ 5107</td>
<td>Internship</td>
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<tr>
<td>ANEJ 5000</td>
<td>Professional Issues in Anesthesiologist Assistant Practice</td>
<td>2</td>
</tr>
<tr>
<td>ANEJ 5002</td>
<td>Clinical Anesthesia II</td>
<td>3</td>
</tr>
<tr>
<td>ANEJ 5304</td>
<td>Anesthesia Laboratory IV</td>
<td>3</td>
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<tr>
<td>ANEJ 5602</td>
<td>Applied Physiology for Anesthesia Practice II</td>
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<tr>
<td>ANEJ 5903</td>
<td>Anesthesia Principles and Practices III</td>
<td>2</td>
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<tr>
<td>ANEJ 5500</td>
<td>Ultrasound-Guided Regional Anesthesia and Vascular Access</td>
<td>3</td>
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<tr>
<td>ANEJ 5103</td>
<td>Student Lecture Series III</td>
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<td><strong>Total Credits</strong></td>
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Minimum clinical experience: 144 hours (anesthesia rotations in hospital)

### Clinical Year, Fall—Semester V Course

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<tr>
<td>ANEJ 6000</td>
<td>Clinical Anesthesia III</td>
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Minimum clinical experience: 675 hours (anesthesia rotations in hospital)

### Clinical Year, Winter—Semester VI Courses

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<td>ANEJ 6002</td>
<td>Clinical Anesthesia IV</td>
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<td>ANEJ 6110</td>
<td>Anesthesia Review</td>
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<td><strong>Total Credits</strong></td>
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Minimum clinical experience: 675 hours (anesthesia rotations in hospital)

### Clinical Year, Summer—Semester VII Course

<table>
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Minimum clinical experience: 356 hours (anesthesia rotations in hospital)

Curriculum is subject to change as directed by the department.
M.S. in Anesthesia—Jacksonville Course Descriptions

ANEJ 5000—Professional Issues in Anesthesiologist Assistant Practice
As providers within the dynamic U.S. health care system, anesthesiologist assistants must possess the ability to exhibit professionalism in a wide range of clinical and nonclinical settings. This course will provide learners with an overview of contemporary and historical practice issues relevant to the anesthesiologist assistant. (2 credits)

ANEJ 5001—Clinical Anesthesia I
Developmental skills and foundations of the clinical practice of anesthesia are gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Participation and responsibilities increase through the year as knowledge and skills develop. (4 credits)

ANEJ 5002—Clinical Anesthesia II
This course is a continuation of ANEJ 5001. Developmental skills and foundations of the clinical practice of anesthesia are gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Participation and responsibilities increase through the year as knowledge and skills develop. (3 credits)

ANEJ 6000—Clinical Anesthesia III
This course is a continuation of ANEJ 5002. Developmental skills and foundations of the clinical practice of anesthesia are gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Participation and responsibilities increase through the year as knowledge and skills develop. (13 credits)

ANEJ 6002—Clinical Anesthesia IV
This course is a continuation of ANEJ 5003. Developmental skills and foundations of the clinical practice of anesthesia are gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Participation and responsibilities increase through the year as knowledge and skills develop. (15 credits)

ANEJ 5101—Student Lecture Series I
This seminar-style course expands upon previous anesthesia coursework as part of a three-course series. Learners will research topics pertinent to the practice of anesthesia and participate in podium presentations of their findings using visual aids. Through the course activities, learners will develop their oral communications skills and ability to synthesize medical literature. Topics are assigned by the course instructor. (1 credit)

ANEJ 5102—Student Lecture Series II
This course is a continuation of ANEJ 5101 and will follow the same format. In this second course of the student lecture series, learners will select their own topic of research with guidance from the course instructor. This course will develop the learners’ ability to select an appropriate research topic, as well as expand their knowledge of anesthesia. Podium presentations using visual aids are required. (1 credit)

ANEJ 5103—Student Lecture Series III
This course is a continuation of ANEJ 5102 and will follow the same format. In this third course of the student lecture series, learners will select an anesthesia case and perform a case study analysis. Emphasis will be on the development of reflective learning practices and critical thinking skills. Podium presentations using visual aids are required. (3 credits)

ANEJ 5107—Internship
Students will complete 80 hours of internship in an area of interest within a health care organization outside of their regular places of employment. The final product of this internship is an in-depth SWOT analysis of the unit or health care organization. The internship site requires prior Department of Anesthesia faculty member approval. (5 credits)

ANEJ 5621—Principles of Airway Management I
This course will provide an opportunity to learn and appreciate structure, function, pathophysiology, disease, and management of the human airway. The basic and advanced principles of elective and emergent airway management, including equipment and techniques, will be covered. Examination, recognition, techniques, and management involved in pediatric and adult difficult airways will be discussed. Course will correlate with laboratory work for a better understanding and use of bag/mask ventilation, oral and nasal airways, oral and nasal intubation techniques, laryngoscopes, intubation tubes, double lumen tubes, surgical airways, and application of laryngeal mask airway. (2 credits)

ANEJ 5622—Principles of Airway Management II
This course is a continuation of ANEJ 5621. This course will provide an opportunity to learn and appreciate structure, function, pathophysiology, disease, and management of the human airway. The basic and advanced principles of elective and emergent airway management, including equipment and techniques, will be covered. Examination, recognition, techniques, and management involved in pediatric and adult difficult airways will be discussed. Course will correlate with laboratory work for a better understanding and use of bag/mask ventilation, oral and nasal airways, oral and nasal intubation techniques, laryngoscopes, intubation tubes, double lumen tubes, surgical airways, and application of laryngeal mask airway.
double lumen tubes, surgical airways, and application of laryngeal mask airway. (2 credits)

ANEJ 5048—Medical Terminology
This is a self-study, online course. Use of medical language for appropriate and accurate communication in patient care. Course includes terminology and symbols, word formation, body systems and disease terms, abbreviations, and procedures. (1 credit)

ANEJ 5081—Introduction to Clinical Anesthesia
Prepares and educates the student to work within the anesthesia care team. Introduction to induction, maintenance, and emergence from anesthesia. Includes history of anesthesia, types of anesthesia, universal precautions and infection control, layout of the operating room, sterile fields and techniques, interacting with patients, starting intravenous catheters and arterial cannulae, obtaining arterial blood samples, and application of ASA-standard monitors. Students will use an anesthesia simulator to gain the basic knowledge and usage of monitors. (2 credits)

ANEJ 5301—Anesthesia Laboratory I
A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students’ understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (3 credits)

ANEJ 5302—Anesthesia Laboratory II
This course is a continuation of ANEJ 5301. A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students’ understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (3 credits)

ANEJ 5303—Anesthesia Laboratory III
This course is a continuation of ANEJ 5302. A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students’ understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (3 credits)

ANEJ 5304—Anesthesia Laboratory IV
This course is a continuation of ANEJ 5303. A state-of-the-art laboratory and anesthesia simulator will prepare the student for the usage and complete understanding of the monitors and practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities—such as pulse oximetry, capnography, and blood pressure monitoring systems—are explored. Laboratory experiments will develop students’ understanding of anesthesia delivery systems, various types of breathing circuits, fresh gas flow effect, theory of dilutional methods of cardiac output monitoring, and relations between mean circulatory filling pressures and central venous pressure. A vascular sonography lab will allow a unique and comprehensive understanding of transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (3 credits)

ANEJ 5328—ECG for Anesthesiologist Assistants
Basic and advanced ECG interpretation using simulators to understand an overview of heart anatomy, function, and neurophysiology. (2 credits)

PHST 5400—Physiology
Clinically relevant physiologic principles of the major organ systems covered in Anatomy. Pathological changes that occur in the human physiology in the disease process. (3 credits)

ANAT 5420—Anatomy
Gross structures of the human body. Integrates topographic and radiographic anatomy to stress the application and importance of clinical anatomy. Develops the knowledge of the human anatomy necessary for the practice of the profession. (5 credits)
ANEJ 5462—Pharmacology for Anesthesia I
Emphasizes drugs specifically related to the practice of anesthesia, including inhaled anesthetics, opioids, barbiturates, benzodiazepines, anticholinesterases, and anticholinergics, neuromuscular blockers, adrenergic agonists and antagonists, nonsteroidal anti-inflammatory drugs, antiadrenergics, calcium channel blockers, diuretics, anticoagulants, antiinflammatory drugs, and antimicrobials. (2 credits)

ANEJ 5463—Pharmacology for Anesthesia II
This course is a continuation of ANEJ 5462. Emphasizes drugs specifically related to the practice of anesthesia, including inhaled anesthetics, opioids, barbiturates, benzodiazepines, anticholinesterases, and anticholinergics, neuromuscular blockers, adrenergic agonists and antagonists, nonsteroidal anti-inflammatory drugs, antidepressants, calcium channel blockers, diuretics, anticoagulants, antagonists, and antimicrobials. (2 credits)

ANEJ 5500—Ultrasound-Guided Regional Anesthesia and Vascular Access
This course will allow students to develop key skills in the utilization of ultrasound technology for a range of practical skills, including regional anesthesia and vascular techniques. It will review the functional anatomy and physiology associated with the indication for regional anesthesia during the perioperative period. The pharmacological properties of local anesthetics will be emphasized in various regional anesthesia techniques as applied to the head, neck, upper and lower limbs, and trunk, as necessary. (3 credits)

ANEJ 5601—Applied Physiology for Anesthesia Practice I
Pathophysiology in a systems approach—cardiovascular, pulmonary, renal, neuro, metabolic, and endocrine. Emphasizing hemodynamics, Starling forces, pulmonary responses, renal hemodynamics, temperature regulation, blood gases/pH, and maternal and fetal physiology. Also emphasizes those systems that affect evaluation and planning for anesthesia and that are affected by the administration of anesthesia. (3 credits)

ANEJ 5602—Applied Physiology for Anesthesia Practice II
This course is a continuation of ANEJ 5601. Pathophysiology in a systems approach—cardiovascular, pulmonary, renal, neuro, metabolic, and endocrine. Emphasizing hemodynamics, Starling forces, pulmonary responses, renal hemodynamics, temperature regulation, blood gases/pH, and maternal and fetal physiology. Also emphasizes those systems that affect evaluation and planning for anesthesia and that are affected by the administration of anesthesia. (3 credits)

ANEJ 5603—Applied Physiology for Anesthesia Practice III
This course is a continuation of ANEJ 5602, which offers pathophysiology in a systems approach—cardiovascular, pulmonary, renal, neuro, metabolic, and endocrine. It emphasizes hemodynamics, Starling forces, pulmonary responses, renal hemodynamics, temperature regulation, blood gases/pH, and maternal and fetal physiology. The course also emphasizes those systems that affect evaluation and planning for anesthesia and that are affected by the administration of anesthesia. (2 credits)

ANEJ 5801—Principles of Instrumentation and Patient Monitoring I
Practical principles, application, and interpretation of various monitoring modalities including ECG, invasive and noninvasive blood pressure, oximetry, cardiac output, respiratory gas analysis, respiration, and instrumentation as they pertain to anesthesia practice. Also includes intraoperative neurophysiology monitoring, temperature, renal function, coagulation/hemostasis, neuromuscular junction, transesophageal and transthoracic echocardiography, cerebrovascular testing, and venous and peripheral arterial testing. (2 credits)

ANEJ 5901—Anesthesia Principles and Practices I
Principles involved in the formulation of anesthetic plans based upon data obtained during the preoperative evaluation. Includes the formulation and practices of different anesthetic plans and techniques as related to specific surgical procedures and pathophysiology. (2 credits)

ANEJ 5902—Anesthesia Principle and Practices II
This course is a continuation of ANEJ 5901. Principles involved in the formulation of anesthetic plans based upon data obtained during the preoperative evaluation. Includes the formulation and practices of different anesthetic plans and techniques as related to specific surgical procedures and pathophysiology. (2 credits)

ANEJ 5903—Anesthesia Principles and Practices III
This course is a continuation of ANEJ 5902. It discusses the principles involved in the formulation of anesthetic plans based upon data obtained during the preoperative evaluation and includes the formulation and practices of different anesthetic plans and techniques as related to specific surgical procedures and pathophysiology. (2 credits)

ANEJ 6000—Clinical Anesthesia III
Encompasses the student’s clinical experience in required rotations through all sub-specialty areas of anesthesia. Clinical rotations are assigned in two-week and four-week intervals and will require being on-call during some nights and weekends. Clinical practice of anesthesia is gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Monthly required readings are assigned. Monthly comprehensive examinations are administered. Each course’s grade is composed of clinical evaluations and comprehensive examination scores. (13 credits)
ANEJ 6002—Clinical Anesthesia IV
This course is a continuation of ANEJ 6001. Encompasses the student’s clinical experience in required rotations through all sub-specialty areas of anesthesia. Clinical rotations are assigned in two-week and four-week intervals and will require being on-call during some nights and weekends. Clinical practice of anesthesia is gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Monthly required readings are assigned. Monthly comprehensive examinations are administered. Each course’s grade is composed of clinical evaluations and comprehensive examination scores. (15 credits)

ANEJ 6003—Clinical Anesthesia V
This course is a continuation of ANEJ 6002. Encompasses the student’s clinical experience in required rotations through all sub-specialty areas of anesthesia. Clinical rotations are assigned in two-week and four-week intervals and will require being on-call during some nights and weekends. Clinical practice of anesthesia is gained through one-on-one supervised instruction in the operating room and other ancillary anesthetizing locations. Monthly required readings are assigned. Monthly comprehensive examinations are administered. Each course’s grade is composed of clinical evaluations and comprehensive examination scores. (12 credits)

ANEJ 6110—Anesthesia Review
Lectures, required readings, and discussions with faculty members, visiting faculty members, and current residents on clinical and research topics. Includes correlation of case management and complications. (1 credit)

MHS 5103—Principles of Life Support
Provides for the certification in Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS). Courses will focus on assessment and management of adults, children, and infants in a cardiopulmonary crisis. Pediatric and Advanced Cardiac Lifesaving will be obtained during this semester. (3 credits)

MHS 5205—Writing for Medical Publications
This course provides a study and review of quality medical writing techniques, issues, and procedures with emphasis on cultivating personal style and content. Focus will be on writing for peer- and evidence-based publications. (3 credits)

For information about the NSU AA specialization, or to request an AA admissions application packet, please contact the NSU admissions office at:
Nova Southeastern University
Health Professions Division
Anesthesiologist Assistant
3200 South University Drive
Fort Lauderdale, FL 33328-2018
(954) 262-1101 or 800-356-0026, ext. 21101
https://healthsciences.nova.edu/healthsciences/anesthesia

Sources of Additional Information
Links to non-NSU sites are provided for your convenience and do not constitute an endorsement.

For information on a career as an anesthesiologist assistant, contact
American Academy of Anesthesiologist Assistants
1231 Collier Road NW, Suite J
Atlanta, GA 30318
e-mail: aaaa@societyhq.com.
anesthetist.org

For information on the certification process for anesthesiologist assistants, contact
National Commission for Certification of Anesthesiologist Assistants
1500 Sunday Drive, Suite 102
Raleigh, NC 27607
aa-nccaa.org

For information about the anesthesia care team, contact
American Society of Anesthesiologists
520 N. Northwest Highway
Park Ridge, IL 60068-2573
asahq.org
Audiology Program Overview

The Department of Audiology offers the Doctor of Audiology (Au.D.) degree program. The postbaccalaureate, on-campus Au.D. degree program is a 119-credit, rigorous academic curriculum, which combines basic science and professional coursework with applied clinical training. Students acquire their clinical competencies from experiences in diverse practice settings. Faculty members and clinical preceptors mentor students and model professional excellence. After receiving a doctoral degree in audiology, graduates are prepared for all aspects of clinical practice as well as for positions of professional leadership.

The Doctor of Audiology (Au.D.) degree establishes audiologists in a clearly defined and prominent role within the hearing health care delivery system and strengthens their position as autonomous practitioners. The degree provides the academic foundation and diverse clinical experiences necessary to enter professional practice today and in the future. Audiologists specialize in the evaluation, diagnosis, management, and treatment of children and adults of all ages with auditory and vestibular disorders. At Nova Southeastern University, the Audiology Department benefits from the integrated interprofessional health care programs of the university’s Health Professions Division. Doctor of Audiology students experience a clinically focused professional doctoral program where students complete a rigorous academic curriculum coupled with extensive clinical experiences.

Accreditation

The Department of Audiology is dually accredited by the Council on Academic Accreditation (CAA) of the American Speech-Language-Hearing Association (ASHA) and the Accreditation Commission for Audiology Education (ACAE). Graduates will have completed the academic and clinical requirements necessary to be eligible to apply for a license as an audiologist, pursue board certification in audiology from the American Board of Audiology, and, if they choose to adhere to the clinical supervisory requirements, the Certificate of Clinical Competence from ASHA.

Admissions Requirements

Postbaccalaureate Degree

Prospective doctor of audiology students are selected by an admissions committee based on preprofessional academic performance, written application, letters of recommendation, submission of Graduate Record Examination (GRE) scores no older than five years, and a personal interview. Preference will be given to students with a cumulative grade point average (GPA) of 3.2 or higher.

The Department of Audiology requires that

- prior to matriculation, applicants must have completed a bachelor’s degree from a regionally accredited college or university
- all applicants must show evidence of computer skills through coursework or self-study prior to the end of the first term (Students may obtain instruction through the NSU Student Microcomputer Laboratory or other training facilities.)
- all NSU Au.D. students meet the requirements outlined in the Essential Functions of the Au.D. Student document upon admission and while matriculating

A course in Normal Language Development is required prior to taking Pediatric Audiology. If a student did not complete this course as an undergraduate, he or she can take it during the Au.D. course of study. However, it will require a separate registration and tuition.

The university reserves the right to modify any requirements on an individual basis as deemed necessary by the dean of the Dr. Pallavi Patel College of Health Care Sciences. The college reserves the right, and the student, by his or her act of matriculation, concedes to the college the right to require his or her withdrawal any time the college deems it necessary to safeguard its standards of scholarship, conduct, and compliance with regulations or for such other reasons as are deemed appropriate. The dean and the chair of the Audiology Department reserve the right to require the student’s withdrawal at any time for the above-mentioned reasons.

United Kingdom Program

The NSU Department of Audiology offers a program in the United Kingdom for audiologists with master’s degrees in audiology. The Doctor of Audiology (Au.D.) is a clinically focused professional degree. The United Kingdom program is designed for the working professional. The content is designed to augment and expand the academic and professional experience that the working professional has achieved.

- An applicant for the program in the United Kingdom must have completed a master’s degree in audiology from a regionally accredited college or university. Students are selected by a Committee on Admissions based on previous academic performance, written application, and letters of recommendation.
• All applicants must show evidence of computer skills through coursework or self-study prior to the end of the first term. Students may obtain instruction through the NSU Student Microcomputer Laboratory or other training facilities.

• Further information on the programs in the United Kingdom is available at nova.edu/aud.

Transfer Students
Individuals seeking to transfer to the NSU on-campus, entry-level Doctor of Audiology Program must submit an application and follow the application and admissions process. The Department of Audiology will consider the transfer of up to nine graduate credits from another academic institution. Eligibility for course transfer requires a grade of B or better and must be accompanied by an official course description. Credits must be earned within six years prior to program admission.

Computer Requirements
All students are expected to have a computer with Microsoft PowerPoint, Word, and Excel software. Some programs used to augment coursework require a computer with the Windows operating system.

Application Procedures
Applicants for admission must submit or be responsible for submission of
1. a completed application through Communication Sciences and Disorders Centralized Application Service (CSDCAS) that includes all supporting documentation, such as official transcripts, letters of recommendation, official GRE scores, and transcript evaluation (if applicable)
2. a completed supplemental application, including a nonrefundable, $50 application fee

The audiology Committee on Admissions will not consider an application until all required fees, credentials, test scores, transcripts and recommendations have been received and verified through CSDCAS and transmitted to the Office of Admissions.

Notice of acceptance or action by the committee on admissions will be on a “rolling” or periodic schedule; therefore early completion of the application is in the best interest of the student.

Personal Interviews
Completed applications are reviewed by the committee on admissions and invitations are extended for a personal interview to those applicants applying for the on-campus, entry-level Au.D. program who meet the initial admission criteria. Interviews for the on-campus postbachelor’s degree program are held on campus and provide the student with an opportunity to meet faculty members and students and visit the campus. Virtual interview media is available if necessary.

Inquiries should be directed to
Audiology Admissions Counselor
Nova Southeastern University
3200 South University Drive
Fort Lauderdale, FL 33328-2018

Phone: (954) 262-1101
877-640-0218
Fax: (954) 262-2282
nova.edu/aud

Tuition and Fees
Payment of tuition and fees is expected at the time of registration. Students receiving financial aid are responsible for making sure that they have completed all applications for financial aid and that it has been granted.

• The annual tuition for 2020–2021 postbachelor’s on-campus Doctor of Audiology program (subject to change by the board of trustees without notice) will be posted on our website (nova.edu/aud).

Tuition for the United Kingdom Au.D. (subject to change by the board of trustees without notice) will be posted on our website (nova.edu/aud).

• A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.

• Upon acceptance, students planning to enroll are required to complete an “Intent to Enroll” form with a nonrefundable deposit of $500. This advance payment will be deducted from the tuition payment due at registration.

The financial ability of applicants to complete their training is important because of the limited number of positions available. Applicants should have specific plans for financing four years of professional education. This should include provision for tuition, living expenses, books, and related expenses.

Requirements for Graduation
In order to be eligible for the postbachelor’s, on-campus Doctor of Audiology degree, each student must
1. satisfactorily complete the 119-credit hour program of study and related clinical placements required for the degree with an overall minimum GPA of 2.7
2. satisfactorily complete the department’s knowledge and skills markers
3. fulfill all obligations to the university
4. ensure that all incomplete grades have been removed and passing grades are on file in the registrar’s office
5. successfully complete a clinical externship experience
6. apply for a diploma
7. attend the commencement program at which the degree is conferred
8. report Praxis examination score (passing not a degree requirement)
9. pass a comprehensive examination

The United Kingdom post-master's degree program is 34 credit hours. Students must successfully complete these credit hour requirements with a grade of 80 percent or better, meet all program and library financial obligations, and apply for a diploma.

Course of Study: Postbachelor’s Program

The Doctor of Audiology degree is awarded after successful completion of four years of professional study. Beginning in the first semester, students are given clinical assignments and experiences. There will be increased clinical involvement throughout the program as students prepare for direct patient care at our clinics and at locations throughout the community.

The fourth year is designed to be a full-time externship work experience that prepares the graduate to enter the profession at graduation. Successful completion of the Doctor of Audiology Program coupled with a passing score on the Praxis Series Examination for Audiology will enable graduates to be licensed and be eligible for professional certification. Additional information can be obtained on our website at nova.edu/aud.

Curriculum Outline: Postbachelor’s Program

Typical Plan of Study

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<thead>
<tr>
<th>YEAR 1—Semester 1: Fall</th>
<th>Credit Hours</th>
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<tr>
<td>AUD 5010 Neuroscience of Audiology</td>
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<td>AUD 5301 Diagnostics I: Audiologic Diagnostic Procedures Across the Life Span</td>
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<td>AUD 5301L Diagnostics I Lab</td>
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<tr>
<td>AUD 5302 Acoustics and Instrumentation</td>
<td>3</td>
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<tr>
<td>AUD 5304 Anatomy and Physiology of the Auditory and Vestibular Mechanisms</td>
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<th>Credit Hours</th>
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<td>AUD 5405 Overview of Amplification I</td>
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<tr>
<td>AUD 5405L Amplification Lab I</td>
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</tr>
<tr>
<td>AUD 6402 Diagnostics II: Site-of-Lesion Assessment</td>
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</tr>
<tr>
<td>AUD 6402L Diagnostics II Lab</td>
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<tr>
<td>AUD 6404 Auditory and Vestibular Pathologies</td>
<td>4</td>
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<tr>
<td>AUD 5070 Research Methods in Audiology</td>
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Dr. Pallavi Patel College of Health Care Sciences—Department of Audiology
<table>
<thead>
<tr>
<th>YEAR 1—Semester 3: Summer</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>AUD 5303 Psychoacoustics and Speech Perception</td>
<td>2</td>
</tr>
<tr>
<td>AUD 5402 Introduction to Auditory Electrophysiology</td>
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<tr>
<td>AUD 5403L Introduction to Auditory Electrophysiology Lab</td>
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<tr>
<td>AUD 5404 Introduction to Vestibular Evaluation</td>
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<td>AUD 5404L Introduction to Vestibular Evaluation Lab</td>
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<tr>
<td>AUD 5410 Navigating the Audiology Professional Landscape</td>
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<td>AUD 6510 Clinic I</td>
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<tr>
<th>YEAR 2—Semester 1: Fall</th>
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<tbody>
<tr>
<td>AUD 6406 Overview of Amplification II</td>
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<tr>
<td>AUD 6408 Auditory Processing Evaluation and Treatment</td>
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<tr>
<td>AUD 6508 Tinnitus Evaluation and Treatment</td>
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<td>AUD 6511 Clinic II</td>
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<tbody>
<tr>
<td>AUD 6504 Implantable Hearing Technologies</td>
<td>2</td>
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<tr>
<td>AUD 7051 Research Methods in Audiology II</td>
<td>3</td>
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<tr>
<td>AUD 7120 Advanced Auditory Electrophysiology</td>
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<tr>
<td>AUD 7075 Counseling in Audiology</td>
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<td>AUD 6512 Clinic III</td>
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<tr>
<td>AUD 7160 Advanced Vestibular Evaluation and Treatment</td>
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<tr>
<td>AUD 6310 Adult Audiology Rehabilitation</td>
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<tr>
<td>AUD 7079 Ethics, Coding, and Reimbursement for Audiology</td>
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<td>AUD 7607 Internship I</td>
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<tr>
<td>AUD 7100 Advanced Seminar in Amplification</td>
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<tr>
<td>AUD 7135 Pediatric Aural (Re)Habilitation</td>
<td>2</td>
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<td>AUD 7194 Clinical Grand Rounds in Audiology</td>
<td>3</td>
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<tr>
<td>AUD 7031 Geriatric Audiology</td>
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<tr>
<td>AUD 7608 Internship II</td>
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### Year 3—Semester 2: Winter

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<tr>
<td>AUD 6502 Hearing Conservation</td>
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<tr>
<td>AUD 7071 Biochemistry and Pharmacology for Audiologists</td>
<td>2</td>
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<tr>
<td>AUD 7080 Practice Management for Audiology</td>
<td>3</td>
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<tr>
<td>AUD 7165 Vestibular Specialty Seminar (elective)</td>
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<td>AUD 7613 Internship III</td>
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### Year 3—Semester 3: Spring

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<td>AUD 7610 Externship I</td>
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### Year 4—Semester 1: Fall

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<th>Course</th>
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### Year 4—Semester 2: Winter

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<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AUD 7612 Externship III</td>
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**Postbachelor’s Program Total Credit Hours:** 119

### Curriculum Outline: UK Program

#### Courses Required for UK Degree Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AUD 7051 Research Methods in Audiology II</td>
<td>3</td>
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<tr>
<td>AUD 7070 Pharmacology for Audiologists</td>
<td>3</td>
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<tr>
<td>AUD 7030 Aging and the Auditory/Vestibular System</td>
<td>2</td>
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<td>AUD 7075 Counseling in Audiology</td>
<td>3</td>
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<tr>
<td>AUD 7161 Genetics of Hearing Impairment</td>
<td>3</td>
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<td>AUD 7101 Advanced Seminar in Amplification</td>
<td>3</td>
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<tr>
<td>AUD 7130 Pediatric Audiology</td>
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<tr>
<td>AUD 7121 Advanced Auditory Electrophysiology</td>
<td>3</td>
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<tr>
<td>AUD 7160 Advanced Vestibular Evaluation and Treatment</td>
<td>3</td>
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<tr>
<td>AUD 7180 Advanced Diagnostic Audiology</td>
<td>3</td>
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<tr>
<td>AUD 7081 Business Management and Leadership</td>
<td>3</td>
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<td>AUD 6504 Implantable Hearing Technologies</td>
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**Total Credit Hours:** 34
# Audiology Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AUD 5010</td>
<td>Neuroscience for Audiology</td>
<td>This course provides an introduction to the gross structure of the brain and spinal cord and the functional relationship of their parts, with emphasis on the auditory and vestibular peripheral and central nervous systems. Topics discussed include function of nerve cells, sensory systems, movement control, memory, cognition, and diseases of the brain.</td>
<td>(2 credits)</td>
</tr>
<tr>
<td>AUD 5070</td>
<td>Research Methods in Audiology</td>
<td>This course provides an introduction to clinical research in audiology and the principles of evidence-based practice. Foundational knowledge and skills in accessing and evaluating medical and scientific literature to support clinical decision-making, applying the information to clinical populations, and integrating evidence in the provision of audiological services are emphasized.</td>
<td>(3 credits)</td>
</tr>
<tr>
<td>AUD 5301</td>
<td>Diagnostics I: Audiologic Diagnostic Procedures Across the Life Span</td>
<td>This course provides an exploration of the components of the audiologic evaluation, including evaluation of the outer ear, middle ear, inner ear, and the central auditory nervous system. Assessment procedures across the life span are examined.</td>
<td>(3 credits)</td>
</tr>
<tr>
<td>AUD 5301L</td>
<td>Diagnostics I Lab</td>
<td>This laboratory course provides students with practical application supplementing AUD 5301.</td>
<td>(1 credit)</td>
</tr>
<tr>
<td>AUD 5302</td>
<td>Acoustics and Instrumentation</td>
<td>This course provides detailed study of the physics of sound and instrumentation used in the audiological sciences.</td>
<td>(3 credits)</td>
</tr>
<tr>
<td>AUD 5303</td>
<td>Psychoacoustics and Speech Perception</td>
<td>This course provides a study of psychoacoustic and speech perception theories and methods. Auditory perception in normal hearing and hearing-impaired subjects will be addressed.</td>
<td>(2 credits)</td>
</tr>
<tr>
<td>AUD 5304</td>
<td>Anatomy and Physiology of the Auditory and Vestibular Mechanisms</td>
<td>This course will provide detailed study of the anatomy and physiology of the outer ear, middle ear, inner ear, and central auditory pathways. The vestibular peripheral system and the vestibular CNS pathways are described.</td>
<td>(3 credits)</td>
</tr>
<tr>
<td>AUD 5402</td>
<td>Introduction to Auditory Electrophysiology</td>
<td>This course provides an introduction to electrophysiological examination of the auditory system. The primary measure of focus is the auditory brainstem response and its underlying anatomical and physiological generators, applications, collection, interpretation, and relevance to clinical decision-making.</td>
<td>(3 credits)</td>
</tr>
<tr>
<td>AUD 5403L</td>
<td>Introduction to Auditory Electrophysiology Lab</td>
<td>This laboratory course supplements AUD 5402, providing students with practical assignments.</td>
<td>(1 credit)</td>
</tr>
<tr>
<td>AUD 5404</td>
<td>Introduction to Vestibular Evaluation</td>
<td>This course provides an introduction to the basic procedures and interpretation for vestibular assessment, including videonystagmography (VNG), vestibular evoked myogenic potentials (VEMP), video head impulse test (vHIT), and bedside evaluation.</td>
<td>(3 credits)</td>
</tr>
<tr>
<td>AUD 5404L</td>
<td>Introduction to Vestibular Evaluation Lab</td>
<td>This laboratory course supplements AUD 5404, providing students with practical assignments.</td>
<td>(1 credit)</td>
</tr>
<tr>
<td>AUD 5405</td>
<td>Overview of Amplification I</td>
<td>This course provides an introduction to amplification. The content of this course includes historical perspectives on amplification; functions and features of amplification systems and their components; methods of fitting; verification; and analyses of these systems. It also includes basic concepts in counseling.</td>
<td>(3 credits)</td>
</tr>
<tr>
<td>AUD 5405L</td>
<td>Amplification Lab I</td>
<td>This laboratory course provides students with practical application supplementing AUD 5405.</td>
<td>(1 credit)</td>
</tr>
<tr>
<td>AUD 5410</td>
<td>Navigating the Audiology Professional Landscape</td>
<td>This course provides an introduction to professional issues encountered in audiology practice, as well as aspects of professional development.</td>
<td>(1 credit)</td>
</tr>
<tr>
<td>AUD 6310</td>
<td>Adult Audiology Rehabilitation</td>
<td>This course provides a detailed study of audiological intervention and remediation strategies for individuals over 18 years old with peripheral and central hearing loss. Emphasis will be placed on the importance of a multiprofessional approach.</td>
<td>(2 credits)</td>
</tr>
</tbody>
</table>
AUD 6402—Diagnostics II: Site-of-Lesion Assessment
This course provides a review of basic middle ear evaluation and a detailed exploration of advanced middle ear evaluation, otoacoustic emissions, and synthesis of diagnostics test results. (2 credits)

AUD 6402L—Diagnostics II Lab
This laboratory is designed to provide students with an opportunity to perform basic and advanced middle ear evaluation, otoacoustic emissions testing, and site-of-lesion diagnosis. (1 credit)

AUD 6404—Auditory and Vestibular Pathologies
This course provides a comprehensive study of pathologies affecting the conductive, sensory, neural, and vestibular mechanisms, as well as methods for their differential diagnosis. Embryological development of the ear is examined. Basic concepts of genetics, including their effects on, diagnosis of, and management of auditory and vestibular function are discussed. Case studies are reviewed. (4 credits)

AUD 6406—Overview of Amplification II
This course provides integration of theoretical and practical concepts of fitting and verification of hearing instruments. Components and features available on hearing instruments are presented. (3 credits)

AUD 6406L—Amplification Lab II
This laboratory course provides students with practical application supplementing AUD 6406. (1 credit)

AUD 6408—Auditory Processing Evaluation and Treatment
This course provides a comprehensive study of auditory processing evaluation and treatment with foci on the underlying neurophysiological mechanisms and models of an auditory processing disorder. Opportunities will be provided to discuss case studies and gain hands-on experience performing behavioral and objective auditory processing measures. (2 credits)

AUD 6502—Hearing Conservation
This course provides a study of topics related to hearing conservation, including the effects of noise on hearing, ototoxicity, occupational and nonoccupational noise exposure, federal regulations related to the prevention of hearing loss, sound surveys, and classroom acoustics. (2 credits)

AUD 6504—Implantable Hearing Technologies
This course provides a study of implantable auditory devices, including cochlear implants, osseointegrated devices (OIID), middle ear implants, and auditory brainstem implants. Candidacy criteria, surgical considerations, and treatment methods are explored in the pediatric and adult populations. (2 credits)

AUD 6508—Tinnitus Evaluation and Treatment
This course provides an introduction to tinnitus evaluation and treatment, examining the epidemiology and theoretical basis of tinnitus. Assessment methods, treatment strategies, and psychosocial effects are examined in detail. (2 credits)

AUD 6510—Clinic I
Participation in supervised auditory and vestibular evaluation, management, and treatment. Weekly meetings with supervisors and/or documentation is required. (1 credit)

AUD 6511—Clinic II
Participation in supervised auditory and vestibular evaluation, management, and treatment. Weekly meetings with supervisors and/or documentation is required. (2 credits)

AUD 6512—Clinic III
Participation in supervised auditory and vestibular evaluation, management, and treatment. Weekly meetings with supervisors and/or documentation is required. (2 credits)

AUD 7030—Aging and the Auditory/Vestibular System
United Kingdom Program Only: Students will be provided with an overview of gerontology with emphasis given to differentiation between the normal aging process and pathological changes related to auditory and vestibular disorders. (3 credits)

AUD 7031—Geriatric Audiology
This course will provide students with an overview of gerontology. A holistic approach to patient care encompassing biological, social, psychological, and cultural aspects related to aging will be considered. Analysis of day-to-day functioning of the aging patient, particularly related to sensory changes, will be covered. An emphasis will be placed on differentiation between normal aging processes and pathological processes. (1 credit)

AUD 7051 Research Methods in Audiology II
This course provides a detailed study of research design, data collection, analysis, and evaluation. The breadth and depth of clinical research is explored as students gain practice in accessing, evaluating, and designing medical, allied health, and other scientific literature to support clinical decision-making, patient- and family-centered care, and quality improvement efforts in the provision of audiological services. (3 credits)

AUD 7070—Pharmacology for Audiology
United Kingdom Program Only: In this course, students are presented with the classes of drugs used in clinical practice with emphasis on activity, mode of action, side effects, toxicity, and drug interactions as they relate to auditory and vestibular function. (3 credits)
AUD 7071—Biochemistry and Pharmacology for Audiologists
This course provides a detailed study of the biochemistry of the ear as a foundation for the mechanisms, side effects, drug interactions, and toxicity of pharmacological and chemical substances. Otoprotective agents are explored. (2 credits)

AUD 7075—Counseling in Audiology
This course provides an exploration of the theoretical basis of counseling methodology and evidence-based approaches to patient- and family-centered care in audiology. Principles and characteristics of effective communication are detailed and applied to context-specific situations through simulated activities. (3 credits)

AUD 7079—Ethics, Coding, and Reimbursement for Audiology
This course provides an introduction to theories of bioethics and applications to audiology and clinical practice. It details evaluation, treatment, and diagnosis codes relevant to audiology practice. Third-party reimbursement policies, procedures, and guidelines are discussed. (2 credits)

AUD 7080—Practice Management for Audiology
This course provides the basic principles involved in the development, operation, and management of audiology practice within the framework of different models of health care delivery. (3 credits)

AUD 7081—Business Management and Leadership
United Kingdom Program Only: In this course, students examine basic principles involved in the development and management of audiology practice within the framework of different models of health care delivery. Legal and ethical issues in practice management will be discussed. (3 credits)

AUD 7100—Advanced Seminar in Amplification
This course provides advanced information on the theoretical and practical concepts of fitting, verification, and analyses of amplification systems. Counseling techniques are discussed. (2 credits)

AUD 7101—Advanced Seminar in Amplification
United Kingdom Program Only: This course is designed to provide advanced information on the theoretical and practical concepts of fitting, verification, and analyses of amplification systems. (3 credits)

AUD 7120—Advanced Auditory Electrophysiology
This course provides a detailed study of evoked potentials, including early through late auditory responses, intraoperative neural monitoring, and somatosensory potentials with an emphasis on the neurophysiological bases of these potentials. It also provides clinical and research applications of various test techniques. Students will have practical, hands-on experience in using evoked potentials in evaluating the human efferent auditory system (brainstem to cochlea) and afferent auditory system (cochlea to cortex). (3 credits)

AUD 7121—Advanced Auditory Electrophysiology
United Kingdom Program Only: Students will study auditory neurophysiologic evaluation procedures, including evoked responses for all latencies and otoacoustic emissions. Interpretation of test results will be discussed in relation to underlying anatomy and physiology. (3 credits)

AUD 7130—Pediatric Audiology
This course provides a detailed study of typical and atypical prenatal, perinatal, and postnatal auditory development in children. Pediatric assessment and intervention protocols are explored with the typical, developmentally delayed, and difficult-to-test populations. (3 credits)

AUD 7135—Pediatric Audiologic (Re)Habilitation
This course provides details related to the provision of audiologic (re)habilitation services to children with hearing loss. Intervention for children with hearing loss in educational and other habilitative settings is explored in depth. (2 credits)

AUD 7160—Advanced Vestibular Evaluation and Treatment
This course provides a detailed study of vestibular test procedures, results, analysis, and treatment. Advanced testing including posturography and rotary chair are presented. Vestibular rehabilitation therapy (VRT), canalith repositioning techniques, and fall-risk assessments are discussed and evaluated. (3 credits)

AUD 7161—Genetics of Hearing Impairment
United Kingdom Program Only: Students will study the basic concepts of genetics and its relation to hearing loss. They will also learn about the hereditary syndromes and birth defects associated with hearing impairments. Additionally, they will gain knowledge about audiologic counseling and interpretation of genetic data. (3 credits)

AUD 7165—Vestibular Specialty Seminar (elective)
Students will participate in an advanced study of vestibular evaluation and treatment. In-depth analysis of vestibular evaluation and treatment techniques will be examined, with focus on special patient populations. An interprofessional approach to management of dizzy/fall-risk patients will be presented. Vestibular rehabilitation and balance therapy programming and therapy techniques will be discussed and evaluated. (3 credits)
AUD 7180—Advanced Diagnostic Audiology
United Kingdom Program Only. Students will study advanced auditory evaluation with an emphasis on integration of audiologic test results leading to management and treatment strategies. (3 credits)

AUD 7194—Clinical Grand Rounds in Audiology
This course provides an evidence-based approach to critically analyze audiological assessment and management across the audiology scope of practice. (3 credits)

AUD 7607—Internship I
Off-campus placement in hospital, agency, or private practice setting(s). Students must meet the schedule required by the facility to which they are assigned. Supervisory meetings are scheduled periodically. (3 credits)

AUD 7608—Internship II
Off-campus placement in hospital, agency, or private practice setting(s). Students must meet the schedule required by the facility to which they are assigned. Supervisory meetings are scheduled periodically. (3 credits)

AUD 7610—Externship I
Full-time placement in an audiology externship position. (8 credits)

AUD 7611—Externship II
Full-time placement in an audiology externship position. (8 credits)

AUD 7612—Externship III
Full-time placement in an audiology externship position. (8 credits)

AUD 7613—Internship III
Off-campus placement in hospital, agency, or private practice setting(s). Students must meet schedule required by facility to which they are assigned. Supervisory meetings are scheduled periodically. (3 credits)
Department of Health and Human Performance

Department of Health and Human Performance Overview

The Department of Health and Human Performance (HHP) offers two graduate programs: The Master of Science in Athletic Training (M.S.A.T.) and the Master of Science in Sports Science (M.S.). The Master of Science in Athletic Training is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). It is a residential program requiring six semesters of study, while the Master of Science in Sports Science is a hybrid program that can be completed in as little as 15 months (4 semesters). Both programs start in the summer and are offered at the Fort Lauderdale/Davie Campus.

Master of Science in Athletic Training Overview

Accreditation Status
The Athletic Training Program (ATP) received approval from the NSU Board of Trustees to offer an M.S.A.T. (Master of Science in Athletic Training) degree beginning May 2018. This follows a mandate from the Commission on Accreditation of Athletic Training Education (CAATE) that degree programs must be offered only at the Master’s degree level after fall 2022.

NSU’s ATP is accredited by the CAATE and is currently on a 10-year accreditation cycle through 2021. The CAATE provides peer review of the program’s educational content based on educational standards adopted by national medical and allied health professional organizations such as

• The American Academy of Family Physicians
• The American Academy of Pediatrics
• The American Orthopedic Society for Sports Medicine
• The Commission on Accreditation of Athletic Training Education
• The National Athletic Trainers Association

These organizations have cooperated to establish, maintain, and promote appropriate standards for quality for educational programs in athletic training and to provide recognition for exceptional programs. These standards and interpretations can be found at caate.net.

Admissions Requirements
This program is no longer admitting students.

Background Checks
As per PCHCS student handbook, accepted applicants and students are required to authorize the NSU Health Professions Division to obtain background check(s) as per adopted policy of March 2011. If the background check(s) reveal information of concern, which the NSU Health Professions Division may deem unfavorable, HPD will request that the individual provide a detailed written explanation of the information contained in this report, along with appropriate documentation (e.g., police reports). Students may also be required to authorize clinical training facilities that they are assigned to by the Health Professions Division to obtain a background check with the results reported to the clinical training facility. Offers of admission will not be considered final until the completion of the background check(s), with results deemed favorable by the NSU Health Professions Division, and where appropriate, by the clinical training facilities. If information received indicates that the student has provided false or misleading statements, has omitted required information, or in any way is unable to meet the requirements for completion of the program, then the admission may be denied or rescinded, the student may be disciplined or dismissed, or his or her enrollment may be terminated.

Acceptance to an NSU Health Professions Division program does not guarantee that a student with information of a concern will be accepted by clinical training facilities to which they may be assigned. Following the initial background check(s), students will be asked annually to provide a certification relating to any convictions or guilty or no-contest pleas to any criminal offense other than traffic violations. Additionally, a Level 2 background check may be required of students completing certain rotations.
Computer Requirements
All students are required to have a computer with the following minimum specifications:
- Pentium or AMD at 1.00 GHZ or equivalent Macintosh processor
- 256 MB RAM
- video and monitor capable of 1024 X 768 resolution or better
- CD-ROM drive
- full duplex sound card and speakers
- internet connection with Internet service provider (DSL, cable, or satellite highly recommended)
- Windows XP or NT or MAC OS or better
- Microsoft Office 2000 or newer with PowerPoint, Word, and Excel minimum
- printer capability

Technical Standards
The technical standards set forth by the ATP establish the essential qualities considered necessary for students admitted to this program to achieve the knowledge, skills, and competencies of an entry-level Athletic Trainer, as well as meet the expectations of the CAATE. In the event a student is unable to fulfill these technical standards, with or without reasonable accommodation, the student will not progress through the program. Compliance with the program’s technical standards does not guarantee a student’s eligibility for the BOC exam.

Candidates for selection to the M.S.A.T. must demonstrate all of the following technical standards:
1. the mental capacity to assimilate, analyze, synthesize, integrate concepts and problem solve to formulate assessment and therapeutic judgments and to be able to distinguish deviations from the norm
2. sufficient postural and neuromuscular control, sensory function, and coordination to perform appropriate physical examinations using accepted techniques. And, accurately, safely, and efficiently use equipment and materials during the assessment and treatment of patients.
3. the ability to communicate effectively and sensitively with patients and colleagues, including individuals from different cultural and social backgrounds. This includes, but is not limited to, the ability to establish rapport with patients and communicate judgments and treatment information effectively. Students must be able to understand and speak the English language at a level consistent with competent professional practice.
4. the ability to record the physical examination results and a treatment plan clearly and accurately
5. the capacity to maintain composure and continue to function well during periods of high stress
6. the perseverance, diligence, and commitment to complete the ATP as outlined and sequenced
7. flexibility and the ability to adjust to changing situations and uncertainty in clinical situations
8. affective skills and appropriate demeanor and rapport that relate to professional education and quality patient care

M.S.A.T. applicants will be required to verify they understand and meet these technical standards or that they believe that, with certain accommodations, they can meet the standards. NSU’s Office of Disability Services (nova.edu/disabilityservices) will evaluate a student who states he/she could meet the program’s technical standards with accommodation and confirm that the stated condition qualifies as a disability under applicable laws.

Tuition and Fees
While a majority of the costs for equipment, lab supplies, and learning materials are covered through student tuition and fees, there are additional costs that are the financial obligation of the students enrolled in the ATP. A summary of those costs is available on the program website; however, this list is neither exhaustive nor exclusive to all student financial obligations.

Requirements for Graduation
In order to be eligible to graduate from the M.S.A.T., students shall
1. successfully complete all academic and clinical courses and degree requirements with a minimum 3.0 cumulative GPA or better
2. have satisfactorily met all financial and library obligations
3. attend in person the commencement program

The Athletic Training Student Organization (ATSO)
The purpose of the Nova Southeastern University Athletic Training Student Organization is to provide opportunities for ongoing professional development and interaction with Allied Health Care Professionals for those interested in the field of Athletic Training and Sports Medicine. This organization will be affiliated with the Nova Southeastern University (NSU) Athletic Training Education Program.
# Master of Science in Athletic Training Curriculum Outline

## First Year—Summer Semester

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<th>Course Code</th>
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<tr>
<td>ATTR 5100</td>
<td>Emergency Medicine</td>
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<tr>
<td>ATTR 5200</td>
<td>Intro to Athletic Training</td>
<td>3</td>
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## First Year—Fall Semester

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<tr>
<td>ATTR 5310</td>
<td>Orthopedic Evaluation I</td>
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</tr>
<tr>
<td>ATTR 5500</td>
<td>Nutrition and Performance</td>
<td>3</td>
</tr>
<tr>
<td>ATTR 5410</td>
<td>Therapeutic Interventions I</td>
<td>4</td>
</tr>
<tr>
<td>ATTR 5610</td>
<td>AT Clinical Experience I</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
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## First Year—Winter Semester

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<tr>
<td>ATTR 5320</td>
<td>Orthopedic Evaluation II</td>
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<tr>
<td>ATTR 5700</td>
<td>Evidence Based Practice</td>
<td>3</td>
</tr>
<tr>
<td>ATTR 5420</td>
<td>Therapeutic Interventions II</td>
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<td>ATTR 5330</td>
<td>Orthopedic Evaluation III</td>
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<td>ATTR 5430</td>
<td>Therapeutic Interventions III</td>
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<td>ATTR 6110</td>
<td>Pharmacology</td>
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<td>AT Clinical Experience III</td>
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## Second Year—Fall Semester

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<td>ATTR 6300</td>
<td>Medical Documentation</td>
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<td>ATTR 6610</td>
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Second Year—Winter Semester

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<tr>
<td>ATTR 6200</td>
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<tr>
<td>ATTR 6400</td>
<td>Behavioral Medicine</td>
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<tr>
<td>ATTR 6130</td>
<td>Clinical Medicine Procedures</td>
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</tr>
<tr>
<td>ATTR 6700</td>
<td>Professional Practice and Clinical Reasoning</td>
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<tr>
<td>ATTR 6620</td>
<td>AT Clinical Experience V</td>
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Total Credits 12

Total Hours 72

Master of Science in Athletic Training Course Descriptions

**ATTR 5100—Emergency Medicine**
This course is designed to prepare students to perform the skills necessary to function as both an Emergency Medical Technician–Basic and an Athletic Trainer (EMT-B; AT). This includes all the skills necessary for the individual to provide emergency medical care at the basic life support level with an ambulance service or other specialized service such as athletic training. Students will learn to recognize emergent situations, care for and transport critical and emergent patients as part of an emergency medical team consistent with Emergency Medical Technician–Basic: National Standard Curriculum. Orientation to the specific systems with which the EMT-Basic and Athletic Trainer will be affiliated will be included. **Prerequisite:** Admission to the M.S.A.T. (9 credits)

**ATTR 5200—Introduction to Athletic Training**
This course will focus on the basic concepts of the prevention and recognition of athletic injuries and treatment procedures for proper management of athletic injuries based on current evidence. Students will also be instructed in the application of taping, wrapping, and other protective equipment. Additionally, students will learn about the governing bodies and associated documents of the athletic training profession. **Prerequisite:** Admission to the MSAT. (3 credits)

**ATTR 5310—Orthopedic Evaluation I**
This course will focus on the recognition, assessment, treatment and appropriate medical referral of athletic injuries and illnesses of the lower extremities. Heavy emphasis will be placed on the clinical skills. **Prerequisite:** ATTR 5100 and ATTR 5200 (4 credits)

**ATTR 5320—Orthopedic Evaluation II**
This course will focus on the recognition, assessment, treatment and appropriate medical referral of athletic injuries and illnesses of the upper extremities. Heavy emphasis will be placed on the clinical skills. **Prerequisite:** ATTR 5310 and ATTR 5610 (4 credits)

**ATTR 5330—Orthopedic Evaluation III**
This course will focus on the recognition, assessment, treatment and appropriate medical referral of athletic injuries and illnesses of the head, spine, and thorax. Heavy emphasis will be placed on the clinical skills. **Prerequisite:** ATTR 5320 and ATTR 5620 (3 credits)

**ATTR 5410—Therapeutic Interventions I**
This course will encompass therapeutic interventions during the acute phase of healing. Students will learn about basic therapeutic interventions used to promote optimal healing conditions, manage discomfort, and minimize discomfort including infrared modalities and exercise. **Prerequisite:** ATTR 5100 and ATTR 5200 (4 credits)

**ATTR 5420—Therapeutic Interventions II**
This course will encompass therapeutic interventions during the fibroblastic repair phase of healing. Students will learn common surgical techniques, identify patient and clinician outcomes, and develop a more thorough understanding of the use of therapeutic interventions in clinical practice. **Prerequisite:** ATTR 5410 and ATTR 5610 (4 credits)

**ATTR 5430—Therapeutic Interventions III**
This course will encompass therapeutic interventions during the maturation and remodeling phase of healing. Students will learn to incorporate gait, posture, biomechanics, and ergodynamics to address needs of the patients. In addition, the use of manual therapies, including joint mobilization, therapeutic massage, myofascial release, and muscle energy techniques to restore mobility and pain management will be emphasized. Students will assess rehabilitation progress and
criteria for return to participation. **Prerequisite:** ATTR 5420 and ATTR 5620 (3 credits)

**ATTR 5500—Nutrition and Performance**
This course addresses the nutritional needs for general health maintenance, exercise progression programing, recovery from exercise and healing from injury. Management and recognition of disordered eating and eating disorders will also be addressed. The exercise element portion of performance will include appropriate exercise testing and developing an appropriate program design for physical maintenance. **Prerequisite:** ATTR 5100 and ATTR 5200 (3 credits)

**ATTR 5610—Athletic Training Clinical Experience I**
This course will focus on field experiences and the application of learned principles from athletic training clinical skills specifically related to equipment intensive sports. Students will be directly supervised by a preceptor and given the opportunity to practice learned skills in the clinical setting. **Prerequisite:** ATTR 5100 and ATTR 5200 (2 credits)

**ATTR 5620—Athletic Training Clinical Experience II**
This course will focus on field experiences and the application of learned principles from athletic training clinical skills specifically related to upper and lower extremity sports. Students will be directly supervised by a preceptor and given the opportunity to practice learned skills in the clinical setting. **Prerequisite:** ATTR 5610 (2 credits)

**ATTR 5630—Athletic Training Clinical Experience III**
This course will focus on field experiences and the application of learned principles from athletic training clinical skills specifically related to non-orthopedic conditions. Students will be directly supervised by a preceptor and given the opportunity to practice learned skills in the clinical setting. **Prerequisites:** ATTR 5620 (1 credit)

**ATTR 5700—Evidence Based Practice**
This course will focus on the fundamentals of evidence-based practice including clinical decision making based on available research studies and the selection and appraisal of literature according to specific criteria that yield evidence of benefit. **Prerequisites:** ATTR 5610 (3 credits)

**ATTR 6100—Medical Pathologies**
This course will focus on the recognition, assessment, treatment and appropriate medical referral of general medical conditions related to each body system including congenital and acquired abnormalities of physically active individuals. Heavy emphasis will be placed on the related clinical skills. **Prerequisite:** ATTR 5310, ATTR 5320, and ATTR 5620 (3 credits)

**ATTR 6110—Pharmacology**
This course will focus on the application of pharmacological principles and drug classifications pertinent to the treatment of athletic injuries. There will be a focus on the use and effects of drugs and of the disease states treated by these drug categories. Additionally, the role of the athletic trainer regarding the therapeutic use and effects of these drugs will be included in the course. **Prerequisite:** ATTR 5310, ATTR 5320, and ATTR 5620 (3 credits)

**ATTR 6120—Diagnostic Imaging**
This course will allow the student to learn how to read and understand diagnostic imaging. This will include describing the basic principles, the different ways of testing, and their role in the diagnostic process. **Prerequisite:** ATTR 6100, ATTR 6110, and ATTR 5630 (1 credit)

**ATTR 6130—Clinical Medicine Procedures**
This course will provide the opportunity for the student to learn clinical medicine procedures including intravenous, injections, blood draws, medication administration, applying staples and sutures, casting, and orthotics. **Prerequisite:** ATTR 6110 and ATTR 6120 (2 credits)

**ATTR 6200—Health Care Administration**
This course will focus on the concepts of legal liability, budget/financial and personnel management, marketing, public relations, inventory control, facility design/development/maintenance, and administration of allied-health care programs. Additionally, the day-to-day supervision, scheduling and provision of services to athletes and other physically active individuals offered in the athletic training room, health-care facilities and other venues will be addressed. **Prerequisite:** ATTR 6610 (3 credits)

**ATTR 6300—Medical Documentation**
This course will focus on professional documentation standards which will include SOAP notes, International Classification of Diseases, 10th Edition (ICD-10), Electronic Medical Record including Allscripts. The students will learn how to be effective documenters in the health care profession. **Prerequisite:** ATTR 6100, ATTR 6110, and ATTR 5630 (2 credits)

**ATTR 6400—Behavioral Medicine**
This course will examine the knowledge and skill necessary for recognition, assessment, and appropriate medical referral for psychosocial healthcare. Further, this course will emphasize concepts of emotional health, as well as motivation and psychological support as part of a comprehensive patient care plan. **Prerequisite:** ATTR 6610 (3 credits)

**ATTR 6610—AT Clinical Experience IV**
This course will focus on an immersive clinical experience and the application of learned principles from athletic training clinical skills. Students will be directly supervised by a preceptor and given the opportunity to practice learned skills in the clinical setting. **Prerequisite:** ATTR 5630 (6 credits)
ATTR 6620—AT Clinical Experience V
This course will focus on a variety of field experiences and the application of learned principles from athletic training clinical skills. Students will be directly supervised by a preceptor and given the opportunity to practice learned skills in the clinical setting. **Prerequisites:** ATTR 6610 (2 credits)

ATTR 6700—Professional Practice and Clinical Reasoning
The student will learn the application of patient oriented evidence into a comprehensive plan of care using outcomes and evidence supported methodology. Students will apply concepts of critical analysis of peer reviewed research culminating in an evidence-based project. **Prerequisites:** ATTR 5700 and ATTR 6610 (2 credits)

**Master of Science in Sports Science Overview**

The Department of Health and Human Performance offers the Master of Science (M.S.) in Sports Science degree program. This 30-credit, postbachelor’s degree program’s academic curriculum combines hands-on laboratory training and online coursework. Faculty members mentor students in areas related to high-level human performance, applied biomechanics, body composition, sports nutrition, and sports neuroscience. The sports science degree further prepares students for careers in exercise and sports science in areas that include, but are not limited to, research, personal training, strength and conditioning, and performance specialization. It is distinguished from comparable programs by its focus on high-performance vs. general population wellness or fitness.

**Admissions Requirements and Application Procedures**

Students with bachelor’s degrees in any area may be considered for the M.S. in Sports Science program. The admissions/applications requirements are as follows:

1. a bachelor’s degree from a regionally accredited college or university or an approved degree credentialing agency for international students
2. a completed NSU Application along with the $50, nonrefundable application fee sent to Nova Southeastern University (Application can be found at [https://apply.nova.edu/Elucian.Erecruiting.Web.External/Pages/welcome.aspx](https://apply.nova.edu/Elucian.Erecruiting.Web.External/Pages/welcome.aspx))
3. submission of all required documents including
   - résumé with three professional references
   - personal statement of professional and educational goals
   - final official transcripts from all institutions attended
4. minimum cumulative grade point average (GPA) of 3.0 on a 4.0 scale and a grade of B (3.0) or better on all prerequisite courses and science courses
5. submission of Test of English as a Foreign Language (TOEFL) scores, if English is not the applicant’s native language

All applications will be reviewed on a case-by-case basis.

**Computer Requirements**

All students are required to have a computer with the following minimum specifications:

- Pentium or AMD at 1.00 GHZ or equivalent Macintosh processor
- 256 MB RAM
- video and monitor capable of 1024 X 768 resolution or better
- CD-ROM drive
- full duplex sound card and speakers
- Internet connection with Internet service provider
- Windows XP or NT or MAC OS or better
- Microsoft Office 2000 or newer with PowerPoint, Word, and Excel minimum
- printer capability

**Technical Standards**

Candidates for selection to the M.S. in Sports Science program must demonstrate all of the following technical standards:

1. the mental capacity to assimilate, analyze, synthesize, and integrate concepts and problem solve
2. sufficient postural and neuromuscular control, sensory function, and coordination to perform appropriate laboratory-based techniques, as well as accurately, safely, and efficiently use equipment and materials during the assessment and testing of study participants
3. the ability to communicate effectively and sensitively with study participants and colleagues, including individuals from different cultural and social backgrounds (Students must be able to understand and speak English at a level consistent with competent professional practice.)
4. the ability to record data clearly and accurately
5. the capacity to maintain composure and continue to function well during periods of high stress
6. the flexibility and ability to adjust to changing situations and uncertainty in clinical situations

7. the affective skills and appropriate demeanor and rapport that relate to professional education

M.S. in Sports Science applicants will be required to verify they understand and meet these technical standards or that they believe that, with certain accommodations, they can meet the standards. NSU’s Office of Disability Services (nova.edu/disabilityservices) will evaluate a student who states that he or she could meet the program’s technical standards with accommodation and confirm that the stated condition qualifies as a disability under applicable laws.

Tuition and Fees
Tuition for the academic year 2020–2021 will be posted on our website (healthsciences.nova.edu/human-performance/sports-science/tuition-and-fees.html). An NSU Student Services Fee of $500 is required each semester and an HPD General Access Fee of $145 is required annually. A Registration Fee of $30 is also required per term. Tuition and fees are subject to change without notice per NSU’s Board of Trustees.

Acceptance and Preregistration fee—$500. This fee is required to reserve the accepted applicant’s place in the entering first-year class, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance. The first semester’s tuition and fees, less the $500 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Additional expenses and fees may be incurred to include, but are not limited to, graduation fees, books, etc.

Requirements for Graduation
In order to be eligible for graduation, M.S. in Sports Science students shall

1. successfully complete all academic courses (30 total credits) and degree requirements with a minimum 3.0 cumulative GPA or better
2. have satisfactorily met all financial and library obligations

Master of Science in Sports Science Curriculum

This is the suggested course sequence for full-time students

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<thead>
<tr>
<th>First Year—Summer Semester</th>
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<tr>
<td>EXSC 5760 Advanced Sport Biomechanics</td>
<td>3</td>
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<tr>
<td>EXSC 5200 Laboratory Instrumentation</td>
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<tr>
<td>MHS 5501 Epidemiology and Biostatistics</td>
<td>3</td>
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<tr>
<td>MHS 5510 Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>EXSC 5500 Advanced Methods of Strength and Conditioning</td>
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</table>
Master of Science in Sports Science Course Descriptions

**EXSC 5200—Laboratory Instrumentation**
This course is designed to provide advanced skills in selecting, calibrating, and using laboratory equipment for the assessment of muscular, metabolic, and cardiovascular aspects of high performance as well as assessment of body composition and mechanics. Significant emphasis will be placed upon interpretation and use of results. (3 credits)

**EXSC 5300—Directed Research I**
This course will require students to 1) perform and write an extensive literature review on the chosen research topic; 2) identify the key issues in the sports science field and, in particular, the student’s field of future research; 3) initiate the needed protocols for a scientific study; 4) write a proposal outlining the dependent and independent variables of the project; and 5) write an IRB and Informed Consent. (3 credits)

**EXSC 5400—Directed Research II**
This course will require students to collect data on their proposed project, perform a data analysis, and compose a report for presentation at a national conference and/or journal publication. Students may register for 1, 2 or 3 credits per semester to complete the required project. (3 credits)

**EXSC 5500—Advanced Methods of Strength and Conditioning**
This course is designed to enhance the student’s guideline education in the areas of scientific foundations, nutrition, and practical applications as set by the National Strength and Conditioning Association (NSCA). The material required to prepare for the course is necessary in preparation for the Certified Strength and Conditioning Specialist (CSCS), the Certified Personal Trainer (CPT), and the Certified Tactical Strength and Conditioning Facilitator (TSAC-F) examinations sponsored by the NSCA. Additionally, students will be exposed to the knowledge required to achieve a Level One Weightlifting Coaching Course offered through United States Weightlifting (USAW). Students will also be required to conduct a case study on a competitive (i.e., state or national class) athlete or tactical professional (i.e., military or fire and rescue). (3 credits)

**EXSC 5600—Sports Analytics**
This course is an introduction to the science and application of analytics in sports. Students will learn how specific analytics can be used to predict athlete development and performance. The course will review athletic performance measurements that include strength, power, energy expenditure, body composition, running speed, jumping ability, etc. The course also reviews nutritional, sleep, GPS, and HRV technologies. It utilizes exploratory data analysis, predictive modeling, and presentation graphics, showing real-world implications for athletes, coaches, team managers, and the sports industry. (3 credits)

**EXSC 5760—Advanced Sport Biomechanics**
This course encompasses the application of kinetic and kinematic principles to selected sport performance, including strength and conditioning. Significant emphasis will be placed on injury prevention, muscle mechanics, and the use of equipment and technology for technique analysis and athlete monitoring. (3 credits)
EXSC 5900—Advanced Ergogenic Aids
This course encompasses the science and application of the current state of knowledge vis-à-vis sports nutrition. Specifically, students will learn to critically analyze the role of macronutrients (i.e., carbohydrates, fats, proteins), sports supplements (e.g., creatine, beta-alanine, caffeine, etc.) and other specialty supplements regarding both aerobic and anaerobic sports. (3 credits)

MHS 5203—Writing for Allied Health Professionals
This course entails the study and practice of writing style used in allied health: scientific writing. Scientific writing is a different format than other kinds of writing used as an undergraduate. It is more precise and succinct, which is different from the way we speak to each other. Scientific writing is written for an audience, with the purpose of informing or possibly persuading the audience. American Psychological Association (APA) style and standard English formatting will be reviewed. The papers written in this course will give the student a foundation for all MHS courses. (3 credits)

MHS 5501—Epidemiology and Biostatistics
The ability to understand the conceptual and practical aspects of biostatistics and epidemiology in health care is critical to understanding research and analyzing population data about disease. This survey course will improve the student’s ability to understand and apply these concepts. (3 credits)

MHS 5510—Research Methods
This course is designed to enable participants to develop skills in reading and critically evaluating published research using the scientific model. The advantages and disadvantages of quantitative and qualitative research methods will be compared and contrasted. Research articles will be collaboratively analyzed to develop an appreciation of potential methodological problems and their implications for evidence-based professional practice. (3 credits)
Department of Health Science

Department of Health Science Overview

The Department of Health Science is an interdisciplinary group of programs designed for health professionals with the desire to advance academically, administratively, or clinically within their profession. Offering distance education from the undergraduate to the doctoral level is consistent with the university’s and college’s commitment to lifelong learning. The department offers the Bachelor of Health Science (B.H.Sc.) and Master of Health Science (M.H.Sc.) Programs in an exclusively online format. The department also offers two innovative doctoral programs. The Doctor of Health Science (D.H.Sc.) and the Ph.D. in Health Science programs are offered via online and intense compressed residential format. These are postprofessional degrees targeted at health professionals trained at the master’s degree level. These programs attract active clinicians, clinician administrators, and health professions educators. A combined M.H.Sc./D.H.Sc. degree is an option also available.

The department also houses two preeminent, on-campus, entry-level programs. The Bachelor of Science in Cardiovascular Sonography is located at our Tampa Bay, Florida, location. The Bachelor of Science in Medical Sonography is offered on our campus in the greater Fort Lauderdale, Florida, area. Both programs are supported by state-of-the-art teaching laboratories and both programs offer a concurrent enrollment in the Master of Health Science program to qualified applicants.

- Bachelor of Health Science (B.H.Sc.)—online
- Bachelor of Science—Cardiovascular Sonography (B.S.)—entry-level, on-campus, Tampa Bay
- Bachelor of Science—Medical Sonography (B.S.)—entry-level, on-campus, Fort Lauderdale
- Master of Health Science (M.H.Sc.)—online
- Accelerated Dual Admission M.H.Sc./D.H.Sc.—online with some residency requirements
- Doctor of Health Science (D.H.Sc.)—online with some residency requirements
- Accelerated Dual Admission M.H.Sc./Ph.D.—online with some residency requirements
- Doctor of Philosophy (Ph.D.) in Health Science—online with some residency requirements

Upon successful completion of the B.H.Sc. program, students are eligible to apply for admission to continue their education in health sciences in the Master of Health Science (M.H.Sc.) program and, later, the Doctor of Health Science (D.H.Sc.) or the Ph.D. in Health Science program. Each of these programs is an online degree program, with the M.H.Sc. having no residency requirement and the D.H.Sc. having a requirement for students to complete two one-week summer institutes.

Computer Requirements

All students in the department are required to have access to a desktop or laptop computer meeting the minimum requirements listed below:

- a recent generation of Microsoft Windows (7, 8, or above) or Apple OS (10.8 or above)
- compatible Microsoft Office software to include Word, Powerpoint, and Excel
- headphones, microphone, camera, and video conferencing capabilities
- Internet broadband access
- recommended: surge protection and appropriate backup options

Tables and smartphones, while very useful, may not be sufficient for all program uses. Additional minimum computer requirements can be found at nova.edu/publications/it-standards.
Master of Health Science Program for Health Professionals

The Master of Health Science (M.H.Sc.) Program is a distance education program designed to provide health professionals with the theoretical and academic training necessary to enhance career mobility and professional advancement.

Health professionals practicing today in urban and rural communities throughout the nation are highly recognized as valuable members of the health care team who make quality care more accessible while reducing costs. These health care professionals are playing a prominent and respected role in providing community medical service. An increasing number of employers are seeking master’s-level, academically prepared professionals to fill expanded roles that include clinical specialization, health education, research, and health care administration.

The M.H.Sc. didactic curriculum provides education in a variety of health related topics. The practical component of the program will be tailored to the individual interest and goal of the graduate student. Under faculty guidance, students will demonstrate increased understanding in their chosen area of study.

The M.H.Sc. program is designed for working nonphysician clinicians and health professionals who have graduated from an accredited health program, as well as health care managers and administrators.

Admissions Requirements

The Department of Health Science Committee on Admissions considers the overall qualities of the applicant. Areas of consideration include personal motivation, quality and length of prior health care experience, academic performance and level of achievement, life experiences, and personal recommendations. The M.H.Sc. Program will admit clinical and administrative health care professionals with diverse undergraduate and professional education, health care work history, health care administrative experience, and life experiences who have a demonstrated capacity to pursue a rigorous course of master’s degree study and increasingly responsible positions in the health care arena.

Prospective M.H.Sc. students are selected by considering the overall qualities of the applicant through application content, academic performance and level of achievement, prior clinical health care experience or a minimum of one year of responsible administrative health care experience, life experiences, letters of evaluation, and personal motivation. In special circumstances, a personal interview may be required. Prior to matriculation into the program, applicants must hold a bachelor’s degree from a regionally accredited college or university with a minimum cumulative grade point average (GPA) of 2.75 or higher on a 4.0 scale.

Prior clinical health care experience or a minimum of one year of health administrative experience is required. The M.H.Sc. is a postprofessional degree designed for health practitioners, clinicians, and administrators from a wide variety of disciplines. The commonality exhibited by our students is one–three years of responsible health care administrative managerial or supervisory experience and/or the practice of a recognized health occupation that requires registration, certification, or licensure. The successful applicant’s health professional experience emphasizes the delivery of clinical services to individuals (e.g., physician assistant, physical therapist, dental hygienist, registered nurse, vascular sonographer, radiology technician, respiratory therapist, etc.). The successful applicant’s health administrative experience includes individuals who act as professional administrators in a variety of health care settings.

Applicants who qualify under the clinical health professional pathway will document their eligibility through state and/or national registration, certification, or licensure in a clinical health field. Applicants who qualify under the health administration pathway will document their experience with an organizational chart showing their position in a health care organization and a letter of reference from a supervisor attesting to their experience and level of responsibility. Administrative applicants will submit a 500 to 1,000 word essay describing their personal and career goals.

The university reserves the right to modify any requirement on an individual basis as deemed necessary by the dean of the Dr. Pallavi Patel College of Health Care Sciences.

In order to be considered for admission, applicants must submit the following prior to matriculation:

• official transcripts of all coursework attempted at all colleges and universities must be forwarded, by institutions attended, to the Enrollment Processing Services, Master of Health Science Program

It is the responsibility of the applicant to ensure that arrangements are made for these transcripts to be sent to

Nova Southeastern University
Enrollment Processing Services
Dr. Pallavi Patel College of Health Care Sciences
M.H.Sc. Program
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

• completion of a bachelor’s degree from a regionally accredited allied health program with a minimum cumulative grade point average of 2.75 or higher on a 4.0 point scale

• national professional certification or licensure (if applicable)
• current state license, registration, or certification (if applicable)
• two letters of evaluation from supervising physicians or managers (Additional letters of recommendation are encouraged.)

To be eligible for consideration for admission, applicants applying under the administrative pathway must have a minimum of one year of verifiable managerial experience in health care administration. This experience should be readily identifiable on the applicant’s résumé. A letter of recommendation from the applicant’s current supervisor detailing the applicant’s length and level of managerial experience must be submitted with the application.

A personal interview with the committee on admissions may be required in some cases (phone interview may be substituted).

All interview expenses are the responsibility of the applicant.

The university reserves the right to modify any requirements on an individual basis as deemed necessary by the dean of the Dr. Pallavi Patel College of Health Care Sciences.

The college reserves the right, and the student, by his or her act of matriculation, concedes to the college the right to require his or her withdrawal any time the college deems it necessary to safeguard its standards of scholarship, conduct, and compliance with regulations or for such other reasons as are deemed appropriate.

The dean and M.H.Sc. program director reserve the right to require the student’s withdrawal at any time for the above-mentioned reasons.

Tuition and Fees
Tuition for academic year 2020–2021 will be posted on our website (healthsciences.nova.edu/healthsciences/mhs/tuition.html). An NSU Student Services Fee of $1,500 is required annually. Tuition waivers and discounts for NSU students and staff and faculty members will be in accordance with published policy and administered through the dean of the Dr. Pallavi Patel College of Health Care Sciences. Tuition, fees, and payment schedules are subject to change without notice. Master of Health Law courses offered through the Shepard Broad College of Law cost $690 per credit hour.

Application Procedures
The M.H.Sc. program provides admission opportunities throughout the year. Applications may be submitted year round.

Once accepted, a start date will be assigned to the student after personal advisement. There are four start dates per year: January, April, July, and October. The student has a maximum of three years from the start date to complete the degree course of study and apply for the M.H.Sc. degree. Before the applicant can be reviewed for possible admission, the following must be submitted:

• a completed M.H.Sc. application form
• a $50, nonrefundable application fee
• official transcripts of all coursework attempted at all colleges and universities must be forwarded, by institutions attended, to the Enrollment Processing Services, Master of Health Science Program Admissions.

It is the responsibility of the applicant to ensure that arrangements are made for these transcripts to be sent.

• a final official transcript, covering all of the applicant’s work, must be forwarded to the Office of Admissions prior to matriculation
• two letters of evaluation from professional supervisors

These evaluators, preferably supervising clinicians, should know the applicant’s personal character and scholastic, clinical, and work abilities. (An applicant to the Health Care Leadership concentration must submit a letter from his or her supervisor documenting the applicant’s level of experience/ responsibility as a health care administrator/manager.)

• official copies of all professional certifications, registrations, licenses or relevant credentialing materials
• complete CV or résumé

All documents must be received at least one month prior to the anticipated start date and must be sent to the address below.

Nova Southeastern University
Enrollment Processing Services
Dr. Pallavi Patel College of Health Care Sciences,
M.H.Sc. Program
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

In special circumstances, a personal interview with members of the committee on admissions may be requested or required. A phone interview may be substituted. Upon the receipt of the completed application and required credentials, the Department of Health Science committee on admissions will recommend to the dean and the M.H.Sc. program director those applicants to be considered for acceptance into the program.

Foreign Coursework
Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.

• World Education Services, Inc.
Bowling Green Station
P.O. Box 5087
New York, NY 10274-5087
(212) 966-6311 • wes.org
It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University, Enrollment Processing Services, Dr. Pallavi Patel College of Health Care Sciences, Department of Health Science Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, FL 33329-9905.

**Graduate Certificate Programs**

The M.H.Sc. program offers graduate certificates in Clinical Research Associate and Clinical Trial Manager.

The criteria for admission to the graduate certificate programs is identical to those for the M.H.Sc. program found previously in this section.

**Graduate Certificate in Clinical Research Associate**

The Graduate Certificate in Clinical Research Associate is designed for not only health care professionals seeking to enter or gain knowledge in the rapidly expanding field of health care clinical research, but also for those that have degrees in various disciplines in science that are seeking employment in the field of clinical research. It consists of the following courses, totaling 15 credit hours:

- MHS 5904—Research Ethics (3 credits)
- MHS 6002—Clinical Trial Process (3 credits)
- MHS 6003—Legal, Safety, and Regulatory Compliance and Best Practices (3 credits)
- MHS 6604—Reporting Clinical Trial Results in Different Media and Externship (3 credits)
- MHS 6605—Clinical Trial Conduct (3 credits)

**Graduate Certificate in Clinical Trial Manager**

The Graduate Certificate in Clinical Trial Manager is designed for not only health care professionals seeking to enter or gain knowledge in the rapidly expanding field of health care clinical research, but also for those that have degrees in various disciplines in science that are seeking employment in the field of clinical trial management. It is meant for individuals who have completed the Clinical Research Associate Graduate Certificate and consists of the following courses, totaling 12 credit hours:

- MHS 5540—Enterprise Risk Management (3 credits)
- MHS 5541—Health Care Systems and Conflict (3 credits)
- MHS 5908—Applied Statistics (3 credits)
- MHS 6607—Clinical Trial Manager (3 credits)

**Nondegree-Seeking Application Procedures/Policy**

A nondegree-seeking student is one who wishes to take one or more courses in the Master of Health Science program and, at the time of application, does not intend to seek the Master of Health Science degree.

Nondegree-seeking students must submit

1. a completed M.H.Sc. application form along with a $50, nonrefundable application fee
2. official college, certificate, and/or diploma-based transcripts from all undergraduate institutions attended, sent directly from the institution to EPS (This includes official documentation of receiving a bachelor’s degree from a regionally accredited college/university. A minimum GPA of 2.75 on a 4.0 grading scale is required in the applicant’s bachelor’s degree.)
3. one letter of recommendation from an individual (other than a relative or friend), such as a supervisor or a community associate.

Due to the limited number of seats available in the program, preference for admission and registration priority will be given to degree-seeking students. Nondegree-seeking students can take a maximum of 9 credits of M.H.Sc. coursework. Enrollment in these courses as a nondegree-seeking student does not guarantee acceptance into the M.H.Sc. program or any other NSU program.

If, after taking classes in the M.H.Sc. program, a nondegree-seeking student decides to pursue the M.H.Sc. degree, the student must resubmit an application as a degree-seeking student. The applicant must meet **ALL** of the admissions requirements for the M.H.Sc. degree program. A nondegree-seeking student who, after taking M.H.Sc. courses, decides to apply as a degree-seeking student, may request transfer credit for courses taken as a nondegree-seeking student, in accordance with the credit transfer policy of the M.H.Sc. program.

**Requirements for Graduation**

To be eligible to receive the M.H.Sc. degree, students shall

- be of good moral character
- satisfactorily complete the program of 37 hours (minimum) of study required for the degree with an average grade of **B** or a GPA of 3.0 on a 4.0 scale
- successfully complete the M.H.Sc. practicum
- receive a recommendation by the M.H.Sc. program director to the dean of the Dr. Pallavi Patel College of Health Care Sciences
Graduation ceremony attendance is not a requirement for distance education students. It is, however, an option that the department encourages and that takes place once a year (in August).

Students with a cumulative GPA of 3.74 or higher are eligible to receive the degree with honors. Students with a cumulative GPA of 4.0 are eligible to receive the degree with high honors.

Course of Study
The M.H.Sc. Program requires a minimum of 31 semester hours of study to be completed. This includes required core courses. All students are required to have individualized curriculum advisement upon acceptance.

Transfer of up to 6 credit hours of acceptable graduate study is permitted upon approval. These graduate courses must have a grade of B or better and must be approved by the M.H.Sc. program director and dean of the Dr. Pallavi Patel College of Health Care Sciences. The dean reserves the right to require, in special cases, more than the minimum of 31 semester hours. Transferred courses cannot have been credited toward a previous degree.

Classes are organized and based on accepted distance learning designs and formats.

Continuous Enrollment
The program requires students to enroll in at least one course per semester for the duration of their M.H.Sc. studies. If a student needs to take a semester off during the academic year, a formal request for a leave of absence shall be submitted to the program director and will be subject to approval.

Continuing Services
The program is designed to be completed in three years. Continuing services fees will be imposed after 36 months in the program. All students must finish the program within five years of the date of acceptance, or they will be dismissed. After the 36th month in the program, students will be enrolled in continuing services at a cost of $990 per semester.

Curriculum Outline—Master of Health Science Program

The curriculum involves completion of a minimum of 31 credit hours that must be completed in each of the two categories of courses (didactic and practical). There is some flexibility in curriculum design to accommodate students’ overall interests, employment, and educational goals. Educational counseling and advisement is always available to assist in the planning and registration process.

Generalist Curriculum Courses

<table>
<thead>
<tr>
<th>Required Core Courses (18 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003 Current Trends and Cultural Issues in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5203 Writing for Allied Health Professionals</td>
<td>3</td>
</tr>
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<td>MHS 5501 Epidemiology and Biostatistics</td>
<td>3</td>
</tr>
<tr>
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<td>3</td>
</tr>
<tr>
<td>MHS 5521 Ethical Issues in Health Care</td>
<td>3</td>
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<tr>
<td>MHS 5530 Principles and Practice of Management in Health Care</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective Courses* (9 credits—choose three courses)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5026 Human Trafficking for Health Care Professionals</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5112 Bioterrorism and Weapons of Mass Destruction</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5211 Contemporary Issues in Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>MHS 5400</td>
<td>Directed Studies</td>
</tr>
<tr>
<td>MHS 5541</td>
<td>Health Care Systems and Conflict</td>
</tr>
<tr>
<td>MHS 5542</td>
<td>Health Care Education</td>
</tr>
<tr>
<td>MHS 5543</td>
<td>Educational Theories and Psychology</td>
</tr>
<tr>
<td>MHS 5544</td>
<td>Curriculum and Instruction in Health Care</td>
</tr>
<tr>
<td>MHS 5545</td>
<td>Assessment and Evaluation in Health Care</td>
</tr>
<tr>
<td>MHS 5546</td>
<td>Health Care Finance</td>
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<td>Health Care Leadership Quality Assurance/Risk Management</td>
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<tr>
<td>MHS 5538</td>
<td>Patient Safety Compliance in Health Care</td>
</tr>
<tr>
<td>MHS 5539</td>
<td>Health Care and Regulatory Compliance</td>
</tr>
<tr>
<td>MHS 5540</td>
<td>Enterprise Risk Management</td>
</tr>
<tr>
<td>MHS 5611</td>
<td>Firearms, Fingerprints, and Other Impression Evidence</td>
</tr>
<tr>
<td>MHS 5612</td>
<td>Forensic Analysis of Trace and Drug Evidence</td>
</tr>
<tr>
<td>MHS 5613</td>
<td>Crime Scene</td>
</tr>
<tr>
<td>MHS 5614</td>
<td>Technology That Revolutionized Criminal Investigations</td>
</tr>
<tr>
<td>MHS 5615</td>
<td>Overview of Crime Laboratory Management</td>
</tr>
<tr>
<td>MHS 5801</td>
<td>Applied Anatomy for Kinesiology</td>
</tr>
<tr>
<td>MHS 5802</td>
<td>Sports Injury Rehabilitation Principles</td>
</tr>
<tr>
<td>MHS 5810</td>
<td>Certified Strength and Conditioning Specialist Preparation</td>
</tr>
<tr>
<td>MHS 5904</td>
<td>Research Ethics</td>
</tr>
<tr>
<td>MHS 5906</td>
<td>Developmental Research Project</td>
</tr>
<tr>
<td>MHS 5908</td>
<td>Applied Statistics</td>
</tr>
<tr>
<td>MHS 5991</td>
<td>Quantitative Research Methods</td>
</tr>
<tr>
<td>MHS 5992</td>
<td>Qualitative Research Methods</td>
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</tbody>
</table>

**Practical Courses (10 credits)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5309</td>
<td>U.S. Health Policy</td>
<td>5</td>
</tr>
<tr>
<td>MHS 5207</td>
<td>Practicum</td>
<td>5</td>
</tr>
</tbody>
</table>

*Any course that is not considered a core course in the generalist curriculum can be used as an elective, with the exception of Health Law Concentration courses.*
Concentrations in the Master of Health Science Program

The M.H.Sc program offers several concentrations: sports medicine; higher education; health law; forensic investigative technology; leadership in health care; health care risk management, patient safety, and compliance; and bioethics. The internship and practicum must be completed in the area of concentration. There are no electives in the concentrations.

**Sports Medicine Concentration Curriculum**

<table>
<thead>
<tr>
<th>Core Courses (15 credits)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003</td>
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<td>Writing for Allied Health Professionals</td>
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<tr>
<td>MHS 5501</td>
<td>Epidemiology and Biostatistics</td>
</tr>
<tr>
<td>MHS 5510</td>
<td>Research Methods</td>
</tr>
<tr>
<td>MHS 5521</td>
<td>Ethical Issues in Health Care</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration Courses (12 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5211</td>
<td>Contemporary Issues in Nutrition</td>
</tr>
<tr>
<td>MHS 5801</td>
<td>Applied Anatomy for Kinesiology</td>
</tr>
<tr>
<td>MHS 5802</td>
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</table>

**Higher Education Concentration Curriculum**

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<th>Core Courses (15 credits)</th>
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<tbody>
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<td>MHS 5521</td>
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<tr>
<th>Course</th>
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<tbody>
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<td>MHS 5542</td>
<td>Health Care Education</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5543</td>
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<td>Curriculum and Instruction in Health Care</td>
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<td>MHS 5545</td>
<td>Assessment and Evaluation in Health Care</td>
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</table>

### Practical Courses (10 credits)

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<td>Practicum</td>
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</tr>
</tbody>
</table>

### Health Law Concentration Curriculum

This concentration is offered through a partnership with the NSU Shepard Broad College of Law. *Students in this concentration should consider themselves in a locked-step schedule.*

### Core Courses (15 credits)

<table>
<thead>
<tr>
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</tr>
<tr>
<td>MHS 5530</td>
<td>Principles and Practice of Management in Health Care</td>
<td>3</td>
</tr>
</tbody>
</table>

### Concentration Courses (18 credits offered through the Shepard Broad College of Law)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHL 1045</td>
<td>Patients’ Rights and Health Care Ethics</td>
<td>2</td>
</tr>
<tr>
<td>MLAW 1035</td>
<td>Professional Communication</td>
<td>2</td>
</tr>
<tr>
<td>MLAW 1036</td>
<td>Legal Foundations</td>
<td>3</td>
</tr>
<tr>
<td>MHL 2021</td>
<td>Pharmaceutical Law</td>
<td>2</td>
</tr>
<tr>
<td>MHL 2030</td>
<td>Law of Risk Management</td>
<td>2</td>
</tr>
<tr>
<td>MLAW 1020</td>
<td>Legal Research Methods and Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>MHL 1090</td>
<td>Law of Accreditation and Licensing</td>
<td>2</td>
</tr>
<tr>
<td>MHL Elective</td>
<td>Elective</td>
<td>2</td>
</tr>
</tbody>
</table>

### Practical Courses (10 credits)

<table>
<thead>
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</tr>
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<td>MHS 5207</td>
<td>Practicum</td>
<td>5</td>
</tr>
</tbody>
</table>
Health Care Risk Management, Patient Safety, and Compliance Concentration Curriculum

This concentration is designed for health care professionals seeking to enter, or be promoted in, the rapidly expanding field of health care risk management, patient safety, and compliance. The courses in this concentration will prepare graduates with the skills and background necessary to reduce medical errors, control adverse events, and implement a quality improvement and patient safety initiative. Completing this concentration requires 37 credits, as detailed below.

<table>
<thead>
<tr>
<th>Core Courses (12 credits)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003 Current Trends and Cultural Issues in Health Care</td>
<td>3</td>
</tr>
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<td>MHS 5203 Writing for Allied Health Professionals</td>
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<td>MHS 5521 Ethical Issues in Health Care</td>
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<td>MHS 5501 Epidemiology and Biostatistics</td>
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</table>

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<thead>
<tr>
<th>Concentration Courses (15 credits)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MHS 5530 Principles of Management in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5537 Health Care Leadership Quality Assurance/Risk Management</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5538 Patient Safety Compliance in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5539 Health Care and Regulatory Compliance</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5540 Enterprise Risk Management</td>
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<table>
<thead>
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<tbody>
<tr>
<td>MHS 5309 U.S. Health Policy</td>
<td>5</td>
</tr>
<tr>
<td>MHS 5207 Practicum</td>
<td>5</td>
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</tbody>
</table>

Concentration for Recognition

In order to gain recognition in the Health Care Risk Management, Patient Safety, and Compliance concentration of the M.H.Sc. program, the student must complete all 5 concentration courses for 15 total hours. Those completing the concentration will be recognized as such with appropriate credentials. If you have any questions of how this may apply to your M.H.Sc. completion, contact the program or your academic adviser for assistance.
Health Care Administration Concentration
This concentration is designed to provide clinical and administrative health professionals with the theoretical and practical training necessary to enhance career mobility and professional advancement. It offers courses in leadership and management, finance, ethics, risk management, research, and other essential areas of health care administration.

Concentration Courses (21 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMIS 623</td>
<td>Information Privacy and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5510</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5546</td>
<td>Health Care Finance</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5530</td>
<td>Principles of Management in Health Care</td>
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<tr>
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Practical Courses (10 credits)

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<td>Practicum</td>
<td>5</td>
</tr>
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</table>

Concentration for Recognition
In order to gain recognition in the Health Care Administration concentration of the M.H.Sc. program, the student must complete all seven concentration courses for a total of 21 total hours, as well as the 2 practical courses for 10 total hours, as outlined above. Those completing the concentration will be recognized as such with appropriate credentials. If you have any questions of how this may apply to your M.H.Sc. completion, contact the program or your academic adviser for assistance.
Master of Health Science Course Descriptions

Didactic Core Component Courses

Required Courses

MHS 5003—Current Trends and Cultural Issues in Health Care
This course serves to familiarize the student with current trends and cultural issues in health care that may impact the patient, the health care system, or the ability to deliver high-quality health care. Discussion and analysis of current and cultural topics facing those who work in health care will be explored. (3 credits)

MHS 5026—Human Trafficking for Health Care Professionals
Human trafficking involves sexual or labor exploitation of a person through force, fraud, and coercion for any type of gain. The World Health Organization (WHO) reported that human trafficking victims endure chronic physical, sexual, and emotional violence from their exploiters and experience communicable diseases from their living conditions, sexually transmitted diseases from their work conditions, and mental health issues from their exploitation. (WHO, 2014) In 2015, the American Public Health Association identified human trafficking as a public health problem in the United States. This course will raise awareness of human trafficking in the United States and internationally; increase the knowledge of the signs and symptoms of trafficked individuals; and provide action steps health care professionals can utilize when trafficked individuals are identified in hospitals, urgent care centers, community health centers, and mental health settings. (3 credits)

MHS 5203—Writing for Allied Health Professionals
This course entails the study and practice of the writing style used in allied health—scientific writing. Scientific writing is a different format than other kinds of writing used as an undergraduate. It is more precise and succinct, which is different from the way we speak to each other. Scientific writing is written for an audience, with the purpose of informing, or possibly persuading, the audience. American Psychological Association (APA) style and standard English formatting will be reviewed. The papers written in this course will give the student a foundation for all MHS courses. (3 credits)

MHS 5501—Epidemiology and Biostatistics
The ability to understand the conceptual and practical aspects of biostatistics and epidemiology in health care is critical to understanding research and analyzing population data about disease. This survey course will improve the ability of the student to understand and apply these concepts. (3 credits)

MHS 5510—Research Methods
This course is designed to enable participants to develop skills in reading and critically evaluating published research by using the scientific model. The advantages and disadvantages of quantitative and qualitative research methods will be compared and contrasted. Research articles will be collaboratively analyzed to develop an appreciation of potential methodological problems and their implications for evidence-based professional practice. (3 credits)

MHS 5521—Ethical Issues in Health Care
The student will examine the ethical issues that confront health care providers and patients. The medical scientific, moral, and socioeconomic bases of these issues and the decision-making processes that providers and patients engage in are analyzed. Topics will include informed and voluntary consent, the role of institutional review boards, euthanasia, the allocation of scarce resources. (3 credits)

MHS 5530—Principles and Practice of Management in Health Care
This course will discuss the various principles of management and its associated issues as they relate to the modern health care professional. The course will explore topics such as concepts of organizational management, decision making, strategic planning, resource management and allocation, conflict, and the concept of power. (3 credits)

MHS 6002—Clinical Trial Process
This course provides students with the crucial aspects of the overall clinical trial process. Students will become familiar with the rationale for clinical trials, key terminology and processes associated with clinical trials, the design of clinical trials, and key plans and documents used in the conduct of clinical trials. The course will draw upon historical examples and codes, declarations, and other sources of regulation and trial conduct guidance, along with practical examples of trial design and management documentation. (3 credits)

MHS 6003—Legal, Safety, Regulatory Compliance, and Best Practices
This course provides students with the foundational knowledge of legal and regulatory compliance and best practices for the conduct of a clinical trial. It will also introduce the role of quality assurance, quality management systems, and standard operating procedures (SOPs). The aim is to familiarize students with the various jurisdictional regulations, guidance required of a practitioner in the area of clinical trials, and checks and balances in place to ensure compliance. The course will include lecture, case studies, and use of online reading assignments. (3 credits)
MHS 6004—Reporting Clinical Trial Results in Different Media and Externship
This course provides students with the foundational knowledge and practice cases on medical writing regulatory submissions, general management, and communication skills required during the conducting of clinical trials. The course will include lecture; case studies; and student participation in presentations, role play assignments, and written reports. (3 credits)

MHS 6005—Clinical Trial Conduct
The course takes students through the conduction of a clinical trial. The ultimate goal of the course is to have students become knowledgeable with the functions performed by a clinical research associate (CRA) during a clinical trial. Students will comprehend the various segments of clinical trials and the multiple duties and responsibilities involved in each. The course will incorporate online delivery of lectures, selected case studies, and the utilization of online technological learning aides. (3 credits)

MHS 6007—Clinical Trial Manager
This course provides students who have completed the clinical research associate certificate program with additional knowledge and understanding of the role and skills required of a clinical trial manager. This course will include lecture; case studies; and student participation in presentations, role play assignments, and written reports. (3 credits)

Elective Courses
MHS 5103—Principles of Advanced Life Support
Introduction to the accepted principles of the advanced life support measures used in adult medical, traumatic, and pediatric emergencies. Includes a review of the most common emergency situations encountered and provides hands-on practical training that will assist the clinician in developing the skills required to stabilize patients with life-threatening conditions. (3 credits)

MHS 5112—Bioterrorism and Weapons of Mass Destruction
Students will review the effects of warfare and bioterrorism on populations, with emphasis on low-intensity conflict and dispersion of chemical and biological weapons in populated areas. Discussions will be devoted to the ecological, sociological, environmental, and general health effects. (3 credits)

MHS 5211—Contemporary Issues in Nutrition
Covers a variety of general concepts and contemporary discussions in the area of nutrition as it applies to personal health. Many of the concepts learned in this course can be applied to the patient counseling and advisement health care professionals are asked to perform. (3 credits)

MHS 5400—Directed Studies
This course provides the opportunity for students to explore a special topic of interest under the direction of a faculty member. Arrangements are made directly with the appropriate faculty member and the program director. Topic exploration is governed by the needs of the program and the educational goals of the student. Possible topics involve clinical and non-clinical aspects of the practice of medicine in the United States. (1–9 credits)

MHS 5535—Issues in Health Care Leadership
This course requires the student to solve a simulated problem facing a simulated health care organization, addressing its impact on all aspects of the health care institution. Students will describe their leadership philosophy based on recognized leadership theory and how this will play a role in achieving an effective solution to the proposed problem. The course will employ interactive technology to disseminate information on the weekly evolution of the simulated problem. The course culminates in a detailed analysis of the problem, which includes proposed solutions for corrective and preventive measures, potential intended and unintended consequences, and evidence of the student’s leadership philosophy. (3 credits)

MHS 5537—Health Care Leadership Quality Assurance/Risk Management
The student will examine health care quality assurance and risk management in the United States and the methods that are utilized to achieve improvements in health care organizations. Upon completion of this course, the student will be prepared to implement continuous quality improvement and performance improvement in management and performance systems by interpreting and understanding of data available to devise, generate, and apply quality performance improvement programs. (3 credits)

MHS 5541—Health Care Systems and Conflict
This introductory course will assist learners to blend conflict-resolution theories, models, and skills into realistic strategies that can be used in a health care setting. The attitudes, knowledge, and skills from this course can be applied to those who deliver, receive, and manage health care. The strategies will be applicable to working with diverse populations, including people with different cultural backgrounds, genders, personalities, positions of power, and agendas. Types of negotiation strategies in order to move toward a collaborative situation will also be addressed. (3 credits)

MHS 5542—Health Care Education
This course explores the various theories and applications of adult education in the practice of training, preprofessional education, and postprofessional education of medical personnel. Critical analysis of the different methods of teaching and training health care professionals is accomplished through discussion, research, investigation, journal development, and assignments. (3 credits)
MHS 5543—Educational Theories and Psychology
This course explores the history and evolution of educational theories and their role in the development of curriculum and instruction related to health care education. (3 credits)

MHS 5544—Curriculum and Instruction in Health Care
Using the principles of curriculum development and related research, students will develop a plan for a unit of instruction for a health care course that includes a need assessment, use of resources, implementation specification, material development, and assessment of instructional effectiveness. (3 credits)

MHS 5545—Assessment and Evaluation in Health Care
This course provides an overview of student and program evaluation and assessment methods in health care education. This course will consider multiple assessment models used in clinical settings, from traditional written assessments to alternative assessment methods such as OSCEs, portfolios, and simulated patients. Students will develop an evaluation/assessment plan tailored to their professional situations. (3 credits)

MHS 5546—Health Care Finance
This course introduces the fundamental theory and concepts of health care finance, focusing on relevant applications to a wide variety of health care settings. Emphasis will be placed on the understanding of key issues in order to provide the tools necessary for clinicians to function within a health care environment. Concentration is on managerial, rather than production, accounting perspective. Major topics include principles of accounting, budgeting, analysis of financial statements, activity-based costing, responsibility accounting, and provider payment and reimbursement systems. The student will be required to prepare a formal paper on a health care finance topic. (3 credits)

MHS 5801—Applied Anatomy for Kinesiology
This course will address medical terminology and anatomy as they pertain to the kinesiology of each joint. The course lays the foundation for understanding the relevant anatomical and physical biomechanics of sports. (3 credits)

MHS 5802—Sports Injury Rehabilitation Principles
This course will use the knowledge of biomechanics to understand the nature of traumatic and overuse injuries in athletes. Rehabilitation concepts as well as specific programs for athletes will be covered. (3 credits)

MHS 5810—Certified Strength and Conditioning Specialist Preparation
This course is a review of the material and preparation necessary for this national certification examination. CPR required prior to registration. (3 credits)

MHL 1020—Legal Research Methods and Reasoning
The law is never static. Coupled with its ever-increasing role in the governance of health care institutions and health care practitioners, this truism means that health care practitioners and administrators may need to obtain, review, and apply newly issued laws or legal decisions in their day-to-day activities. This course will enable students to find the law, to read and understand legal statutes and regulations, and to understand the analytic process lawmakers and lawyers use. (4 credits, includes 1-credit, on-campus institute)

MHL 1045—Law of Patients’ Rights and Health Care Ethics
Beginning with the development of the bedrock legal principles of informed consent, this course will examine the legal aspects of patients’ rights movements and will trace the status of patients’ legal abilities to control their treatment. Part of the course will be devoted to the existence of, substance of, and reasons for patients’ rights statutes specific to hospital and nursing home settings. Additionally, this course examines how the law has affected health care ethics by exploring the principles of ethics for health care providers; the ways in which these ethical principles are reflected in the law; and the legal, ethical, and policy aspects of issues affecting health care providers. Students will analyze situations arising in the health care context and will consider issues relating to both individual and institutional health care providers’ ethics. (2 credits)

MHL 1090—Law Accreditation/Licensing
This course provides a detailed examination of the legal aspects of two credentialing concepts—accreditation and licensure—in both the individual health care practitioner setting and the institutional setting. Students will examine the primary goal of these concepts (i.e., protecting the public), how accreditation differs from licensure, and how they interrelate. Prerequisite: MHL 1020 (2 credits)

MLAW 1036—Legal Foundations
This course will explore the legal foundations and structure of the United States court system and the modern administrative state. The course will also explore the legal structure of the federal government and the system of checks and balances that controls the distribution of power between the federal and state government. (3 credits)

MLAW 1035—Professional Communication
This course will cover a wide-range of professional communication issues presented in written, oral, and electronic format. Students will have the opportunity to develop interpersonal communication skills, presentation skills, and professional writing techniques. Communication skills are vital to career success; they serve as a platform for personal success and professional advancement. Students will learn the foundational techniques to communicate clearly, concisely, and effectively in the professional environment. (2 credits)
MHS 2021—Pharmaceutical Law
This course is designed to provide an understanding of the pharmaceutical industry and the role of the various stakeholders involved. Topics will touch upon the legal, regulatory, policy, business, scientific, and ethical issues related to the industry. A selection of topics will be covered and may include the drug discovery process, drug promotion, drug distribution from manufacture through dispensing, insurance and reimbursement, controlled substances, negligence and malpractice, licensing and certification, health informatics, antitrust, and intellectual property rights. Government agencies including the FDA, CMS, DEA, and state licensing boards will be discussed throughout the course. (3 credits, includes 1-credit, on-campus institute)

MHS 5611—Firearms, Fingerprints, and Other Impression Evidence
This course will provide students with a broad overview of the impression evidence discipline in forensic science. Topics discussed will include firearms and tool mark examination and microscopy, footwear and tire track examination, and latent fingerprints. Current courtroom challenges such as Daubert issues related to impression evidence will also be discussed. Students will be evaluated on the concepts learned based on practical exercises, tests, a final exam, and a research paper. (3 credits)

MHS 5612—Forensic Analysis of Trace and Drug Evidence
This course will be divided into two sections: trace evidence and drugs. In the first segment, the course will cover the different drugs of abuse, the controlled substances act, dependency, and the forensic analysis of these samples. The trace evidence segment will include basic microscopy, fibers, paint, glass, fractures, hairs, explosives, and arson. Concepts will be solidified via case studies. (3 credits)

MHS 5613—Crime Scene
This course will provide students with an in-depth understanding of the various steps to processing a crime scene. These will include scene documentation, evidence collection and preservation, and interpretation. In addition, scene safety and current courtroom challenges will be discussed. (3 credits)

MHS 5614—Technology That Revolutionized Criminal Investigations
This course will provide students with a survey of the field of forensic genetics in an understandable manner. Topics will include presumptive testing, a history of serological analyses, and the beginning of the era of DNA technology including RFLP and AMPLFLP analysis. Newer methods of typing such as Short Tandem Repeat (STR), Y-chromosome STR, SNP analysis, mitochondrial sequencing, and mini-STRs will be explored. Case studies and examples of these methods will be examined and investigated empirically. This course is an invaluable tool for criminal investigators, attorneys, and those students planning to work in the forensic genetics field. (3 credits)

MHS 5615—Overview of Crime Laboratory Management
A review of process management, work flow, and future growth will be discussed. This course will provide students with a survey of manpower, quality assurance, safety, and budgeting issues, as well as what job requirements are needed to perform various jobs from crime scene detective to DNA analyst. Accreditation, certification, and outside review of laboratory performance will be explored. The C.S.I. effect and its impact on the modern forensic laboratory will be examined. The competing interests of case analysis, prosecution, and investigation will be detailed. (3 credits)

MHS 5538—Patient Safety Compliance in Health Care
This course will provide the framework for developing a patient safety program. Specific topics will include the link between patient safety and legal and regulatory compliance; the role of accreditation standard-setting organizations in patient safety; evidenced-based outcomes and standards of care; the creation and preservation of reports, data, and device evidence in medical error situations; and managing patient safety compliance through accountability-based credentialing for health care professionals. The student will be expected to complete a case study on the implementation of a patient safety initiative in a health care setting of his or her choice. (3 credits)

MHS 5539—Health Care and Regulatory Compliance
This course will cover recent developments in compliance regulations resulting from federal and state laws governing health care in various settings including HIPPA and HITECH. Students will learn about the seven essential elements of an effective compliance program and how to implement them. Course topics include setting up and maintaining a compliance program, the role of the health care compliance officer, investigating, reporting, enforcement, and discipline. Students will have the opportunity to explore a case study on ethics in compliance and to develop sample compliance forms and policies that can be used in a variety of health care settings. (3 credits)

MHS 5540—Enterprise Risk Management
This course provides a framework for the implementation of enterprise risk management as a means for implementation of a comprehensive risk management process and plan that encompasses the entire enterprise, crossing departmental barriers. Course topics include enterprise risk management and its evolution, risk financing methods, contract management, claims management, environmental compliance, human research, peer review and credentialing, due diligence in
business transactions, consent to treatment, advent of ediscovery rules, and the impact of the electronic health record. Students will be expected to complete case studies on the implementation of enterprise risk management in a health care setting of their choice. (3 credits)

**MHS 5908—Applied Statistics**
This course is an introduction to applied statistics and data analysis. Topics include collecting and exploring data, basic inference, simple and multiple linear regressions, analysis of variance, nonparametric methods, and statistical computing. (3 credits)

**MHS 5992—Qualitative Research Methods**
This course explores the development and application of qualitative research designs and methods. It considers a broad array of approaches, from exploratory narratives to focused comparison case studies, for investigating plausible alternative hypotheses. The focus is on analysis, not data collection. (3 credits)

**MHS 5991—Quantitative Research Methods**
This course develops logical, empirically based arguments using statistical techniques and analytical methods. Elementary statistics, probability, and other types of quantitative reasoning useful for description, estimation, comparison, and explanation are covered. Emphasis is on the use and limitations of analytical techniques in planning practice. (3 credits)

**MHS 5904—Research Ethics**
This seminar-based course explores techniques for recognizing, analyzing, and resolving ethical dilemmas facing health care professionals and biomedical researchers in today’s highly regulated environment. Professional conduct topics include authorship, conflict of interest, data acquisition and management, and the protection of human subjects and animals involved in research programs. (3 credits)

**MHS 5906—Developmental Research Project**
This course provides students with the opportunity to assimilate the skills required to communicate in academic settings both orally and in writing. The purpose of this course is twofold. First, the course will acquaint students with the guidelines that will assist them in creating well-crafted academic communication. Second, it will give students the opportunity to practice their communication skills and receive feedback from colleagues and instructors. The primary focus of the course is the thesis process. (3 credits)

**MHS 5526—Advanced Topics in Health Care Ethics**
A Hospital Ethics Committee (HEC) performs an important consult role in addressing the ethical issues presented in a clinical circumstance. This course describes the makeup and role of the HEC in addressing ethical issues. Students will then participate in mock ethics committees, be presented with ethically challenging, hypothetical cases, debate the issues, and provide consults. Following each committee meeting, students will submit papers reflecting upon their role in the HEC, as well as provide an analysis of the ethical issues present in the cases. (3 credits)

**MHS 5527—Neurobiology Issues in Medical Ethics**
The course will provide an introduction to the neurosciences and their intersection with law and morality. The course will explore a number of areas, including the relationship between various brain deficiencies and their implications for individual behavioral responsibility; legal issues surrounding various brain states, including the adolescent brain, the injured brain, and brain death; legal and ethical issues related to memory, the emotions, and lie detection; and the neuroscience of legal decision-making. Additionally, the course will glimpse the neuroethics horizon, including a look at areas such as cognitive enhancement, the brain-machine interface, and artificial intelligence. (3 credits)

**MHS 5528—Technological Advances in Medicine and the Impact on Ethics**
The advancement of science and the invention of new medical technologies present new challenges for traditional bioethics. Scientific advances in cloning, stem cell research, genetic engineering, genetic testing, reproductive technologies, and genomics have profound impacts on the individual and society. In this course, students will explore controversies in bioethics arising from these new technologies, as well as have the opportunity to debate these issues, applying bioethical theories and principles. (3 credits)

**Practical Components**

**MHS 5309—U.S. Health Policy**
This course will explore how U.S. health policy is made and the interests and roles of various stakeholders and state, local, and federal governments. Students will analyze health policies and discern what impact proposed and executed health policies will have on health care entities, groups, individuals, and health care practice. Students will gain the skills necessary to conduct a policy analysis that examines a health care or public health issue or concern. (5 credits)

**MHS 5207—Practicum**
The practicum is a cumulating experience for M.H.Sc. students. Under supervision of an M.H.Sc. faculty adviser, students will develop community-based health education or health promotion and disease prevention interventions with underserved and/or nontraditional populations. (5 credits)
Accelerated Dual-Degree M.H.Sc./D.H.Sc. Program

This accelerated dual-degree program was designed for accomplished, motivated health care practitioners educated at the bachelor’s degree level who desire a clinically applicable, postprofessional, interdisciplinary doctoral degree. The program is specifically appropriate for those practitioners who have a strong desire to teach within the health disciplines at the graduate level or assume advanced professional and institutional leadership roles within the health care delivery system.

The combined M.H.Sc./D.H.Sc. degree provides rigorous academic exposure to a wide range of topics pertinent to clinicians, health administrators, and health professions educators. These topics include epidemiology, health care finance, statistics and research methods, conflict resolution, leadership studies, professional writing, health policy, global health issues, evidence-based medicine, medical informatics, and medical quality assurance/risk management. Students have the opportunity to engage in capstone research experiences and internships within their home community.

Graduates are equipped with the knowledge, skills, and experience to expand their professional roles in both clinical and non-clinical arenas. Study is primarily nonresidential, and uses state-of-the-art online course platforms that permit synchronous and asynchronous learning experiences. Students are required to attend two one-week, on-campus institutes during the doctoral portion of their studies.

This accelerated track permits the motivated student to earn both a master’s and a doctoral degree from our respected, regionally accredited research institution. The 82 credits of course content earned can be completed with three–seven years of study.

M.H.Sc./D.H.Sc. Accelerated Program

- total combined semester hours: 76
- 21 hours completed in the M.H.Sc. program
- 55 hours completed in the D.H.Sc. program
- M.H.Sc. degree awarded after completion of 42 credits (the 21 credits of the M.H.Sc. core courses, the D.H.Sc. ethics and research courses, a 4-credit D.H.Sc. course of the student’s choice, the DHS internship/practicum preparation course, and the D.H.Sc. Internship and D.H.Sc. Practicum courses)
- M.H.Sc. courses all taught through distance learning
- D.H.Sc. courses taught through distance learning and at required on-campus summer institutes
- chat sessions and threaded discussions, a regular part of the program, promote student-professor and student-student interaction

Admissions Requirements

Prior to matriculation, applicants must have completed a bachelor’s degree from a regionally accredited college or university. Applicants should demonstrate a cumulative bachelor’s degree GPA at or above a 3.0 on a 4.0 scale. Prior health care experience is required. The postprofessional M.H.Sc./D.H.Sc. dual-degree program is designed for health practitioners and clinicians from a wide variety of disciplines. The successful administrative applicant will demonstrate at least five years of professional experience with increasing levels of responsibility in a health care setting. Professional experience will be documented by an organizational chart demonstrating the applicant’s position within the organization and a letter of recommendation from a supervisor attesting to the applicant’s level of responsibility within the organization. Health care administrators will also need to submit a statement concerning their career and professional goals within the health care environment. Fellowship or certification by a recognized health certifying body (e.g., FACHE) is desirable.

Beginning with the admission cycle for fall 2012, applicants will be required to take the GRE and submit their scores as part of the application process.

All applicants must show evidence of computer skills through coursework or self-study prior to the end of the first semester. Students may obtain instruction through the NSU microcomputer laboratory or other training facilities.

The university reserves the right to modify any requirement on an individual basis, as deemed necessary by the dean of the Dr. Pallavi Patel College of Health Care Sciences.

Tuition and Fees

Tuition for M.H.Sc. courses for 2020–2021 will be posted on our website (healthsciences.nova.edu/healthsciences/mhs/tuition.html).

Tuition for D.H.Sc. courses for 2020–2021 will be posted on our website (nova.edu/cah/healthsciences/dhs).

An NSU Student Services Fee of $1,500 is required annually. All tuitions and fees are subject to change by the board of trustees without notice.

Application Procedures

Applicants for admission must submit to EPS, or be responsible for submission of,

1. a completed application form, along with a $50, nonrefundable application fee
2. Two evaluation forms—supplied in the application package or by request—from supervisors or colleagues, clinical or nonclinical.

3. Official transcripts sent directly from all previously attended undergraduate, professional, and graduate institutions.

4. All coursework from international institution(s), if applicant attended or is a graduate of any international institution(s).

Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.

- World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org

- Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org

- Educational Credential Evaluators, Inc.
  101 West Pleasant Street, Suite 200
  Milwaukee, WI 53212-3963
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University, Enrollment Processing Services, Dr. Pallavi Patel College of Health Care Sciences, Department of Health Science Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, FL 33329-9905.

5. Complete résumé or curriculum vitae.

6. Copies of national and professional certifications or licenses by a recognized certifying body (if applicable).

7. Official Graduate Record Examination (GRE) scores taken within five years of the date of matriculation.

Complete applications and all admission documentation must be sent to:

Nova Southeastern University
Enrollment Processing Services
Dr. Pallavi Patel College of Health Care Sciences
M.H.Sc./D.H.Sc. Accelerated Track
3301 College Avenue, PO Box 299000
Fort Lauderdale, FL 33329-9905

Phone: (954) 262-1101
877-640-0218
Fax: (954) 262-2282

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**Computer Requirements**

All students are required to have a computer with the following minimum specifications:

- Pentium or AMD at 1.00 GHZ or equivalent Macintosh processor
- 256 MB RAM
- Video and monitor capable of 1024 X 768 resolution or better
- CD-ROM drive
- Full duplex sound card and speakers
- Internet connection with Internet service provider (DSL, cable, or satellite highly recommended)
- Windows XP or NT or MAC OS or better
- Microsoft Office 2000 or newer with PowerPoint, Word, and Excel minimum
- Printer capability

**Requirements for Graduation**

To be eligible to receive the M.H.Sc. and D.H.Sc. degrees, students must:

- Be of good moral character
- Satisfactorily complete the 21 credits in the M.H.Sc. and the 55 credits in the D.H.Sc. programs
- Receive a recommendation by the M.H.Sc. and D.H.Sc. program directors to the dean of the Dr. Pallavi Patel College of Health Care Sciences
Specific Requirements for Graduation for the M.H.Sc. in the Accelerated Dual-Degree M.H.Sc./D.H.Sc. Program for Students Matriculating on or After Fall 2020

Students are required to have 21 credits in the MHS core courses.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003 Current Trends and Cultural Issues in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5203 Writing for Allied Health Professionals</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5501 Epidemiology and Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5530 Principles of Management in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS Elective Courses</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total MHS Credits</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

Students are required to have 21 credits in the DHS courses.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8040 Professionalism and Health Care Ethics</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8010 Statistics and Research Methods</td>
<td>4</td>
</tr>
<tr>
<td>Student’s choice of a DHS course</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8125 Preparation for the Internship/Practicum</td>
<td>1</td>
</tr>
<tr>
<td>DHS 8130 Internship</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8140 Practicum</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total DHS Credits</strong></td>
<td><strong>21</strong></td>
</tr>
<tr>
<td><strong>Total Credits Applied to the Master of Health Science</strong></td>
<td><strong>42</strong></td>
</tr>
</tbody>
</table>
## Course of Study

### M.H.Sc. Degree Curriculum Required MHS Courses

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003</td>
<td>Current Trends and Cultural Issues in Health Care</td>
</tr>
<tr>
<td>MHS 5203</td>
<td>Writing for Allied Health Professionals</td>
</tr>
<tr>
<td>MHS 5501</td>
<td>Epidemiology and Biostatistics</td>
</tr>
<tr>
<td>MHS 5530</td>
<td>Principles and Practice of Management in Health Care</td>
</tr>
</tbody>
</table>

**Total: 12**

### MHS Elective Courses (choose three)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5026</td>
<td>Human Trafficking for Health Care Professionals</td>
</tr>
<tr>
<td>MHS 5211</td>
<td>Contemporary Issues in Nutrition</td>
</tr>
<tr>
<td>MHS 5541</td>
<td>Health Care Systems and Conflict</td>
</tr>
<tr>
<td>MHS 5543</td>
<td>Educational Theories and Psychology</td>
</tr>
<tr>
<td>MHS 5544</td>
<td>Curriculum and Instruction in Health Care Education</td>
</tr>
<tr>
<td>MHS 5545</td>
<td>Assessment and Evaluation in Health Care Education</td>
</tr>
<tr>
<td>MHS 5400</td>
<td>Directed Studies in Medical Science</td>
</tr>
<tr>
<td>MHS 5546</td>
<td>Health Care Finance</td>
</tr>
</tbody>
</table>

**Total credits completed in the M.H.Sc. program:** **21**

### D.H.Sc. Degree Curriculum Required DHS Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8040</td>
<td>Professionalism and Health Care Ethics</td>
</tr>
<tr>
<td>DHS 8121</td>
<td>Scientific Writing</td>
</tr>
<tr>
<td>DHS 8125</td>
<td>Preparation Forum</td>
</tr>
<tr>
<td>DHS 8130</td>
<td>Internship</td>
</tr>
<tr>
<td>DHS 8140</td>
<td>Practicum</td>
</tr>
<tr>
<td>DHS 8190</td>
<td>Health Care Education</td>
</tr>
</tbody>
</table>

**Total: 19**

### Block 1 (three out of four required)

All four may be taken. If only three are chosen, one elective may substitute for the fourth required course.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8000</td>
<td>Professional Competencies in the Clinical Care of Diverse and Special Populations</td>
</tr>
<tr>
<td>DHS 8030</td>
<td>Community Health Promotion and Disease Prevention</td>
</tr>
<tr>
<td>DHS 8090</td>
<td>Health Policy, Planning, and Management</td>
</tr>
<tr>
<td>DHS 8110</td>
<td>Community/Environmental Health</td>
</tr>
</tbody>
</table>

**Total: 12**

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Dr. Pallavi Patel College of Health Care Sciences—Department of Health Science
**Required Summer/Winter Residential Institutes**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8010</td>
<td>Statistics and Research Methods</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8071</td>
<td>Conflict Resolution for Health Care Leaders</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total:** 8

**On-Campus Institutes**—The summer institute is five days and affords the student the opportunity to take a course in the morning and the afternoon. The winter institute is three days and students can register and take only one course. There are two courses that students are required to take with the institute component. Completion of these two courses are a program requirement for all students.

**Block 2**

One required, the others may be omitted or used as electives.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8400</td>
<td>Global Health Studies</td>
<td>4</td>
</tr>
<tr>
<td>HSP 9006</td>
<td>Concepts in Evidence-Based Medical Practice</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8750</td>
<td>Patient Safety Medical Error</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8810</td>
<td>Epidemiology and Global Health</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8800</td>
<td>Health Care Informatics</td>
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</tbody>
</table>

**Total:** 4

**Experiential**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>DHS 8125</td>
<td>Preparation Forum</td>
<td>1</td>
</tr>
<tr>
<td>DHS 8130</td>
<td>Internship</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8140</td>
<td>Practicum</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total:** 9

**Electives (Choose three)**

Any courses from Block 1 and 2 not counted toward core requirements can also be used as electives.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>DHS 8100</td>
<td>Alternative and Complementary Medicine</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8180</td>
<td>Medical Writing for the Health Professional</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8200</td>
<td>Independent Study A</td>
<td>1–4</td>
</tr>
<tr>
<td>DHS 8250</td>
<td>Independent Study B</td>
<td>1–4</td>
</tr>
<tr>
<td>DHS 8700</td>
<td>Comparative International Health Systems</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8775</td>
<td>Survey of Health Law</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8045</td>
<td>The Influence of Ethics and Culture on Global Health</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total:** 12

**Total credits completed in the D.H.Sc. program:** 61

Additional Core Block 1, Core Block 2, and electives are available; please see the curriculum section of the D.H.Sc. program. If you wish to take courses not listed above, please consult your academic adviser.
Course Descriptions

Master of Health Science

MHS 5003—Current Trends and Cultural Issues in Health Care
This course serves to familiarize the student with current trends and cultural issues in health care that may impact the patient, the health care system, or the ability to deliver high-quality health care. Discussion and analysis of current and cultural topics facing those who work in health care will be explored. (3 credits)

MHS 5026—Human Trafficking for Health Care Professionals
Human trafficking involves sexual or labor exploitation of a person through force, fraud, and coercion for any type of gain. The World Health Organization (WHO) reported that human trafficking victims endure chronic physical, sexual, and emotional violence from their exploiters and experience communicable diseases from their living conditions, sexually transmitted diseases from their work conditions, and mental health issues from their exploitation. (WHO, 2014) In 2015, the American Public Health Association identified human trafficking as a public health problem in the United States. This course will raise awareness of human trafficking in the United States and internationally; increase the knowledge of the signs and symptoms of trafficked individuals; and provide action steps health care professionals can utilize when trafficked individuals are identified in hospitals, urgent care centers, community health centers, and mental health settings. (3 credits)

MHS 5203—Writing for Allied Health Professionals
This course entails the study and practice of the writing style used in allied health—scientific writing. Scientific writing is a different format than other kinds of writing used as an undergraduate. It is more precise and succinct, which is different from the way we speak to each other. Scientific writing is written for an audience, with the purpose of informing, or possibly persuading, the audience. American Psychological Association (APA) style and standard English formatting will be reviewed. The papers written in this course will give the student a foundation for all MHS courses. (3 credits)

MHS 5211—Contemporary Issues in Nutrition
The course covers a variety of general concepts and contemporary discussions in the area of nutrition as it applies to personal health. Many of the concepts learned in this course can be applied to the patient counseling and advisement health care providers are asked to perform. (3 credits)

MHS 5400—Directed Studies in Medical Science
This course provides the opportunity for students to explore a special topic of interest under the direction of a faculty member. Arrangements are made directly with the appropriate faculty member and the program director. Topic exploration is governed by the needs of the program and the educational goals of the student. Possible topics involve clinical and non-clinical aspects of the practice of medicine in the United States. (3 credits)

MHS 5501—Epidemiology and Biostatistics
The ability to understand the conceptual and practical aspects of biostatistics and epidemiology in health care is critical to understanding research and analyzing population data about disease. This survey course will improve the ability of the student to understand and apply these concepts. (3 credits)

MHS 5530—Principles of Management in Health Care
This course will discuss the various principles of management and its associated issues as they relate to the modern health care professional. The course will explore topics such as concepts of organizational management, decision making, strategic planning, resource management and allocation, conflict, and the concept of power. (3 credits)

MHS 5541—Health Care Systems and Conflicts
This introductory course will assist learners to blend conflict resolution theories, models, and skills into realistic strategies that can be utilized in a health care setting. The attitudes, knowledge, and skills gained from this course can be applied to those who deliver, receive, and manage health care. The strategies will be applicable to working with diverse populations, including people of different cultural backgrounds, personalities, sex, positions of power, and agendas. Types of negotiation strategies to help move toward a collaborative situation will also be addressed. (3 credits)

MHS 5543—Educational Theories and Psychology
This course explores the history and evolution of educational theories and their role in the development of curriculum and instruction related to health care education. (3 credits)

MHS 5544—Curriculum and Instruction in Health Care Education
Using the principles of curriculum development and related research, students will develop a plan for a unit of instruction for a health care course that includes a needs assessment, use of resources, implementation specification, material development, and assessment of instructional effectiveness. (3 credits)

Dr. Pallavi Patel College of Health Care Sciences—Department of Health Science 321
MHS 5545—Assessment and Evaluation in Health Care Education
This course provides an overview of student and program evaluation and assessment methods in health care education. This course will consider multiple assessment models used in clinical settings, from traditional written assessments to alternative assessment methods such as OSCEs, portfolios, and simulated patients. Students will develop an evaluation/assessment plan tailored to their professional situation. (3 credits)

MHS 5546—Health Care Finance
This course introduces the fundamental theory and concepts of health care finance focusing on relevant applications to a wide variety of health care settings. Emphasis will be placed on the understanding of key issues in order to provide the tools necessary for clinicians to function within a health care environment. Concentration is on managerial, rather than production, accounting perspective. Major topics include principles of accounting, budgeting, analysis of financial statements, activity-based costing, responsibility accounting, and provider payment and reimbursement systems. The student will be required to prepare a formal paper on a health care finance topic. (3 credits)

Doctor of Health Science
DHS 8000—Health Care for Diverse Populations/Professional Competencies in the Clinical Care of Diverse and Special Populations
This course focuses on issues and information relating to the general epidemiological concerns, health care disparities, and specific health and disease issues involved in the care of both culturally based diverse populations (African American, Native American, Asian and Asian sub-populations, and Latino-Hispanic populations), and other nonethnic special populations (homeless, uninsured, indigent, disabled, incarcerated, rural, inner city, GLBT, geriatric, pediatric, and others). (4 credits)

DHS 8010—Statistics and Research Methods
This course allows the student to develop understanding through critical analysis of the basic research methods used in health care. Students will be taught how to critically analyze medical information and perform effective literature reviews. (4 credits)

DHS 8030—Community Health Promotion and Disease Prevention
This course develops the knowledge and skills needed to work with communities to improve the health status of the community. Major topics will include health promotion and disease prevention. Special emphasis will be placed on the “Healthy People 2010” initiatives. (4 credits)

DHS 8040—Professionalism and Health Care Ethics
This course is an in-depth study of the concepts of health care ethics. The course of study analyzes the differences between ethics and law and examines the core values and beliefs of medical professionalism. Methods of ethical analysis and a review of current case studies will be used in critical discussions of ethical dilemmas faced by health care personnel in areas such as cloning, organ transplantation, and the implications of the Human Genome Project. The student will explore the personal values, professional standards, and institutional guidelines that define the roles and responsibilities of the health care practitioner. (4 credits)

DHS 8045—The Influence of Ethics and Culture on Global Health
Technology, research, and the advancement of health care interventions have produced impressive improvements in health outcomes for many. Unfortunately, these advancements have also led to inequalities in health status within and between countries, creating growing global ethical dilemmas. The world is faced with new challenges, such as the potential for pandemics, an aging population, a diminishing health care workforce, and the stresses of determining resource allocation. With these challenges comes a need to better understand the process of ethical reasoning and resolution, as this will be paramount for the development and maintenance of global health. Another dimension that must be considered in ethical decision making is the influencing factors of culture. Culture comprises the political, social, economic, religious, and ethnic norms and values of a society. Culture is instrumental in shaping bioethical policy worldwide, which necessitates its inclusion and consideration in all global ethic discussions. The purpose of this course is to provide an introduction to the principles and theories of ethics as applied to global health, and how culture influences ethical decision making. The course will examine some of the primary theories and principles in health care ethics including virtue, deontology, utilitarian, autonomy, justice, beneficence, and nonmaleficence. The course will explore many prominent global health issues and exemplify how greater knowledge and understanding of global ethics and culture is vital to effective and sound decision making. Topics that will be discussed in the course include ethical issues related to pandemic preparedness, end of life, human organ transplantation, clinical research in developing countries, human rights, resource allocation, and the effects of globalization on world health. It is anticipated that students will bring their own ethical dilemmas arising from their own experiences, cultures, and practices. (4 credits)

DHS 8090—Health Policy, Planning, and Management
This course critically examines the dynamics of health care in the United States. The student is expected to analyze the health care industry and contrast nonprofit and for-profit health care delivery systems. A critical exploration of
the ramifications of health care reform and the impact on institutions and individuals will be undertaken. The concepts of cost containment, and long-term care will be analyzed. (4 credits)

**DHS 8095—Global Health Policy**
Globalization affects all sectors, including health care, and understanding the key policy issues is essential in the study of global health. This course, taught from a clinical perspective, examines the health policy issues confronting international health organizations, governments, and specific populations. It reviews the processes that influence the development and implementation of policies and examines specific topics related to HIV/AIDS, poverty and nutrition, infectious disease, smoking, concerns of women and children, and other global major health concerns. (4 credits)

**DHS 8100—Alternative and Complementary Medicine**
This course examines and analyzes alternative and complementary medicine and their impact on the health care industry. The approach to the subject is to present selected alternative and complementary medicine fields in an informative, nonjudgmental format. (4 credits)

**DHS 8110—Community Environmental and Occupational Health**
Issues such as air and water quality and waste management will be examined. OSHA will be examined and analyzed for its impact on health and health care. Trends in environmental and occupational health legislation will be examined for their impact potential. (4 credits)

**DHS 8121—Scientific Writing**
This course is designed to familiarize students with the writing competencies for writing papers in the Doctor of Health Science (D.H.Sc.) program. This course will cover the genre of scientific writing. Scientific writing is used in research and report writing. It is more precise and succinct, which is different from the way we speak to each other and other types of writing. Scientific writing is used in research and report writing. Scientific writing is based upon scientific theory and evidence from the literature. Upon completion of the course, students will be given a foundation for all DHS courses. (2 credits)

**DHS 8125—Preparation Forum**
Students should enroll in this course within one to two semesters of matriculation into the D.H.Sc. program. This is a 1-credit course in which students work closely in a one-on-one fashion with the course instructor/mentor to develop appropriate learning objectives and experiential plans for the internship (DHS 8130) and a substantial developmental project for the practicum (DHS 8140). Together, the internship and practicum form the capstone of the program. Attention is also paid to appropriate preparation for the form and style of the written deliverables of the internship and practicum and appropriate timelines for completion. Successful completion of DHS 8125 will include the following: completion of APA-style quizzes, approval of topic for DHS 8130 at least one semester prior to enrollment, approval of topic for DHS 8140 one to two semesters prior to enrollment, and completion of an error-free proposal for DHS 8140 at least one to two semesters prior to enrollment. Students will be continuously enrolled in DHS 8125 until all three tasks are accomplished. (1 credit)

**DHS 8130—Internship**
This course is the capstone of the program. The student will perform an internship at a community health care institution, clinic, educational facility, etc., which is approved in the DHS 8125 course at least one semester prior to enrolling in DHS 8130. The student should spend a minimum of 80 clock hours learning skills from a mentor. Examples of acceptable internship experiences include teaching assistantships to learn on-site or online teaching skills, volunteering at nonprofit organizations to learn about particular topics in health promotion and disease prevention, or shadowing an executive to learn leadership and executive skills, among other experiences. Students on the global track must have an internship experience that has an international basis. The student will write a report that describes the institution, defines the population served, and details the health promotion activities observed. A critical evaluation should be made that details strengths, weaknesses, opportunities, and threats to the institution in order to analyze if the skills delineated are able to be learned. Prerequisite: DHS 8125 (4 credits)

**DHS 8140—Practicum**
The practicum is a written project that is developmental in nature. The practicum project must be approved in the DHS 8125 course one to two semesters prior to enrolling in DHS 8140. Enrollment in the practicum course must be preceded by a proposal that contains the project idea and a preliminary literature review, which will be written in the DHS 8125 course at least one to two semesters prior to enrolling in DHS 8140. The student will be required to choose a health promotion topic and create a health promotion program or educational resource that can be used for a community education program. An implementation and evaluation plan must be included in the final product. Examples of appropriate educational resources include developing a presentation for a national conference, developing a presentation for an in-service, or developing a course curriculum. Students on the global track must have an international basis for the project. Prerequisite: DHS 8125 (4 credits)

**DHS 8150—Continuing Internship Services**
This course is a continuation of DHS 8130. It is used when the student is given an incomplete grade and needs to finish his or her internship. (0 credit)
DHS 8160—Continuing Practicum Services
This course is a continuation of DHS 8140. It is used when the student is given an incomplete grade and needs to finish his or her practicum. (0 credits)

DHS 8071—Conflict Resolution for Health Care Leaders
This course examines and analyzes the nature and dynamics of human conflict within health care leadership and management. Various methods and theories of leadership and management, both in and out of health care, and their impact on productivity, profitability, and employee satisfaction will be explored. Learners will acquire and engage practical strategies to improve leadership skills applicable in a variety of settings. Additionally, critical analysis of the different approaches to mitigating conflict in health care leadership will be required to research, develop, and evaluate diverse practice environments and their role in health outcomes. Through the completion of various assignments, the learner will be expected to demonstrate mastery of the subject matter via application of the theories and information presented in the assigned readings, participation in the discussion board, and other learning activities. (4 credits)

DHS 8180—Medical Writing for the Health Professional
The demand for medical writing professionals is growing significantly. So, too, is the supply of individuals with advanced health science and professional degrees seeking careers both in and outside of academia. This course is designed to provide doctoral students with the foundational knowledge and skills needed for successful publication of a professional journal article or clinical case review. Methods of document preparation, proper word and punctuation use, and the requirements for authors of biomedical journal articles will be discussed. This course is not designed for entry-level medical writing; rather it is designed for professionals with a strong biomedical and/or life sciences background to write for scientific audiences in peer-reviewed journals. This course encourages good writing skills through choosing better words; writing better sentences; and preparing tables, graphs, and photographs. All students are required to develop and submit a quality paper that meets the requirements for publication in a peer-reviewed professional or biomedical journal. The Publication Manual of the American Psychological Association (APA) 6th Edition, will be the required format for all formal assignments. (4 credits)

DHS 8190—Health Care Education
This course explores the various theories and applications of adult education in the practice of training, preprofessional education, and postprofessional education of medical personnel. Critical analysis of the different methods of teaching and training health care professionals is accomplished through discussion, research, investigation, journal development, and assignments. (4 credits)

DHS 8200—Independent Study A
This course is supervised by a faculty member and is a self-directed experience for the student. The student will be required to develop a proposal regarding the topic of study, a learning contract with specific objectives, and a plan of action to include methods of obtaining the information and the material produced to demonstrate an in-depth understanding of the subject areas. A faculty member will be assigned to the student for the supervised study and will follow the approved learning contract for successful completion of the course. The purpose of this course is to allow the student to explore an area of interest in the field of health care or health sciences. The secondary benefit of the course is to allow the student, with the assistance of the faculty, to develop and complete a doctoral-level course of study. Upon completion of the course, the student should be able to develop a proposal regarding a particular area of health sciences sufficient for doctoral level of study, develop a learning contract and self-directed course of study at the doctoral level, develop curriculum components for an educational program using self-directed study, describe information research during the completion of the objectives, and describe the methods of developing and successfully completing a self-directed course. (1–4 credits)

DHS 8250—Independent Study B
This course is supervised by a faculty member and is a self-directed experience for the student. The student will be required to develop a proposal regarding the topic of study, a learning contract with specific objectives, and a plan of action to include methods of obtaining the information and the material produced to demonstrate an in-depth understanding of the subject areas. A faculty member will be assigned to the student for the supervised course. The purpose of this course is to allow the student to explore an area of interest in the field of health care or health sciences. The secondary benefit of the course is to allow the student, with the assistance of the faculty member, to develop and complete a doctoral level of study. Upon completion of the course, the student should be able to develop a proposal regarding a particular area of health sciences sufficient for doctoral level of study, develop a learning contract and self-directed course of study at the doctoral level, develop curriculum components for an educational program using self-directed study, describe information research during the completion of the objectives, and describe the methods of developing and successfully completing a self-directed course. (1–4 credits)
Global health care is an emerging priority for health professional education programs and clinical practice. It is essential for all health care professionals to understand the impact of global health issues on health care and international economic stability. This course explores the many facets of global health to expose the student to the complexity of the concepts that impact health care in developing and developed countries. (4 credits)

The purpose of this course is to provide an introduction to the principles, structure, and function of international health systems through a comparative analysis of various countries’ health care systems. The course will explore how national systems have evolved and how countries confront the emerging issues in health care. The course will explore and develop a systematic comparative analysis of the evolution, administrative structures, societal choices, financing, and provision of health care services in underdeveloped, developing, and developed countries. (4 credits)

Leadership plays a key role in adopting practices to promote patient safety and leaders should have the skills necessary to be effective in the implementation of these practices. This course will focus on patient safety through a study of safety-oriented leadership, organizational culture, human factors, decision-making science, communication, and a systems approach to health care delivery. Current best practice models and the latest professional literature emphasizing patient safety will be featured. (4 credits)

This course is designed to introduce D.H.Sc. students to health law or law as it affects the professionals and institutions that deliver health care in the United States. The course focuses on the traditional areas of concern for courses on health law, including access to health care, the cost of health care, the quality of health care, and protection of the person of the patient. (4 credits)

This course will focus on available and future methodologies and technologies for the processing, archiving, analysis, and transmission of data, information, and knowledge in the medical and health care setting. (4 credits)

This course emphasizes the underlying concepts of the epidemiologic approach as it relates to pertinent global health issues. The student will be introduced to principles and methods of epidemiologic research. These include study designs, measures of frequency, association, impact, and sources of error. Application to global health and public health strategies for disease prevention, surveillance, and controls are discussed. (4 credits)

There is great value in listening to patient narratives and reflecting upon what is communicated through these stories about health, illness, suffering, and recovery. In this course, students will explore written forms of patient narratives, as well as multimedia presentations, movies, music, song, and visual arts to improve their understanding of patient experiences. Students will learn how to enhance their own listening, self-reflection, and communication skills, and, in the process, they will develop narrative competencies that emphasize empathy, compassion, and other effective components of quality care. The course will explore ways in which a study of the medical humanities contributes to a deeper understanding of personal and social features that affect the quality of patient care. (4 credits)

This course provides a working knowledge of evidence-based medicine. Cases will be used as the backbone of this course to assist the student in analyzing data to justify the treatments used in clinical practice. Students will also learn how to critically appraise the literature, evaluate diagnostic test performance, design clinical pathways and standards of care, and implement evidenced-based medicine findings in their own clinical or administrative settings. (4 credits)
Doctor of Health Science (D.H.Sc.) Program

The D.H.Sc. program offers a four concentration curriculum. Students can either complete the generalist, the global health, the education for the health professions, or the telehealth concentrations. Starting in fall 2020, The D.H.Sc. program requires completion of a minimum of 55 credits of coursework. This includes 44 credits of didactic coursework, 9 credits of practical coursework, and 2 credits for the Scientific Writing course.

The D.H.Sc. program is designed for completion in a distance-learning format and requires only minimal on-campus time during one to two intensive, one-week, winter or summer institute seminar sessions. The residential sessions are held at the NSU Fort Lauderdale/Davie Campus.

The program curricula are designed to build upon the scientific and general knowledge of the health care professional while focusing on the overall health care picture. Leadership, policy, diversity, evidence-based medical practice, and alternative methods of treatment are but a few of the areas stressed in the generalist curriculum.

During the course of study, the student must complete a practicum and internship approved by the course director in an area of health care such as leadership, education, policy, or delivery. Students selecting a concentration in global health, education in the health care professions, or telehealth should focus their internship and practicum work in their chosen area of study. The internship is used to expose the student to an area of healthcare not commonly experienced in the student’s normal area of practice. Though they are two separate portions of the curriculum, the internship may be used as an area of research in preparation for undertaking the practicum.

The coursework is professor-paced using state-of-the-art, web-based delivery. The curriculum and coursework follow a standard 12-week semester calendar in conjunction with resident on-campus programs. At the standard pace established by the program, the course of study can be completed in three years. It is required that all coursework be completed within seven years.

Admissions Requirements

Prospective D.H.Sc. students are selected by the Committee on Admissions, which considers the overall qualities of applicants and their suitability for this course of study. Areas of consideration include application content, academic record, prior health care experience, letters of evaluation, and personal motivation. In special circumstances, a personal interview with members of the committee on admissions may be required.

1. Prior to matriculation, applicants must have completed a master’s degree from a regionally accredited college or university.
2. Applicants should demonstrate a cumulative master’s degree G.P.A. at or above a 3.0 on a 4.0 scale to be eligible for regular admission. The Committee on Admissions will make a recommendation to the dean of the college as to any remedial coursework necessary for an applicant to achieve full admission.
3. Prior health care experience is required and is strongly considered in the admissions process. The D.H.Sc. is a postprofessional degree designed for advanced health practitioners, public health professionals, and health care administrators from a wide variety of disciplines. The commonality exhibited by our students is the expert practice of a recognized health occupation at a professional level, or five years of administrative experience in a health care organization with progressively increasing responsibilities over that time frame. The successful applicant’s health profession may emphasize delivery of services to individual clients (e.g., PA, PT, R.N., LCSW, etc.) or be population based (M.P.H., M.H.A.). An appropriate level of professional practice is generally recognized by health professions licensure (e.g., R.N., PT), a national certification or registration (e.g., PA-C, RVT, RRT, CRNA, FACHE), a recognized health professions academic credential (e.g., M.P.H., M.S.N., M.S.W., M.H.A., M.B.A.), or a combination of the above. All questions regarding the appropriateness of an applicant’s qualifications for admission can be discussed with the department chair or program director on an informal basis, but the official recommendations are made by the Committee on Admissions to the dean of Dr. Pallavi Patel College of Health Care Sciences. The dean makes the final determination. Successful past applicants and graduates have included physicians, dentists, nurses, nurse practitioners, nurse midwives, physician assistants, master’s degree-level social workers, physical therapists, occupational therapists, dental hygienists, and athletic trainers.

We have recently expanded the program to include health care administrators, and our graduates now include a hospital CEO and an assistant surgeon general of the U.S. Public Health Service.

4. All applicants must show evidence of computer skills through coursework or self study prior to the end of the first term. Students may obtain instruction through the NSU Student Microcomputer Laboratory, the D.H.Sc. Orientation Center, or other training facilities.
Application Procedures
All applicants for admissions must submit or be responsible for the submission of
1. a completed application form along with a $50, nonrefundable application fee
2. two letters of evaluation from supervisors or colleagues, clinical or nonclinical (An administrative/nonclinical applicant must include a letter from his or her direct supervisor describing the applicant’s position and responsibilities within the organization.)
The evaluation form is supplied in the application package.
3. official transcripts sent directly from all previously attended undergraduate, professional, and graduate institutions to Nova Southeastern University
   Enrollment Processing Services
   Dr. Pallavi Patel College of Health Care Sciences Admissions
   3301 College Avenue, P.O. Box 299000
   Fort Lauderdale, FL 33329-9905
   Phone: (954) 262-1101
   877-640-0218
   Fax: (954) 262-2282
4. an evaluation for U.S. institutional equivalence for all coursework from international institution(s), if applicant attended or is a graduate of any international institution(s)
   Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.
   • World Education Services, Inc.
     Bowling Green Station
     P.O. Box 5087
     New York, NY 10274-5087
     (212) 966-6311 • wes.org
   • Josef Silny & Associates, Inc.,
     International Education Consultants
     7101 SW 102 Avenue
     Miami, FL 33173
     (305) 273-1338 fax
     info@jsilny.org • jsilny.org
   • Educational Credential Evaluators, Inc.
     101 West Pleasant Street, Suite 200
     Milwaukee, WI 53212-3963
     (414) 289-3400 • ece.org
5. a complete résumé or CV
6. copies of national and professional certifications or licenses by recognized certifying bodies
A writing sample may be required.
Administrative/nonclinical applicants for admissions must also submit or be responsible for the submission of
• career and professional goal statement
• an organizational chart indicating the applicant’s position and area of authority in the employment organization
Completed applications must be sent to
Nova Southeastern University
Enrollment Processing Services
Dr. Pallavi Patel College of Health Care Sciences Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905
The D.H.Sc. Office of Admissions works on a rolling admissions basis. Applications are accepted year round. To ensure that your application receives prompt consideration, you should apply early. All final documentation must be received by the EPS no later than one month prior to intended registration date.
The D.H.Sc. Committee on Admissions will not consider an application until all required fees, credentials, transcripts and test scores have been received by the EPS.

Tuition and Fees
Tuition for D.H.Sc. courses for 2020–2021 will be posted on our website (nova.edu/cah/healthsciences/dhs). Additional expenses and fees may be incurred. Examples include, but are not limited to, travel to and from campus, graduation fees, and books. An NSU Student Services Fee of $1,500 is required annually. All tuition and fees are subject to change by the board of trustees without notice.

Requirements for Graduation
To be eligible to receive the D.H.Sc. degree, students shall
• be of good moral character
• satisfactorily complete the program of 55 credits (minimum) of study required for the degree (starting fall 2020)
• successfully complete the D.H.Sc. internship and practicum
• receive a recommendation by the D.H.Sc. program director to the dean of the Dr. Pallavi Patel College of Health Care Sciences
# D.H.Sc. Curriculum Outline for Students Matriculating on or After Fall 2020

**Introductory Course (Required in first year of enrollment)**  

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>DHS 8121 Scientific Writing</td>
<td>2*</td>
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</tbody>
</table>

## Core Courses

### Core Block One—16 Credits

Four of the following courses are required. (Must include one policy and one ethics course.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8000 Professional Competencies in the Clinical Care of Diverse Populations</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8030 Community Health Promotion and Disease Prevention</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8040 Professionalism and Health Care Ethics</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8045 The Influence of Ethics and Culture on Global Health</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8090 Health Policy, Planning, and Management</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8095 Global Health Policy</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8110 Community Environmental and Occupational Health</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8196 Theories and Principles for Health Care Educators</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8197 Traditional and Competency-Based Curriculum and Implementation</td>
<td>4</td>
</tr>
</tbody>
</table>

Students interested in a global health concentration should take DHS 8045 and DHS 8095, either as core courses or as electives. Students taking the education for health care professions concentration should take DHS 8196 and DHS 8197, either as core courses or electives.

### Core Block Two—8 Credits

Two of the following courses are required.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>DHS 8400 Global Health Issues</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8750 Patient Safety Medical Error</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8190 Health Care Education</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8800 Health Care Informatics</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8810 Epidemiology and Global Health</td>
<td>4</td>
</tr>
<tr>
<td>HSP 9006 Evidence-Based Medical Practice</td>
<td>4</td>
</tr>
</tbody>
</table>

Students interested in the global health concentration should take DHS 8400 and DHS 8810, either as core courses or electives.
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8125 Preparation Forum</td>
<td>1</td>
</tr>
<tr>
<td>DHS 8130 Internship</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8140 Practicum</td>
<td>4</td>
</tr>
</tbody>
</table>

**Residential Institutes (required)—12 Credits**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8010 Statistics and Research Methods</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8071 Conflict Resolution for Health Care Leaders</td>
<td>4</td>
</tr>
</tbody>
</table>

**Electives—12 Credits**

Three of the following courses are required. Additional Core Block One or Two courses may be substituted.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8100 Alternative and Complementary Medicine</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8165 Human Trafficking: Legal Issues, Public Health, and Advocacy for the Health Care Profession</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8180 Medical Writing for the Health Professional</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8195 Academic Health Program Development</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8199 Interprofessional Health Care</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8200 Independent Study A</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8250 Independent Study B</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8700 Comparative International Health Systems</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8775 Survey of Health Law</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8820 Telehealth Concepts, Applications, and Future Trends</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8825 Technological Infrastructures of Telehealth</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8830 Strategic Planning for Telehealth Programs and Services</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8900 Narrative Medicine</td>
<td>4</td>
</tr>
</tbody>
</table>

Students interested in the global health concentration should take DHS 8400 and DHS 8810, either as core courses or electives. Students interested in the education in the health care professions concentration should take DHS 8195 as an elective. Students interested in the telehealth concentration should take DHS 8820, DHS 8825, and DHS 8830 as electives.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8120 Doctoral Analysis</td>
<td>2</td>
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<tr>
<td>or</td>
<td></td>
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<tr>
<td>DHS 8121 Scientific Writing</td>
<td>2*</td>
</tr>
</tbody>
</table>

**Total** 61

On-campus institutes—These one-week, summer sessions are held either on the main campus or at one of the NSU regional campuses. Two such institutes are required to complete the program for the D.H.Sc. degree. These institutes are required for all students, regardless of concentrations.
Doctor of Health Science Course Descriptions

DHS 8000—Professional Competencies in the Clinical Care of Diverse Populations
This course focuses on issues and information relating to the general epidemiological concerns, health care disparities, and specific health and disease issues involved in the care of both culturally based diverse populations (African American, Native American, Asian and Asian sub-populations, and Latino-Hispanic populations) and other nonethic special populations (homeless, uninsured, indigent, disabled, incarcerated, rural, inner city, GLBT, geriatric, pediatric, and others). (4 credits)

DHS 8010—Statistics and Research Methods
This course allows the student to develop an understanding through critical analysis of the basic research methods used in health care. Students will be taught to critically analyze medical information and perform effective literature reviews. (4 credits)

DHS 8030—Community Health Promotion and Disease Prevention
This course develops the knowledge and skills needed to work with communities to improve health status of the community. Major topics will include health promotion and disease prevention. Special emphasis will be placed on the Healthy People 2010 initiatives. (4 credits)

DHS 8040—Professionalism and Health Care Ethics
This course is an in depth study of the concepts of health care ethics. The course of study analyzes the differences between ethics and law and examines the core values and beliefs of medical professionalism. Methods of ethical analysis and review of current case studies will be used in critical discussions of ethical dilemmas faced by health care personnel in areas such as cloning, organ transplantation, and the implications of the Human Genome Project. The student will explore the personal values, professional standards, and institutional guidelines that define the roles and responsibilities of the health care practitioner. (4 credits)

DHS 8045—The Influence of Ethics and Culture on Global Health
Technology, research, and advancement of health care interventions have produced impressive improvements in health outcomes for many. Unfortunately, these advancements have also lead to inequalities in health status within and between countries, creating growing global ethical dilemmas. The world is faced with new challenges, such as the potential for pandemics, an aging population, a diminishing health care workforce, and the stresses of determining resource allocation. With these challenges comes a need to better understand the process of ethical reasoning and resolution, as this will be paramount for the development and maintenance of global health. Another dimension that must be considered in ethical decision making is the influencing factors of culture. Culture comprises the political, social, economic, religious, and ethnic norms and values of a society. Culture is instrumental in shaping bioethical policy worldwide, which necessitates its inclusion and consideration in all global ethic discussions. The purpose of this course is to provide an introduction to the principles and theories of ethics as applied to global health and how culture influences ethical decision making. The course will examine some of the primary theories and principles in health care ethics including virtue, deontology, utilitarian, autonomy, justice, beneficence, and nonmaleficence. The course will explore many prominent global health issues and exemplify how greater knowledge and understanding of global ethics and culture is vital to effective and sound decision making. Topics that will be discussed in the course include ethical issues related to pandemic preparedness, end of life, human organ transplantation, clinical research in developing countries, human rights, resource allocation, and the effects of globalization on world health. It is anticipated that students will bring their own ethical dilemmas arising from their own experiences, cultures, and practices. (4 credits)

DHS 8090—Health Policy, Planning, and Management
This course critically examines the dynamics of health care in the United States. The student is expected to analyze the health care industry and contrast nonprofit and for-profit health care delivery systems. A critical exploration of the ramifications of health care reform and the impact on institutions and individuals will be undertaken. The concepts of cost containment and long-term care will be analyzed. (4 credits)

DHS 8095—Global Health Policy
Globalization affects all sectors, including health care, and understanding key policy issues is essential in the study of global health. This course, taught from a clinical perspective, examines the health policy issues confronting international health organizations, governments, and specific populations. It reviews the processes that influence the development and implementation of policies and examines specific topics related to HIV/AIDS, poverty/nutrition, infectious disease, smoking, concerns of women and children, and other major global health concerns. (4 credits)

DHS 8100—Alternative and Complementary Medicine
This course examines and analyzes alternative and complementary medicine and their impact on the health care industry. The approach to the subject is to present selected alternative and complementary medicine fields in an informative, nonjudgmental format. (4 credits)
DHS 8110—Community Environmental, and Occupational Health

Issues such as air and water quality and waste management will be examined. OSHA will be examined and analyzed for its impact on health and health care. Trends in environmental and occupational health legislation will be examined for their impact potential. (4 credits)

DHS 8121—Scientific Writing

This course is designed to familiarize students with the writing competencies for writing papers in the Doctor of Health Science (D.H.Sc.) program. This course will cover the genre of scientific writing. Scientific writing is used in research and report writing. It is more precise and succinct, which is different from the way we speak to each other and other types of writing. Scientific writing is based upon scientific theory and evidence from the literature. Upon completion of the course, students will be given a foundation for all DHS courses. (2 credits)

DHS 8125—Preparation Forum

Students should enroll in this course within one to two semesters of matriculation into the D.H.Sc. program. This is a 1-credit course where students work closely in a one-on-one fashion with their course instructor/mentor to develop appropriate learning objectives and experiential plans for the internship (8130) and a substantial developmental project for the practicum (8140). Together, the internship and practicum form the capstone of the program. Attention is also paid to appropriate preparation for the form and style of the written deliverables of the internship and practicum and appropriate timelines for completion. Successful completion of this course will include completion of APA-style quizzes, approval of topic for DHS 8130 at least one semester prior to enrollment, approval of topic for DHS 8140 one to two semesters prior to enrollment, and completion of an error-free proposal for DHS 8140 at least one to two semesters prior to enrollment. Students will be continuously enrolled in DHS 8125 until all three tasks are accomplished. (1 credit)

DHS 8130—Internship

This course is the capstone of the program. The student will perform an internship at a community health care institution, clinic, educational facility, etc., which is approved in the DHS 8125 course at least one semester prior to enrolling in DHS 8130. The student should spend a minimum of 80 clock hours learning skills from a mentor. Examples of acceptable internship experiences include teaching assistantships to learn on-site or online teaching skills, volunteering at nonprofit organizations to learn about particular topics in health promotion and disease prevention, or shadowing an executive to learn leadership and executive skills, among other experiences. Students on the global track must have an internship experience that has an international basis. The student will write a report that describes the institution, defines the population served, and details the health promotion activities observed. A critical evaluation should be made that details strengths, weaknesses, opportunities, and threats to the institution in order to analyze if the skills delineated are able to be learned. Prerequisite: DHS 8125 (4 credits)

DHS 8140—Practicum

The practicum is a written project that is developmental in nature. The practicum project must be approved in the DHS 8125 course one to two semesters prior to enrolling in DHS 8140. Enrollment in the practicum course must be preceded by a proposal that contains the project idea and a preliminary literature review, which will be written in the DHS 8125 course at least one to two semesters prior to enrolling in DHS 8140. The student will be required to choose a health promotion topic and create a health promotion program or educational resource that can be used for a community education program. An implementation and evaluation plan must be included in the final product. Examples of appropriate educational resources include developing a presentation for a national conference, developing a presentation for an in-service, or developing a course curriculum. Students on the global track must have an international basis for the project. Prerequisite: DHS 8125 (4 credits)

DHS 8150—Continuing Internship Services

This course is a continuation of DHS 8130. It is used when the student is given an incomplete grade and needs to finish his or her internship. (2 credits)

DHS 8160—Continuing Practicum Services

This course is a continuation of DHS 8140. It is used when the student is given an incomplete grade and needs to finish his or her practicum. (2 credits)

DHS 8165—Human Trafficking: Legal Issues, Public Health, and Advocacy for the Health Care Professional

This course will examine the issue of human trafficking through a health care, policy, and public health lens. Through investigation of current resources in their communities, as well as researching primary resources (research articles, public polices and human trafficking laws, governmental and nongovernmental agencies reports), students will analyze the consequences of human trafficking at the individual and community levels. Students will identify gaps in research and/or policies and will formulate potential solutions. Building on this new knowledge, students will build a plan to influence change and advocate for victims locally, nationally, or internationally. (4 credits)

DHS 8071—Conflict Resolution for Health Care Leaders

This course examines and analyzes the nature and dynamics of human conflict within health care leadership and management. Various methods and theories of leadership and management,
both in and out of health care, and their impact on productivity, profitability, and employee satisfaction will be explored. Learners will acquire and engage practical strategies to improve leadership skills applicable in a variety of settings. Additionally, critical analysis of the different approaches to mitigating conflict in health care leadership will be required to research, develop, and evaluate diverse practice environments and their role in health outcomes. Through the completion of various assignments, the learner will be expected to demonstrate mastery of the subject matter via application of the theories and information presented in the assigned readings, participation in the discussion board, and other learning activities. (4 credits)

**DHS 8180—Medical Writing for the Health Professional**

The demand for medical writing professionals is growing significantly. So, too, is the supply of individuals with advanced health science and professional degrees seeking careers both in and outside of academia. This course is designed to provide doctoral students with the foundational knowledge and skills needed for successful publication of a professional journal article or clinical case review. Methods of document preparation, proper word and punctuation use, and the requirements for authors of biomedical journal articles will be discussed. This course is not designed for entry-level medical writing; rather it is designed for professionals with a strong biomedical and/or life sciences background to write for scientific audiences in peer-reviewed journals. This course encourages good writing skills through choosing better words; writing better sentences; and preparing tables, graphs, and photographs. All students are required to develop and submit a quality paper that meets the requirements for publication in a peer-reviewed professional or biomedical journal. The *Publication Manual of the American Psychological Association* (APA) 6th Edition, will be the required format for all formal assignments. (4 credits)

**DHS 8190—Health Care Education**

This course explores the various theories and applications of adult education in the practice of training, preprofessional education, and postprofessional education of medical personnel. Critical analysis of the different methods of teaching and training health care professionals is accomplished through discussion, research, investigation, journal development, and assignments. (4 credits)

**DHS 8195—Academic Health Program Development**

This course explores the major steps to be undertaken when considering the development of new academic health programs at a college or university. Special emphasis is given to the needs assessment and how to conduct the needs assessment. Budget will be discussed and developed; the course will highlight the development of faculty and the specific qualifications of faculty needed for a particular program specialty. Emphasis will be placed on the resources needed and resources available in the targeted community. Through the completion of various projects, the student will be expected to demonstrate mastery of the subject matter via application of the material and information presented in the assigned readings, participation in the discussion board, and participation in the course activities. (4 credits)

**DHS 8196—Theories and Principles for Health Care Educators**

This course explores some of the major learning theories that are utilized in health professions programs with emphasis on adult learning theory. The use of Bloom's Taxonomy in creating curriculum is explored. Students will be exposed to various methods of delivering material to be learned in their respective health discipline. The knowledge gained in this course will enhance the seasoned instructor and give invaluable insight and guidance to those transitioning from clinical practice to education in the health professions. (4 credits)

**DHS 8197—Traditional and Competency-Based Curriculum and Implementation**

The course will expose students to the traditional tenets of curriculum development and the facets of curriculum development of the aspects of competency-based instruction. Students will gain knowledge in the area of instructional implementation in the education of health care professionals. Subject matter will include, but not be limited to, student assessment, utilization of technology in education, course development, writing test questions that accurately assess learning outcomes, incorporating simulation methods, and problem-based learning. (4 credits)

**DHS 8199—Interprofessional Health Care**

The changing landscape of health care delivery systems will continue to be more challenging as patient care becomes more complex. The health care team involves multiple disciplines, whose providers form the health care team along with the patient and caregivers. Health care providers must be able to transition into clinical practice settings prepared to participate in relationship-centered interprofessional and intra-discipline teams. This course prepares the learner to gain experience in applying strategies that promote a collaborative-practice style that has the ultimate goal to improve the quality of an integrated and comprehensive, medical and oral, patient-care delivery system. Using a competency-learning approach to coursework, the student will acquire the skills of patient-centered care that is relationship focused, process oriented, and applicable across professions and practice settings. Students will develop a comprehensive health care plan that includes oral health considerations for a patient case study. (4 credits)
DHS 8200—Independent Study A
This course is a self-directed, faculty-supervised experience for the student. The student will be required to develop a proposal regarding the topic of study, a learning contract with specific objectives, and a plan of action that includes methods of obtaining the information and the material produced, thus demonstrating an in-depth understanding of the subject areas. A faculty member will be assigned to the student for the supervised study and will follow the approved learning contract for successful completion of the course. The purpose of this course is to allow the student to explore an area of interest in the field of health care or health sciences. The secondary benefit of the course is to allow the student, with the assistance of the faculty member, to develop and complete a doctoral-level course of study. Upon completion of the course, the student should be able to develop a proposal regarding a particular area of health sciences sufficient for doctoral level of study, develop a learning contract and self-directed course of study at the doctoral level, develop curriculum components for an educational program using self-directed study, describe information research during the completion of the objectives, and describe the methods of developing and successfully completing a self-directed course. (4 credits)

DHS 8250—Independent Study B
This course is a self-directed, faculty-supervised experience for the student. The student will be required to develop a proposal regarding the topic of study, a learning contract with specific objectives, and a plan of action that includes methods of obtaining the information and the material produced, thus demonstrating an in-depth understanding of the subject areas. A faculty member will be assigned to the student for the supervised course. The purpose of this course is to allow the student to explore an area of interest in the field of health care or health sciences. The secondary benefit of the course is to allow the student, with the assistance of the faculty member, to develop and complete a doctoral-level study. Upon completion of the course, the student should be able to develop a proposal regarding a particular area of health sciences sufficient for doctoral level of study, develop a learning contract and self-directed course of study at the doctoral level, develop curriculum components for an educational program using self-directed study, describe information research during the completion of the objectives, and describe the methods of developing and successfully completing a self-directed course. (4 credits)

DHS 8400—Global Health Issues
Global health care is an emerging priority for health professional education programs and clinical practice. It is essential for all health care professionals to understand the impact of global health issues on health care and international economic stability. This course explores the many facets of global health to expose the student to the complexity of the concepts that impact health care in developing and developed countries. (4 credits)

DHS 8700—Comparative International Health Systems
The purpose of this course is to provide an introduction to the principles, structure, and function of international health systems through a comparative analysis of various countries’ health care systems. The course will explore how national systems have evolved and how countries confront the emerging issues in health care. It will explore and develop a systematic comparative analysis of the evolution, administrative structures, societal choices, financing, and provision of health care services in underdeveloped, developing, and developed countries. (4 credits)

DHS 8750—Patient Safety Medical Error
Leadership plays a key role in adopting practices to promote patient safety, and leaders should have the skills necessary to be effective in the implementation of these practices. This course will focus on patient safety through a study of safety-oriented leadership, organizational culture, human factors, decision-making science, communication, and a systems approach to health care delivery. Current best practice models and the latest professional literature emphasizing patient safety will be featured. (4 credits)

DHS 8775—Survey of Health Law
This course is designed to introduce D.H.Sc. students to health law, or law as it affects the professionals and institutions that deliver health care in the United States. The course focuses on the traditional areas of concern for courses on health law, including: 1) access to health care; 2) the cost of health care; 3) the quality of health care; and 4) protection of the patient. (4 credits)

DHS 8800—Health Care Informatics
This course will focus on available and future methodologies and technologies for the processing, archiving, analysis, and transmission of data, information, and knowledge in the medical and health care setting. (4 credits)

DHS 8810—Epidemiology and Global Health
This course emphasizes the underlying concepts of the epidemiologic approach as it relates to pertinent global health issues. The student will be introduced to principles and methods of epidemiologic research. These include study designs, measures of frequency association, impact, and sources of error. Application to global health and public health strategies for disease prevention, surveillance, and control are discussed. (4 credits)
DHS 8820—Telehealth Concepts, Applications, and Future Trends
Telehealth involves any technology-medical communication that facilitates health services, such as the exchange of information in coordinating patient care. This course explores the foundational concepts that support telehealth within a health care environment, including information privacy and security standards that support health information systems and technologies. Students will examine the current applications of telehealth and propose recommendations that resolve common issues within clinical settings. The course has an emphasis on the legal and ethical considerations with implementing telehealth programs. Furthermore, students will appraise future trends by reviewing current telehealth products and anticipating upcoming innovations or practices. (4 credits)

DHS 8825—Technological Infrastructures of Telehealth
The health industry’s technology has been rapidly evolving—with telehealth placed as an area of value and growth potential. Telehealth, which involves the use of any technology in providing clinical services, requires health professionals to develop strong skills in information systems and technologies. This course introduces aspects of technology management relevant to telehealth practices. Students will discover ways in which data is captured, transmitted, stored, and retrieved. Students will learn how to uphold information security and privacy through contemporary approaches in technology management. The course presents technical concepts from a leadership perspective; learners will be able to determine the types of skills used by technology experts in the management of telehealth services or programs. Upon successful completion of the course, students will be able to apply telehealth approaches across various areas of medicine and different health care organizations. (4 credits)

DHS 8830—Strategic Planning for Telehealth Programs and Services
Telehealth services utilize health information technologies and systems to facilitate health care operations, clinical procedures, and the exchange of health information. Health care organizations have found it necessary to coordinate the rapid growth of telehealth/telemedicine services by building partnerships, exploring business ventures, and launching comprehensive programs. This course examines telehealth strategies and initiatives through case-study analysis and class discussions. Students will practice hands-on management of telehealth technologies, systems, and operations. Throughout the course, students will engage in a comprehensive strategic planning process—honoring professional communication, teamwork, and customer service skills. (4 credits)

DHS 8900—Narrative Medicine
There is great value in listening to patient narratives and reflecting upon what is communicated through these stories about health, illness, suffering, and recovery. In this course, students will explore written forms of patient narratives, as well as multimedia presentations, movies, music, song, and visual arts to improve their understanding of patient experiences. Students will learn how to enhance their own listening, self-reflection, and communication skills, and, in the process, they will develop narrative competencies that emphasize empathy, compassion, and other effective components of quality care. The course will explore ways in which a study of the medical humanities contributes to a deeper understanding of personal and social features that affect the quality of patient care. (4 credits)

HSP 9006—Concepts in Evidence-Based Medical Practice
This course provides a working knowledge of evidence-based medicine. Cases will be used as the backbone of this course to assist the student in analyzing data to justify the treatments used in clinical practice. Students will also learn how to critically appraise the literature, evaluate diagnostic test performance, design clinical pathways and standards of care, and implement evidenced-based medicine findings in their own clinical or administrative settings. (4 credits)
Accelerated Dual-Degree M.H.Sc./Ph.D. in Health Science Program

The accelerated M.H.Sc. and Ph.D. in Health Science is a distance – based, research focused dual program designed for bachelor’s prepared health professionals with diverse work backgrounds who are interested in earning a terminal degree in the field of health science with a core focus in research. The program will prepare graduates to function both independently and interdependently within the clinical and non-clinical research environment. The dual degree program challenges the student to examine the current state of health care; apply sophisticated knowledge of research design, biostatistics, and epidemiology to the literature of their core discipline; and design and conduct original research in health care.

The accelerated dual degree is designed to provide a means of M.H.Sc. and Ph.D. completion for working health care professionals currently at the bachelor’s degree level, increasing opportunities for health practitioners to earn a terminal degree in the field of health science with a core focus in research. It will prepare graduates to function both independently and interdependently within clinical and non-clinical research environment and for advanced development of new knowledge in their fields of expertise. The dual degree program challenges the student to examine the current state of health care; apply sophisticated knowledge of research design, biostatistics, and epidemiology to the literature of their core discipline; and initiate the design and follow up mechanisms for research in health care.

Admissions Requirements

The Accelerated Dual-Degree M.H.Sc./Ph.D. in Health Science will admit health care professionals with diverse undergraduate education, professional-level health care work history, and life experience, who have demonstrated the capacity to pursue a rigorous course of graduate study and increasingly responsible positions in health care. Applicants interested in this dual degree program will apply directly to the program. The Accelerated Dual-Degree M.H.Sc./Ph.D. in Health Science Committee on Admissions will recommend prospective students for admission by considering the overall qualities of the applicant through Graduate Record Examination (GRE) scores, statement of intent, writing samples, letters of recommendation, and the personal interview.

1. All applicants must hold a bachelor’s degree from a regionally accredited college or university prior to matriculation into the program.
2. Applicants must have a minimum of a 3.0 GPA on a 4.0 scale.
3. Applicants must have prior health care experience. It is strongly considered in the admissions process. The M.H.Sc./Ph.D. in Health Science program is a postprofessional degree designed for health practitioners, public health professionals, and health care administrators from a wide variety of disciplines. The commonality exhibited by our students is the expert practice of a recognized health occupation at a professional level, or five years of administrative experience in a health care organization with progressively increasing responsibilities over that time frame.

The successful applicant’s health profession may emphasize delivery of services to individual clients (e.g., PA, PT, RN, LCSW, etc.) or be population-based (MPH, MHA). An appropriate level of professional practice is generally recognized by either health professions licensure (e.g., RN, PT), a national certification or registration (e.g., PA-C, RVT, RRT, CRNA, FACHE), a recognized health professions academic credential (e.g., M.P.H., M.S.N., M.S.W., M.H.A., M.B.A.), or a combination of the above. The successful administrative (nonclinical) applicant will demonstrate at least five years of professional administrative experience with increasing levels of responsibility in a health care setting. Professional experience will be documented by an organizational chart demonstrating the applicant’s position within the organization and a letter of recommendation from a supervisor attesting to the applicant’s level of responsibility within the organization. Health care administrators will also need to submit a statement concerning their career and professional goals within the health care environment. Fellowship or certification by a nationally recognized health certifying body (FACHE, etc.) is desirable.

All questions regarding the appropriateness of an applicant’s qualifications for admission can be discussed with the department chair or program director on an informal basis, but the official recommendations are made by the Committee on Admissions to the dean of the Dr. Pallavi Patel College of Health Care Sciences, who makes the final determination.

It is recommended that applicants have official Graduate Record Examination (GRE) scores of 150 (verbal), 149 (quantitative), and 4 (analytical writing). GRE scores must be less than five years old at the time of matriculation into the program.

4. Applicant must have a personal interview with the Committee on Admissions (a telephonic or Skype interview is accepted, based on the applicant’s needs).

Applicants must also provide

- two letters of recommendation supporting the applicant’s aptitude and determination to complete this course of study (The letters should originate from professional colleagues/ supervisors or from course instructors at the last school attended.)
• a written statement outlining the applicant’s interest in pursuing the M.H.Sc./Ph.D. in Health Science, research experience, and career goals
• one writing sample that reflects original work
• a copy of the applicant’s professional registration, certification, or licensure

Nonclinical applicants must also include
• a letter of recommendation from a supervisor describing the applicant’s position in the organization and the scope and duration of responsibility
• a personal statement describing the applicant’s career goals and an organizational chart (This is not required for clinically licensed, registered, or certified applicants.)

Tuition and Fees
Tuition for the M.H.Sc./Ph.D. in Health Science Dual-Degree program for 2020–2021 will be posted on our website at https://healthsciences.nova.edu/healthsciences/mhs_phd/index.html. An NSU student services fee of $1,500 is required annually. Additionally, students must pay a registration fee of $25, or a deferment fee of $75 if a payment plan is selected, each semester. All tuition and fees are subject to change by the board of trustees without notice.

Application Procedures
The M.H.Sc./Ph.D. in Health Science Dual-Degree program admits students on a rolling basis. Students are considered for admission when all of their admissions documents have been submitted to the Enrollment Processing Center. Anyone with a pending application packet that is not complete by the deadline will be automatically rolled over into the admissions cycle for the next term. The Office of Admissions processes applications on a rolling admissions basis throughout the year.

Applicants for admission must submit to the EPS, or be responsible for submission of,
1. a completed M.H.Sc./Ph.D. in Health Science Dual-Degree program application form, along with a $50, nonrefundable application fee
2. official and final transcripts sent directly from all undergraduate, professional, and graduate institutions of higher learning (including ones currently in progress)
   Conferral degree and conferral date must be on the transcript(s) from all institutions.
3. all coursework from international institution(s), if applicant attended or is a graduate of any international institution(s)

Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.

• World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org

• Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org

• Educational Credential Evaluators, Inc.
  101 West Pleasant Street, Suite 200
  Milwaukee, WI 53212-3963
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University, Enrollment Processing Services, Dr. Pallavi Patel College of Health Care Sciences, Department of Health Science Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, FL 33329-9905.

4. a copy of national allied health professional certifications or licenses, if applicable
5. a copy of current state license, registration, or certification
6. two letters of recommendation supporting the applicant’s aptitude and determination to complete this course of study (The letters should originate from professional colleagues/supervisors or from course instructors at the last school attended.)
7. a written statement outlining the applicant’s interest in pursuing the M.H.Sc./Ph.D. in Health Science, research experience, and career goals
8. one writing sample that reflects original work
9. official Graduate Record Examination (GRE) scores that are no more than five years old

Health care administrators must also submit an up-to-date résumé or curriculum vitae (CV) detailing at least five years of health care and managerial experience. Nonclinical applicants (health administrators) must also include a third letter of recommendation from a supervisor describing their position in the organization and the scope and duration of their responsibility, a personal statement describing their career goals, and an organizational chart.
Send transcripts and all required documents to
Nova Southeastern University
Enrollment Processing Services (EPS)
Dr. Pallavi Patel College of Health Care Sciences
M.H.Sc./Ph.D. in Health Science Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

A personal interview with the Committee on Admissions is required. A phone interview or Skype interview may be substituted upon approval.

**Important note:** You must be accepted to the program no later than 21 days prior to the start of a semester in order to register for classes in that particular semester. If not, you will be placed on the accepted student list, but will not be able to start courses in that particular semester. In any case, you must register for your courses no later than 14 days prior to the start of the course in any semester.

The M.H.Sc./Ph.D. in Health Science Committee on Admissions will not consider an application until all required fees, credentials, exam scores, transcripts, and documents are received by the committee.

**Transfer Credits**
Students matriculated in the M.H.Sc./Ph.D. in Health Science program may petition for transfer of credits to the program. Up to, but not to exceed, 6 credits may be considered for transfer from a regionally accredited program of study only if the transferred courses meet the goals and objectives of the course in question.

**Computer Requirements**
All students are required to have a computer with the following minimum specifications:

- Pentium or AMD at 1.00 GHZ or equivalent Macintosh processor
- 256 MB RAM
- video and monitor capable of 1024 X 768 resolution or better
- CD-ROM drive
- full duplex sound card and speakers
- an Internet connection with Internet service provider (DSL, cable, or satellite highly recommended)
- Windows XP or NT or MAC OS or better
- Microsoft Office 2000 or newer with PowerPoint, Word, and Excel minimum
- printer capability

Tablets and smartphones, while very useful, may not be sufficient for all program uses. Upon admission, minimum computer requirements can be found online at [nova.edu/publications/it-standards](http://nova.edu/publications/it-standards).

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**Curriculum Outline**

<table>
<thead>
<tr>
<th>Courses for M.H.Sc. Degree</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MHS 5203 Writing for Allied Health Professionals</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5510 Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5908 Applied Statistics</td>
<td>3</td>
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<tr>
<td>MHS 5906 Developmental Research Project</td>
<td>3</td>
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<tr>
<td>MHS 5995 Thesis I</td>
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<tr>
<td>MHS 5996 Thesis II</td>
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<tr>
<td>MHS 5996 Thesis III</td>
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<tr>
<td>MHS 5996 Thesis IV</td>
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<tr>
<td>DHS 8090 Health Policy, Planning, and Management</td>
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### Courses for Ph.D. Degree

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>DHS 8030</td>
<td>Community Health Promotion and Disease Prevention</td>
</tr>
<tr>
<td>DHS 8071</td>
<td>Conflict Resolution for Health Care Leaders</td>
</tr>
<tr>
<td>DHS 8810</td>
<td>Epidemiology and Global Health</td>
</tr>
<tr>
<td>HPH 7300</td>
<td>Biostatistics I</td>
</tr>
<tr>
<td>HPH 7310</td>
<td>Biostatistics II</td>
</tr>
<tr>
<td>HPH 7500</td>
<td>Philosophy of Science</td>
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<tr>
<td>HPH 7600</td>
<td>Grants and Publications</td>
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<tr>
<td>HPH 7700</td>
<td>Test and Measurements</td>
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<tr>
<td>HSP 9001</td>
<td>Behavior Theories in Health Science</td>
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<tr>
<td>HSP 9002</td>
<td>Survey Methodology</td>
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<tr>
<td>HSP 9007</td>
<td>Research Practicum</td>
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<tr>
<td>HSP 9008</td>
<td>Comprehensive Exam</td>
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</table>

### Dissertation

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<tbody>
<tr>
<td>HSP 9011</td>
<td>Dissertation</td>
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<tr>
<td>HSP 9012</td>
<td>Dissertation</td>
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<tr>
<td>HSP 9013</td>
<td>Dissertation</td>
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<tr>
<td>HSP 9014</td>
<td>Dissertation</td>
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<tr>
<td>HSP 9015</td>
<td>Dissertation</td>
</tr>
<tr>
<td>HSP 9016</td>
<td>Dissertation</td>
</tr>
</tbody>
</table>

**Total Credits** 47

**Total Dual-Degree Credit Hours** 88
Course Descriptions

MHS 5203—Writing for Allied Health Professionals
This course entails the study and practice of the writing style used in allied health: scientific writing. Scientific writing is a different format than other kinds of writing used as an undergraduate. It is more precise and succinct, which is different from the way we speak to each other. Scientific writing is written for an audience with the purpose of informing or possibly persuading the audience. American Psychological Association (APA) style and standard English formatting will be reviewed. The papers written in this course will give the student a foundation for all MHS courses. (3 credits)

MHS 5510—Research Methods
This course is designed to enable participants to develop skills in reading and critically evaluating published research using the scientific model. The advantages and disadvantages of quantitative and qualitative research methods will be compared and contrasted. Research articles will be collaboratively analyzed to develop an appreciation of potential methodological problems and their implications for evidence-based professional practice. (3 credits)

MHS 5908—Applied Statistics
Good decision-making in health care is enhanced through empiricism, where formal processes are used to ask pertinent research questions, review the professional contributions of others, develop appropriate methodologies, obtain reliable and valid data, organize data into formal data sets, conduct suitable statistical analyses, and make informed judgments. This course provides background in both theory and practice in statistics and research methods, in part to prepare students for the many activities associated with clinical research. (3 credits)

MHS 5906—Developmental Research Project
This course provides the student with the opportunity to assimilate the skills required to communicate in academic settings both orally and in writing. The purpose of this course is two-fold. First, the course will acquaint the student with the guidelines that will assist in creating well-crafted academic communication. Second, it will provide the opportunity to practice communication skills and receive feedback from colleagues and the instructor. The primary focus of the course is the thesis process. (3 credits)

MHS 5995—Thesis I
This course is intended for students planning to conduct research in a variety of different settings. Its topics include case studies, interviews, documentary evidence, and participant observation and survey research. The primary goal of the course is to assist students in preparing their formal thesis proposals. The instructor must approve the proposal. (3 credits)

MHS 5996—Thesis II
In this course, the student will carry out the proposed research (under the instructor’s supervision) and conduct data analysis, which will culminate in a summary paper of the student’s research findings. (3 credits)

MHS 5997—Thesis III
This course is dedicated to the formal writing of the student’s thesis under the professor’s supervision. Once the instructor accepts the paper, two other faculty members on the student’s thesis committee will review it. (3 credits)

MHS 5998—Thesis IV
In this course, the student prepares for oral defense of the thesis and revision of the manuscript of the thesis. (3 credits)

DHS 8090—Health Policy, Planning, and Management
Everyone involved with health care (including consumers, providers, payers, special interest groups, elected officials, and administrators) is affected by health policy. This course examines health policy issues confronting public/private health organizations and specific groups. Assignments review processes influencing the development and implementation of policies including topics related to health insurance reform, government-supported programs, quality care, and population-based issues. Each week, the student evaluates information available through Internet sites and reference texts to develop a paper demonstrating an understanding of the assignment topic and participates in discussion topics that will be analyzed, synthesized, proposed, and/or evaluated. (4 credits)

DHS 8810—Epidemiology and Global Health
This course emphasizes the underlying concepts of the epidemiologic approach as it relates to pertinent global health issues. The student will be introduced to principles and methods of epidemiologic research. These include study designs; measures of frequency, association, and impact; and sources of error. Application to global health and public health strategies for disease prevention, surveillance, and controls are discussed. (4 credits)

HPH 7410—Qualitative Research
This course focuses primarily on the knowledge and skill competencies students need to design and conduct qualitative research successfully. In this pursuit, students immerse themselves in the epistemological, theoretical, ethical, methodological, and procedural understanding of qualitative research; apply this knowledge to the conceptualization and conduct of qualitative research; report the findings of the research in the form of a research article; and appraise the quality of such qualitative research products. Upon completion
of the course students will have demonstrated that they have mastered the basic competencies needed to create, plan, and complete a qualitative research dissertation. (3 credits)

**HPH 7400—Quantitative Research Design**

This course will provide students with a fundamental understanding of the basic methods and approaches used in health-related research. A major emphasis of the course will be on the conceptualization and design of research studies. The course will cover ethics, formulation of research questions, study design, reliability, validity, sampling, measurement, and interpretation of research findings. It will prepare students to critically evaluate published literature, and to design sound research studies. The course will be both theoretical and applied. Students will be challenged to apply the theoretical concepts presented in the classroom and in the readings to design a study to address a health-related issue of their choice. (3 credits)

**HPH 7220—Research Ethics**

This course introduces students to ethics concepts as they apply to questions and challenges in conducting research with human subjects. The aim is to increase students’ awareness of, and ability to reason through, ethical issues that arise in human-subject research. The course will draw upon historical examples, codes, declarations, and other sources of ethical guidance, including discussions of contemporary controversies in human-subject research. (3 credits)

**DHS 8030—Community Health Promotion and Disease Prevention**

This course develops the knowledge and skills needed to work with communities to improve health status of the community. Major topics will include health promotion and disease prevention. Special emphasis will be placed on the “Healthy People 2010” initiatives. (4 credits)

**DHS 8071—Conflict Resolution for Health Care Leaders**

This course examines and analyzes the nature and dynamics of human conflict within health care leadership and management. Various methods and theories of leadership and management, both in and out of health care, and their impact on productivity, profitability, and employee satisfaction will be explored. Learners will acquire and engage practical strategies to improve leadership skills applicable in a variety of settings. Additionally, critical analysis of the different types of approaches to mitigating conflict in health care leadership will be required to research, develop, and evaluate diverse practice environments and their role in health outcomes. Through the completion of various assignments, the learner will be expected to demonstrate mastery of the subject matter via application of the theories and information presented in the assigned readings, participation in the discussion board, and other learning activities. (4 credits)

**HPH 7300—Biostatistics I**

The application of quantitative techniques has expanded rapidly in medical decision making. The emphasis on evidence-based health care means that health care workers must be able to evaluate the results from published health care research studies. This course is the first of two courses designed to provide students with the knowledge of quantitative techniques. The course will cover descriptive statistics, parametric group comparison statistics, and basic non-parametric statistics and will also provide an introduction to linear modeling. (3 credits)

**HPH 7310—Biostatistics II**

The aim of this course is to enable students to appreciate the richness of statistical science and to invite them to the concepts of probabilistic thinking. Statistics is the science of the future. Any technique that they are going to learn will help them to understand the unknown better, and in turn, it will increase their success in other courses and in future professional careers. Principles of statistical inference build upon the course of Fundamentals of Biostatistics. As such, a prerequisite for enrolling in this course is Fundamentals of Biostatistics. The goals of this course are threefold: (1) introduce the basic concepts of probability as well as methods for calculating the probability of an event; (2) assist students in developing an understanding of probability theory and sampling distributions; and (3) familiarize students with inferences involving one or two populations, ANOVA, regression analysis, and chi-square tests. (3 credits)

**HPH 7500—Philosophy of Science**

This course will address classical issues in the philosophy of science, including demarcation—the distinction between what science is and is not, hypothesis development, confirmation and falsification, causation, and explanation. The course will also explore the ontological, epistemological, methodological, and axiological foundation of the major paradigms within which inquiry in the human services professions are located. Issues of congruence between research question selection and paradigm selection will also be addressed. (3 credits)

**HPH 7600—Grants and Publications**

This course is designed to provide writing experiences that prepare the learner for manuscript and grant proposal submissions. This introductory experience into the grant process from proposal to funding to management will include project management, funding sources, and funding challenges. Other course requirements include a research proposal (manuscript) that is ready for submission for publication and development of a dissertation proposal. (3 credits)
**HPH 7700—Tests and Measurements**
The course provides a foundation in the basic principles of measurement error with a focus on how to assess and control for error through research design methods and statistical analysis. Students will explore test construction and parsimonious data analysis methods to develop an understanding for designing instruments and assessment tools. Topics in the course will also include survey implementation, sampling, data collection, follow-up, and ethical issues. A focus on issues specific to measurement error in the medical sciences will also be examined throughout the course. (3 credits)

**HSP 9001—Behavior Theories in Health Science**
The purpose of this course is to understand health behavior theories to make decisions on appropriate theories that will guide dissertation research questions and methodology, data analysis, and interpretation. This course presents behavior theories commonly used in the analysis of health care sciences research data. Emphasis is on understanding and applying these concepts and techniques to dissertation and other research data through writing in APA style. (3 credits)

**HSP 9002—Survey Methodology**
This course introduces students to a set of principles of survey methodology that are the basis of standard practices in the field. The course provides guidelines for developing survey objectives, designing survey studies, sampling respondents, and administering surveys. Emphasis is on the skills and resources needed to design and conduct a survey. (3 credits)

**HSP 9007—Research Practicum**
This course requires students to conduct a research activity under faculty member supervision. (3 credits)

**HSP 9008—Comprehensive Exam**
The comprehensive examination is a written examination students will take after completion of all required coursework and before the dissertation phase of the Ph.D. program. The exam will be offered twice a year, onsite. The exam will take a holistic approach and encompass all learning objectives from the program: research, evidence-based medicine, ethics, diversity, conflict resolution, and global health. Students must pass the comprehensive exam in order to move forward to the dissertation phase. (1 credit)

**HSP 9011, 9012, 9013, 9014, 9015, and 9016—Dissertations**
Dissertation Preparation Seminar, Proposal, Dissertation, and Oral Defense. Students will conduct original research in their areas of expertise or concentration, as approved by the program chair and dissertation committee. The dissertation will culminate with an oral final defense, which will occur in person at the summer or winter institute, or on the Fort Lauderdale/Davie Campus. The oral defense must be arranged at least 45 days in advance. (12 credits)
Doctor of Philosophy (Ph.D.) in Health Science Program

The Doctor of Philosophy (Ph.D.) in Health Science is a postprofessional, distance-based, research doctoral program designed for master's degree-prepared clinical health professionals, public health practitioners, and senior-level health care administrators. The focus of the Ph.D. in Health Science is to educate and graduate research practitioners with the skills and knowledge to conduct research in a complex society and environment, while focusing globally within the framework of health policy. The Ph.D. in Health Science requires 64 credits for completion. Students take courses through online delivery, with on-campus institutes. Successful completion of comprehensive exams is required before moving to the dissertation stage. The dissertation is 12 credits, with an on-campus oral defense. Students have up to seven years to complete the program.

The Doctor of Philosophy in Health Science is designed to provide a means of Ph.D. completion for working health care professionals currently at the master’s degree level, increasing opportunities for health practitioners to earn a terminal degree in the field of health science with a core focus in research. It will prepare graduates to function both independently and interdependently within the clinical and non-clinical research environment and for advanced development of new knowledge in their fields of expertise. The Ph.D. in Health Science program challenges the student to examine the current state of health care; apply sophisticated knowledge of research design, biostatistics, and epidemiology to the literature of their core discipline; and initiate the design and follow up mechanisms for research in health care. Its professor-driven, student-centered online course delivery is coupled with a research practicum; a minimum of two one-week, on-campus institutes; a comprehensive examination, and a dissertation with oral defense.

Admissions Requirements
The Ph.D. program will admit health care professionals with diverse graduate education, professional level health care work history, and life experiences who have demonstrated capacity to pursue a rigorous course of graduate study and increasingly responsible positions in health care. Applicants interested in the Ph.D. in Health Science program will apply directly to the program. The Ph.D. Committee on Admissions will recommend prospective students for admission by considering the overall qualities of the applicant through Graduate Record Examination (GRE) scores, statement of intent, writing samples, letters of recommendation, and the personal interview.

1. All applicants must hold a master’s degree or a professional doctorate (for example, Au.D., D.P.T., O.T.D., D.S.W., Dr.P.H., D.M.D., SLP.D., D.C.) from a regionally accredited college or university, prior to matriculation in the program.

2. Applicants must have a minimum cumulative master's degree or a professional doctoral GPA of 3.0 or better on a 4.0 scale.

3. It is recommended that applicants have official Graduate Record Examination (GRE) scores of 150 (verbal), 149 (quantitative), and 4 (analytical writing). GRE scores must be less than five years old at the time of matriculation into the Ph.D. program.

4. Prior health care or health research experience is required and is strongly considered in the admissions process. Applicants must submit a copy of their current state license and/or professional certification or verifiable documentation regarding this experience to the Office of Admissions.

The Ph.D. is a postprofessional degree designed for health practitioners, public health professionals, and health care administrators from a wide variety of disciplines. Students in this program must demonstrate expert practice of a recognized health occupation at a professional level, or have five years of administrative experience in a health care organization, with progressively increasing responsibilities during that time.

The successful applicant’s health profession may emphasize delivery of services to individual clients (e.g., Au.D., PA, PT, OT, R.N., LCSW) or be population based (e.g., M.P.H., M.H.A.). An appropriate level of professional practice is generally recognized by health professions licensure (e.g., Au.D., R.N., PT, OT, RDH), a national certification or registration (e.g., PA-C, RVT, RRT, CRNA, FACHE), a recognized academic credential (e.g., M.P.H., M.S.N., M.S.W., M.H.A., M.B.A., J.D., M.A. or M.S. in Audiology, D.P.T., O.T.D.), or a combination of the above. The successful administrative or health care education applicant will demonstrate at least five years of professional experience with increasing levels of responsibility in a health care or health care education setting. Professional experience will be documented by an organizational chart demonstrating the applicant’s position within the organization and a letter of recommendation from a supervisor attesting to the applicant’s level of responsibility within the organization. Health care administrators or health care educators will also need to submit a statement concerning their career and professional goals within the health care environment. Fellowship or certification by a recognized health certifying body (e.g., FACHE, FNSCA, CISSN) is desirable.

All questions regarding the appropriateness of an applicant’s qualifications for admission can be discussed with the department chair or program director on an informal basis, but the official recommendations are made by the Committee on Admissions to the dean of the Dr. Pallavi Patel College of Health Care Sciences, who makes the final determination.
5. Applicant must have a personal interview with the Ph.D. Interview Committee (telephonic or Skype interview is accepted, based on the applicant’s needs).

Applicants must also provide

- two letters of recommendation supporting the applicant’s aptitude and determination to complete this course of study (The letters should originate from professional colleagues/supervisors or from course instructors at the last school attended.)
- one writing sample that reflects master’s or doctoral degree-level original work
- a written statement describing his or her interest in pursuing a Ph.D. in Health Science, past research experiences, dissertation research interests, and career goals
- a résumé or curriculum vitae
- a completed application for admission along with official transcripts from all graduate study
- evidence of computer skills through coursework or self-study prior to the end of the first semester (Students may obtain instruction through the NSU Student Microcomputer Laboratory, the Health Science Online Orientation, or other training facilities.)

Application Procedures

The Ph.D. Office of Admissions admits for the fall and winter semesters. Applications are accepted year-round. All final documentation must be received at least 30 days prior to tentative enrollment.

Before the applicant can be reviewed for possible admission, the following must be submitted:

1. a completed application form along with a $50, nonrefundable application fee
2. official GRE scores, sent directly from the Educational Testing Service (ETS)
3. official transcripts sent directly from all previously attended professional and graduate institutions

Send all official documents (including GRE scores and transcripts) to

Nova Southeastern University
Enrollment Processing Services
Dr. Pallavi Patel College of Health Care Sciences Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

4. an evaluation for U.S. institutional equivalence for all coursework from international institution(s), if applicant attended or is a graduate of any international institution(s)

Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed following.

- World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  Old Chelsea Station
  New York, NY 10274-5087
  (212) 966-6371 • wes.org

- Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org

- Educational Credential Evaluators, Inc.
  101 West Pleasant Street, Suite 200
  Milwaukee, WI 53212-3963
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University’s Enrollment Processing Services at the address listed here.

5. a complete résumé or CV

6. copies of state, national, and professional certifications or licenses recognized by certifying bodies

7. two letters of recommendation stating that the applicant possesses the aptitude and determination to complete this course of study (The letters should originate from professional colleagues/supervisors or from course instructors at the last school attended.)

8. one writing sample that reflects master’s or doctoral degree-level original work

9. a written statement describing the applicant’s interest in pursuing a Ph.D. in Health Science, past research experiences, dissertation research interests, and career goals

Applicant must also have a personal interview with the Ph.D. Interview Committee. (A telephonic or Skype interview is accepted, based on the applicant’s needs.)

Nonclinical applicants (health administrators and health educators) must also submit a letter of recommendation from a supervisor describing their position in the organization and the scope and duration of their responsibility, a personal statement describing their career goals, and an organizational chart. (This is not required for clinically licensed, registered, or certified applicants or for public health practitioners with an M.P.H.). Clinically qualified applicants should submit a copy of their registration, certification, and/or licensure.
Important Note: You must be accepted to the program no later than 21 days prior to the start of a semester in order to register for classes in that particular semester. If not, you will be placed on the accepted student list, but will not be able to start courses in that particular semester. In any case, you must register for your courses no later than 14 days prior to the start of the course in any semester.

The Ph.D. Committee on Admissions will not consider an application until all required fees, credentials, exam scores, transcripts, and documents, are received by the Office of Admissions.

Transfer of Credits
Students matriculated in the Ph.D. program may petition for a transfer of credits into the program. These credits can be transferred from doctoral courses taken at regionally accredited colleges or universities. All courses to be transferred must be substantially equivalent to courses taught in the program, as determined by the program director and appropriate faculty members. A student who wishes to have a course taken at another institution reviewed for transfer credit must submit a copy of the course syllabus to the program office. Each petition for transfer credit will be reviewed on an individual basis.

Tuition and Fees
Tuition for Ph.D. courses for 2020–2021 will be posted on our website (healthsciences.nova.edu/healthsciences/phd/ tuition-fees.html). Additional expenses and fees may be incurred. Examples include, but are not limited to, travel to and from campus, graduation fees, and books. Students are responsible for purchasing any required textbooks and/or classroom materials. An NSU Student Services Fee of $1,500 is required annually. Additionally, students must pay a registration fee of $25, or a deferment fee of $75 if a payment plan is selected, each semester. All tuition and fees are subject to change by the board of trustees without notice.

Requirements for Graduation
To be eligible to receive the Ph.D. in Health Science degree, students must
• be of good moral character
• complete the minimum required coursework of 68 semester hours
• complete the research practicum
• pass all three questions on the comprehensive exam
• complete a dissertation based on original research in an area of the student’s expertise or concentration, as approved by the program director and dissertation committee
• defend the dissertation, as determined by the dissertation committee, with verification of presentation or publication

Computer Requirements
It is highly recommended that the student have access to a desktop or laptop consistent with the following:
• a recent generation of Microsoft Windows (7 or 8) or Apple OS (10.8 or above)
• Microsoft Office software to include Word, PowerPoint, and Excel
• headphones, microphone, camera, and video conferencing capabilities
• Internet broadband access
• surge protection and appropriate back-up options (recommended)

Tablets and smartphones, while very useful, may not be sufficient for all program uses.

Curriculum Outline

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<tr>
<td>DHS 8090 Health Policy, Planning, and Management</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8110 Community, Environmental, and Occupational Health</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8170 Conflict Resolution for Health Care Leaders*</td>
<td>4</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>DHS 8170</td>
<td>Leadership in Health Care*</td>
</tr>
<tr>
<td>HSP 9006</td>
<td>Evidence-Based Medical Practice</td>
</tr>
</tbody>
</table>

*DHS 8170 is a required summer institute course.

### HPD Research Core Courses—18 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPH 7300</td>
<td>Biostatistics I</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7310</td>
<td>Biostatistics II</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7400</td>
<td>Quantitative Research Design</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7410</td>
<td>Qualitative Research Design</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7500</td>
<td>Philosophy of Science</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPH 7600</td>
<td>Grants and Publications</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7700</td>
<td>Test and Measurements</td>
<td>3</td>
</tr>
</tbody>
</table>

### Health Science Research Courses—25 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSP 9001</td>
<td>Behavior Theories in Health Science</td>
<td>3</td>
</tr>
<tr>
<td>HSP 9002</td>
<td>Survey Methodology</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7220</td>
<td>Research Ethics</td>
<td>3</td>
</tr>
<tr>
<td>HSP 9007</td>
<td>Research Practicum*</td>
<td>4</td>
</tr>
<tr>
<td>HSP 9010</td>
<td>Research Practicum Continued</td>
<td>2**</td>
</tr>
</tbody>
</table>

*HSP 9007 is a required winter institute course.

### Comprehensive Exam—1 Credit

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSP 9008</td>
<td>Comprehensive Exam</td>
<td>1</td>
</tr>
</tbody>
</table>

### Dissertation—12 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSP 9011</td>
<td>Dissertation</td>
<td></td>
</tr>
<tr>
<td>HSP 9012</td>
<td>Dissertation</td>
<td></td>
</tr>
<tr>
<td>HSP 9013</td>
<td>Dissertation</td>
<td></td>
</tr>
<tr>
<td>HSP 9014</td>
<td>Dissertation</td>
<td>12</td>
</tr>
<tr>
<td>HSP 9015</td>
<td>Dissertation</td>
<td></td>
</tr>
<tr>
<td>HSP 9016</td>
<td>Dissertation</td>
<td></td>
</tr>
<tr>
<td>HSP 9017</td>
<td>Dissertation Continuation</td>
<td>2**</td>
</tr>
</tbody>
</table>

**There is a continuing service charge for this course.
DHS 8030—Community Health Promotion and Disease Prevention
This course develops the knowledge and skills needed to work with communities to improve the health status of that community. Major topics will include health promotion and disease prevention. Special emphasis will be placed on the Healthy People 2010 initiatives. Students will be required to complete a paper of at least 20 pages based on an intervention strategy from Healthy People 2010. The paper will include an introduction, review of the literature, discussion, and conclusion in chapter form. Discussion boards are a required part of this course. (3 credits)

DHS 8090—Health Policy, Planning, and Management
This course critically examines the dynamics of health care in the United States. The student is expected to analyze the health care industry and contrast non-profit and for-profit health care delivery systems. A critical exploration of the ramifications of health care reform and the impact on institutions and individuals will be undertaken. The concepts of cost containment and long-term care will be analyzed. The student will be expected to write a paper on health care reform and managed care that is at least 10 pages in length and provides an informed opinion on future directions of health care reform. The paper should address the question of what new directions managed care may take and what is the future of health care reform. (3 credits)

DHS 8071—Conflict Resolution for Health Care Leaders
This course examines and analyzes the nature and dynamics of human conflict within health care leadership and management. Various methods and theories of leadership and management, both in and out of health care, and their impact on productivity, profitability, and employee satisfaction will be explored. Learners will acquire and engage practical strategies to improve leadership skills applicable in a variety of settings. Additionally, critical analysis of the different types of approaches to mitigating conflict in health care leadership will be required to research, develop, and evaluate diverse practice environments and their role in health outcomes. Through the completion of various assignments, the learner will be expected to demonstrate mastery of the subject matter via application of the theories and information presented in the assigned readings, participation in the discussion board, and other learning activities. (4 credits)

DHS 8810—Epidemiology and Global Health
This course emphasizes the underlying concepts of the epidemiologic approach as it relates to pertinent global health issues. The student will be introduced to principles and methods of epidemiologic research. These include study designs, measures of frequency, association, impact, and sources of error. Application to global health and public health strategies for disease prevention, surveillance, and control are discussed. (3 credits)

HSP 9006—Concepts in Evidence-Based Medical Practice
This course provides a working knowledge of evidence-based medicine. Cases will be used as the backbone of this course to assist the student in analyzing data to justify the treatments used in clinical practice. Students will also learn how to critically appraise the literature, evaluate diagnostic test performance, design clinical pathways and standards of care, and implement evidenced-based medicine findings in their own clinical or administrative settings. (3 credits)

HPH 7300—Biostatistics I
The application of quantitative techniques has expanded rapidly in medical decision making. The emphasis on evidence-based health care means that health care workers must be able to evaluate the results from published health care research studies. This course is the first of two courses designed to provide students with the knowledge of quantitative techniques. The course will cover descriptive statistics, parametric group comparison statistics, and basic nonparametric statistics and provide an introduction to linear modeling. (3 credits)

HPH 7310—Biostatistics II
The aim of this course is to enable students to appreciate the richness of statistical science and to invite them to the concept of probabilistic thinking. Statistics is the science of the future. Any technique that students are going to learn will help them to understand the unknown better, and in turn, will increase their success in other courses and in future professional careers. Principles of statistical inference build upon the course Fundamentals of Biostatistics. The goals of this course are threefold: (1) introduce the basic concepts of probability as well as methods for calculating the probability of an event; (2) assist students in developing an understanding of probability theory and sampling distributions; and (3) familiarize students about inferences involving one or two populations, ANOVA, regression analysis, and chi-square tests. (3 credits)
HPH 7400—Quantitative Research Design
This course will provide students with a fundamental understanding of the basic methods and approaches used in health care research. A major emphasis of the course will be on the conceptualization and design of research studies. The course will cover ethics, formulation of research questions, study design, reliability, validity, sampling, measurement, and interpretation of research findings. It will prepare students to critically evaluate published literature, and to design sound research studies. The course will be both theoretical and applied. Students will be challenged to apply the theoretical concepts presented in the classroom and in the readings to design a study to address a health-related issue of their choice. (3 credits)

HPH 7410—Qualitative Research Design
This course will focus primarily on the knowledge and skill competencies needed to conduct qualitative research successfully. In this pursuit, students will immerse themselves in the epistemological, theoretical, ethical, methodological, and procedural understanding of qualitative research; apply this knowledge to the conceptualization and conduct of qualitative research; report the findings of the research in the form of a research article; and appraise the quality of such qualitative research products. Upon completion of the course, students will demonstrate that they have mastered the basic competencies needed to create, plan, and complete a qualitative research dissertation. (3 credits)

HPH 7500—Philosophy of Science
This course will address classical issues in the philosophy of science including demarcation; the distinction between what science is and is not; hypothesis development, confirmation, and falsification; causation; and explanation. The course will also explore the ontological, epistemological, methodological, and axiological foundation of the major paradigms within which inquiry in the human services professions are located. Issues of congruence between research question selection and paradigm selection will also be addressed. (3 credits)

HPH 7600—Grants and Publications
This course is designed to provide writing experiences that prepare the learner for manuscript and grant proposal submissions. This introductory experience into the grant process from proposal to funding to management will include project management, funding sources, and funding challenges. Other course requirements include a research proposal (manuscript) that is ready for submission for publication and development of a dissertation proposal. (3 credits)

HPH 7700—Test and Measurements
This course provides a foundation in the basic principles of measurement with a focus on how to assess and control for error through research design methods and statistical analysis. Students will explore test construction and parsimonious data analysis methods to develop an understanding for designing instruments and assessment tools. A focus on issues specific to measurement error in the medical sciences will also be examined throughout the course. (3 credits)

HSP 9001—Behavior Theories in Health Science
The purpose of this course is to understand health behavior theories to make decisions on appropriate theories that will guide dissertation research questions and methodology, data analysis, and interpretation. This course presents behavior theories commonly used in the analysis of health care sciences research data. Emphasis is on understanding and applying these concepts and techniques to a dissertation and other research data through writing in APA style. (3 credits)

HSP 9002—Survey Methodology
This course introduces students to a set of principles of survey methodology that are the basis of standard practices in the field. The course provides guidelines for developing survey objectives, designing survey studies, sampling respondents, and administering surveys. Emphasis is on the skills and resources needed to design and conduct a survey. (3 credits)

HSP 9007—Research Practicum
Research Practicum requires students to conduct a research activity under faculty member supervision. Objectives include developing the ability to critically review literature, abstract salient points from literature and present them cogently, summarize conceptual and methodological issues in the literature, formulate a research problem derived from the literature, derive research hypotheses from research questions, develop a research methodology, test stated hypotheses, implement research methodology, analyze and interpret data, and write research in APA style. (4 credits)
HSP 9010—Research Practicum Continued
Students who do not complete HSP 9007 in the required
16 weeks must enroll in HSP 9010. A charge of 2 credits for
continuing service will be made to maintain the student’s
full-time status in the Ph.D. program. Students’ progress
through Research Practicum Continued will increase their total
number of degree credits beyond the required 68. (2 credits,
continuing service charge)

HSP 9008—Comprehensive Exam
The comprehensive examination is a written examination
that students take after the completion of all the required
Ph.D. in Health Science coursework and before beginning
the dissertation phase of the Ph.D. program. It is designed to
evaluate a student’s ability to demonstrate that he or she is a
suitable candidate for a Ph.D. degree. Successful completion
of the comprehensive examination is required for students to
move to advanced standing and begin dissertation research.

The comprehensive examination is given two times per
academic year, during the summer and winter semesters, and
takes place on the Fort Lauderdale/Davie Campus. Students
must take the comprehensive examination within one year of
completion of all academic coursework. Failure to complete the
requirements within the time frame may result in dismissal from
the program. Students who register for the comprehensive
examination certify by this action that they are prepared to
take the exam. However, participating in the comprehensive
examination center does not mean that students will pass the
comprehensive examination.

Students can withdraw from the comprehensive examination
without a reason up to 10 days before the exam. Once this
time has passed, students with circumstances beyond their
control (such as sickness, car accident, family illness or other
extenuating circumstances), must notify the Ph.D. program
director at the earliest possible time and provide documentation
to support their need to withdraw from the exam. Students who
have obtained approval from the Ph.D. program director to
withdraw from the comprehensive examination will be allowed
to take the comprehensive examination at the next scheduled
offering. Students who registered for the comprehensive
examination and who fail to take the exam, or students who
do not contact the program director requesting to be excused
from the examination, will automatically fail the comprehensive
examination. Students who have failed the comprehensive
examination are referred to the Committee on Student Progress
(CSP). The CSP will examine the student’s individual case and
will make appropriate recommendations to the department
chair or designee. See the procedures for the Committee on
Student Progress and Student Appeals in the Dr. Pallavi Patel
College of Health Care Sciences Student Handbook. (1 credit)

The grading of the comprehensive examination is on a
Pass/Fail basis. Students are notified of their results on the
comprehensive examination by certified mail and copies of
the letters are sent to students’ NSU email accounts. Following
the successful completion of the comprehensive examination,
students can register for dissertation credits and begin the
dissertation process.

Students are only allowed to take the complete comprehensive
exam once and must pass all three categories to move forward
to the dissertation phase of the Ph.D. program.

Students who fail one or two of the three categories on
the comprehensive examination have failed the exam and
are referred to the CSP. The CSP will examine the student’s individual case and may recommend that the student be
allowed to retake a failed category or categories at the next
scheduled institute. Students who do not pass all three exam
questions and are given permission to retake one or two
questions at the next exam offering will be required to enroll
in an additional 1-credit continuation course. If students are
allowed to retake a failed category, they have one opportunity
to pass all failed categories. Failure of one or two categories
on retake results in the student’s second failure of the
comprehensive exam. Students who fail the comprehensive
examination on retake are referred to the CSP for possible
dismissal from the Ph.D. program.

Students who wish to dispute their grades must contact the
Ph.D. program director, as there is no direct communication
between graders and students. Grade disputes must be
submitted in writing within five business days of notification of
the comprehensive examination results. The program director
will interact directly with the faculty member who graded the
exams and inform the student of the grader’s comments. The
grade dispute ends at the program director.

All college-wide policies regarding academic honesty,
the student progress committee, and appeals apply to the
comprehensive exam.

Students are required to familiarize themselves with the
academic standards and the academic honesty policy and
procedure as described in the Dr. Pallavi Patel College of Health
Care Sciences Student Handbook. (1 credit)
HSP 9011, 9012, 9013, 9014, 9015, and 9016—Dissertation
The dissertation is scheduled as six courses over two years. This includes the dissertation preparation seminar, proposal, dissertation, and oral defense. Students will conduct original research in an area of the student’s expertise or concentration, as approved by the program chair and dissertation committee, with verification of presentation or publication. The dissertation will culminate with an oral final defense, which will occur in person at the summer or winter institute, or on the Fort Lauderdale/Davie Campus. The oral defense must be arranged at least 45 days in advance. Process and requirements are detailed in the Health Professions Division Dr. Pallavi Patel College of Health Care Sciences Dissertation Guide. (12 credits)

HSP 9017—Dissertation Continuation
For any additional semester after the initial six courses, students will register for a dissertation continuation course with a continuing service charge to maintain the students’ full-time enrollment. At the end of each semester, students who demonstrate forward progress on their dissertation will earn a PR (in progress) grade. Students who do not demonstrate forward progress will earn an NPR (not in progress) grade. Students who earn an NPR grade in any dissertation course may register for the next semester, although they may not be eligible for federal funds. Students’ progress through dissertation continuation may increase their total number of degree credits beyond the required 67. (2 credits, continuing service charge)

On-Campus Institutes
These one-week sessions are located either at the Fort Lauderdale/Davie Campus or the Tampa Bay Regional Campus. A minimum of three institutes are required to complete the Ph.D. degree. DHS 8080 and DHS 8170 will be offered as summer institutes. HSP 9007 will be offered as a fall or winter institute.
Occupational therapists provide services to enhance participation and function in daily occupations, including self care, work, and leisure. Occupational therapists frequently work with individuals when performance has been interrupted or jeopardized by disease, injury, disability, life stress, or other factors. Therapy consists of clients’ planned involvement in occupation—purposeful and meaningful activities—that positively influences their life adaptation. This involvement in occupation may be facilitated by supportive training, specialized equipment, environmental modification and/or problem solving to accomplish life tasks. The therapeutic process is founded upon the belief that individuals are the principal agents of their own adaptation, and through active involvement in occupation, can have a significant impact on their health status, and well-being.

The occupational therapist must be an expert in the knowledge of occupation, its role in health and adaptation, and its use in therapy. Occupational therapy practice requires the therapist to exercise increasingly complex, autonomous decision-making and problem-solving skills in multifactorial situations. The therapist must, therefore, be a critical thinker, capable of evaluating and synthesizing information from a variety of sources about a wide range of phenomena. Finally, the therapist should be a reflective practitioner able to evaluate his or her own clinical reasoning.

The NSU Department of Occupational Therapy offers an entry-level Master of Occupational Therapy (M.O.T.) degree, an entry-level Doctor of Occupational Therapy (O.T.D.) degree, and two postprofessional degrees: a Doctor of Occupational Therapy (Dr.O.T.), and a Doctor of Philosophy (Ph.D.). The M.O.T. program is a full-time, campus-based entry-level program. The O.T.D. is a full-time, blended program with online and campus-based weekend sessions. The M.O.T. and the O.T.D. are both designed so that a student may enter after completing an undergraduate or graduate degree from a regionally accredited college or university. The Dr.O.T. and Ph.D. are both postprofessional OT degrees offered through distance education.

Master of Occupational Therapy Accreditation

The entry-level Master of Occupational Therapy is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 6116 Executive Boulevard, Suite 200, North Bethesda, MD 20852-4929. ACOTE’s telephone number, care of AOTA, is (301) 652-AOTA. Graduates of the program will be eligible to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). In addition, most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT certification examination. Note that a felony conviction may affect a graduate’s ability to sit for the NBCOT certification examination or attain state licensure.

Master of Occupational Therapy Admissions Requirements

The Master of Occupational Therapy Program selects students based on grade point average (GPA), Graduate Record Examination (GRE) scores, a written essay, letters of evaluation, and an interview. Strong candidates will also demonstrate concern for people of diverse backgrounds, as well as the ability to use judgment, insight, and reasoning.

All applicants, including Occupational Therapy Assistant (OTA) applicants as described below, must

- complete a minimum of 40 volunteer hours with at least two different populations
- complete an undergraduate degree from a regionally accredited college or university
- have a minimum GPA of 3.0 on a 4.0 scale for the last two years of undergraduate study
- have social science and humanities prerequisite GPAs of 3.0 or better
- have a natural science prerequisite GPA of 2.75 or better

OTA applicants completing 60 upper-division credits in the NSU online Bachelor of Health Science program must

- earn an average of 3.0 or better in the Bachelor of Health Science upper-division courses

All applicants, including OTA applicants, must

- have a grade of 2.0 or better in all prerequisite courses
- submit GRE scores that are less than five years old for all three areas of the general test (quantitative, verbal, and analytic writing)

Preference will be given to applicants with a GRE verbal score of 143, a quantitative score of 141, and an analytical writing score of at least 3.5.
Prerequisite Courses

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Natural Sciences</strong></td>
<td></td>
</tr>
<tr>
<td>Biology with lab (introduction, general, or principles of)</td>
<td>3–4</td>
</tr>
<tr>
<td>Anatomy (human) and physiology (including lab)</td>
<td>4</td>
</tr>
<tr>
<td>OR Anatomy (human) with lab</td>
<td>4</td>
</tr>
<tr>
<td>AND Physiology with lab</td>
<td>3–4</td>
</tr>
<tr>
<td>Physics with lab (general, college)</td>
<td>3–4</td>
</tr>
<tr>
<td>OR Kinesiology</td>
<td>3–4</td>
</tr>
<tr>
<td><strong>Social Sciences</strong></td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>6</td>
</tr>
<tr>
<td>Human growth and development or developmental psychology (must cover infancy through aging)</td>
<td>3</td>
</tr>
<tr>
<td>Other social sciences (e.g. ethnic studies, anthropology, sociology, or ethics)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Humanities</strong></td>
<td></td>
</tr>
<tr>
<td>English composition</td>
<td>6</td>
</tr>
<tr>
<td>OR English composition</td>
<td>3</td>
</tr>
<tr>
<td>AND a writing-intensive course</td>
<td>3</td>
</tr>
<tr>
<td>AND a 4.0 on the writing section of the GRE</td>
<td></td>
</tr>
<tr>
<td>Other humanities (e.g., art, communications, literature, foreign language, history, philosophy, logic, or humanities)</td>
<td>9</td>
</tr>
<tr>
<td><strong>Math</strong></td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td>Medical terminology (college)</td>
<td>1 (minimum)</td>
</tr>
</tbody>
</table>

Applicants must demonstrate computer and word processing competency.

NOTE: None of the science courses can be applied science courses.

**Recommended Courses**

The following additional courses will also help in the occupational therapy curriculum.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>Public speaking</td>
<td>3</td>
</tr>
<tr>
<td>Theories of personality</td>
<td>3</td>
</tr>
<tr>
<td>Logic/philosophy</td>
<td>3</td>
</tr>
</tbody>
</table>

Master of Occupational Therapy Application Procedures

The entry-level Master of Occupational Therapy (M.O.T.) program begins annually in May.

Candidates for admission to the M.O.T. program are responsible for the submission of an application via the Occupational Therapy Centralized Application Service (OTCAS). The OTCAS application deadline is March 1. Priority will be given to individuals whose applications have been verified in OTCAS by April 1. Applications are processed on a rolling or periodic basis. It is in the best interest of prospective students to complete their applications early because of the limited number of positions in the class. Applications received after the deadline date will be considered subject to space availability in the entering class.

Details and fees associated with OTCAS are available on the OTCAS website at otcas.org. After the Office of Admissions has been notified of completed application processing by OTCAS, students will be asked to submit a required, separate NSU M.O.T. application form by the deadline of March 15 for further consideration, along with a $50, nonrefundable application fee. Details on application procedures are available at https://healthsciences.nova.edu/ot/mot/application_procedures.html.

Official Graduate Record Examination (GRE) scores are required from within the last five years in all three areas of the general test: verbal, quantitative, and analytical writing.

The NSU institution code is 5522 and the department code is 0618.

GRE scores should be submitted through the OTCAS system with the M.O.T. application.

Three letters of reference on NSU Master of Occupational Therapy forms from individuals (other than relatives) such as academic instructors and professors, health professionals, volunteer or work supervisors are required. One reference must be from an occupational therapist. Evaluations should be submitted on forms within the OTCAS system.

All applicants, except Occupational Therapy Assistants, must complete a minimum of 40 volunteer hours with at least two different populations. Documentation of volunteer hours must be submitted within the OTCAS system.

Upon receipt of all materials from OTCAS, the NSU application, test scores, and applicable fees, the Committee on Admissions will select applicants to complete a video essay. Those selected will be notified in writing of the expectations and instructions for recording and submitting the video essay. An invitation to complete a video essay should not be construed by the applicant as evidence of acceptance.

If accepted, it is the responsibility of the applicant to ensure arrangements are made for final official transcripts from all
undergraduate (including advanced, placement test scores), professional, and graduate institutions attended to be sent directly from each institution. All final transcripts, covering all of the applicants work, must be forwarded to

Nova Southeastern University
Enrollment Processing Services
Dr. Pallavi Patel College of Health Care Sciences
Occupational Therapy Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

**Undergraduate/Occupational Therapy Department Dual Admission Program**

Nova Southeastern University’s Health Professions Division has established a dual admission program with the university’s Office of Undergraduate Admissions for a select number of highly motivated, qualified students interested in pursuing both undergraduate and professional studies in occupational therapy. Candidates must maintain minimum cumulative NSU and science (all BIOL, CHEM, and PHYS courses) GPAs of 3.0 at all times throughout the program. Students will spend four years in an undergraduate school and will be awarded a bachelor’s degree from that college. Students who successfully meet all of the application requirements, including a video essay, will be offered the opportunity to transition to the first year of education at Nova Southeastern University’s Dr. Pallavi Patel College of Health Care Sciences. Students will receive the Master of Occupational Therapy degree after completion of the M.O.T. program.

For more information and requirements, contact the NSU Office of Undergraduate Admissions, 3301 College Avenue, Fort Lauderdale, FL 33314-7796.

Occupational Therapy Assistants are eligible to apply to the Master of Occupational Therapy (M.O.T.) program after completing a bachelor’s degree from a regionally accredited college or university or from the online Bachelor of Health Science program at NSU. For more information about the B.H.Sc. online degree completion program, visit [healthsciences.nova.edu](http://healthsciences.nova.edu) or email bhsinfo@nova.edu. This program is on a temporary hold pending transition from the M.O.T. to the O.T.D. entry-level program on the Fort Lauderdale/Davie Campus.

**Tuition and Fees**

Tuition for 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website ([nova.edu/ot](http://nova.edu/ot)).

A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 also is required annually.

**Acceptance and Preregistration Fee—$1,000.** This fee is required to reserve the accepted applicant’s place in the entering first-year class. This advance payment will be deducted from the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is payable within four weeks of an applicant’s acceptance or by April 15, whichever comes first.

The first semester's tuition and fees, less the $1,000 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.

The financial ability of applicants to complete their education at NSU is important because of the limited number of positions available in each class. Applicants should have specific plans for financing two-and-a-half years of professional education. This should include tuition, living expenses, books, equipment, and miscellaneous expenses.

It is required that each student carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

**Master of Occupational Therapy Course of Study**

The academic discipline of occupational therapy draws upon and integrates a wide range of interdisciplinary topics. Theories that illuminate the understanding of occupation in human life, the role of occupation in health and adaptation, and the art and science of using activities as therapeutic agents create the foundation for the discipline.

As part of the regular curriculum, occupational therapy students are placed in fieldwork sites that require all students to be fingerprinted and subjected to a background check in accordance with regulations of the Child Care, Licensing and Enforcement Section, Bureau of Children's Services and Broward County, Florida. Additionally, some placement facilities may require criminal background checks and/or drug testing.

Students may, under supervision, provide occupational therapy services to patients seen in the university clinics as part of the regular course of study.

A felony conviction may affect a student’s ability to be placed in fieldwork sites and a graduate’s ability to sit for the National Board for Certification in Occupational Therapy, Inc. (NBCOT) certification examination or attain state licensure. For further information, applicants may visit [nbcot.org/early-determination](http://nbcot.org/early-determination) and request an Early Determination Review of their background.
**Requirements for Graduation**
In order to be eligible for the M.O.T. degree, students shall

- be of good moral character
- have satisfactorily completed the program of study required for the degree (98 semester hours) with a minimum grade of 78 percent in each OCT course; 75 percent in anatomy, physiology, and neuroanatomy; and a minimum cumulative GPA of 2.3
- have satisfactorily met all financial and library obligations to the university
- successfully complete Level II fieldwork within 24 months of completion of didactic courses

**Master of Occupational Therapy Program Curriculum Outline**

<table>
<thead>
<tr>
<th>First Year—Summer Semester</th>
<th>Credits</th>
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<tbody>
<tr>
<td>OCT 5014 Introduction to Occupational Therapy</td>
<td>2</td>
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<tr>
<td>OCT 5963 Foundations for Professional Practice</td>
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<tr>
<td>OCT 5420 Anatomy</td>
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<tr>
<td>OCT 5400 Physiology</td>
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<tr>
<td>OCT 5800 Applied Kinesiology for Occupational Therapy</td>
<td>2</td>
</tr>
<tr>
<td>OCT 5800L Kinesiology for OT Lab</td>
<td>1</td>
</tr>
<tr>
<td>OCT 5101 Theoretical Foundations of Occupational Therapy Practice</td>
<td>2</td>
</tr>
<tr>
<td>OCT 5013 Occupational Analysis</td>
<td>2</td>
</tr>
<tr>
<td>OCT 5121 Effects of Chronic Illness, Injury, and Human Disorders on Occupational Performance I</td>
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<tr>
<td>ANA 5533 Neuroanatomy</td>
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<tr>
<td>OCT 5011 Occupational Performance and Participation Throughout the Life Span</td>
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<tr>
<td>OCT 5123 Effects of Chronic Illness, Injury, and Human Disorders on Occupational Performance II</td>
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<td>OCT 5130 Human Interactions</td>
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<td>OCT 5174 Research Methods</td>
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### Second Year—Summer Semester

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<td>Impact of Context and Environment on Occupational Performance</td>
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<td>OCT 5015L</td>
<td>Impact of Context and Environment Lab</td>
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<tr>
<td>OCT 6106</td>
<td>OT Practice for Mental Health and Wellness</td>
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<td>OT Practice for Mental Health and Wellness Lab</td>
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<td>OCT 6206</td>
<td>OT Practice for Mental Health and Wellness Practicum</td>
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**Total Credits** 8

### Second Year—Fall Semester

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<td>OCT 6207</td>
<td>OT Practice Practicum</td>
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<td>OCT 6175</td>
<td>Research Development Seminar</td>
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**Total Credits** 14

### Second Year—Winter Semester

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<td>OCT 6208</td>
<td>OT Practice Practicum</td>
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<td>OCT 6176</td>
<td>Research Practicum</td>
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<td>OCT 6980</td>
<td>Fieldwork and Professional Practice Seminar</td>
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<td>OCT 6350</td>
<td>Professionalism and Leadership</td>
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**Total Credits** 14

### Third Year—Summer/Fall Semester

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<tr>
<td>OCT 6981</td>
<td>Fieldwork Experience I (40 hours/week for 12 weeks)</td>
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<tr>
<td>OCT 6982</td>
<td>Fieldwork Experience II (40 hours/week for 12 weeks)</td>
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**Total Credits** 24

**Total Hours** 98
Accreditation
The Doctor of Occupational Therapy Entry-Level Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE®) of the American Occupational Therapy Association (AOTA), located at 6116 Executive Boulevard, Suite 200, North Bethesda, MD 20852-4929. ACOTE’s telephone number, c/o AOTA, is (301) 652-AOTA.

Graduates of the program will be eligible to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of the exam, the individual will be an Occupational Therapist, Registered (OTR). In addition, most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT certification. Note that a felony conviction may affect a graduate’s ability to sit for the NBCOT certification examination or attain state licensure.

Through its innovative curricular design and delivery model, the entry-level Doctor of Occupational Therapy (O.T.D.) program prepares qualified students to become successful occupational therapy practitioners, managers, and leaders who are generalists with beginning specialization in a selected practice area. The program prepares students with knowledge and skills for competent entry-level, occupation-based practice; professional leadership; and the drive to remain contemporary in a variety of contexts for an ever-changing world—armed with a doctoral level of expertise and clinical reasoning applied to clinical specialization, research, theory explorations, leadership, program and policy development, administration, advocacy, and/or education. The entry-level O.T.D. program has a responsibility to the public to assure that its graduates can become fully competent and caring occupational therapists who are capable of providing benefit and doing no harm. Individuals admitted and retained in the O.T.D. program must possess the intelligence, integrity, compassion, humanitarian concerns, physical and emotional capacity, cognitive and communication skills, and professionalism necessary to practice occupational therapy. To this end, all entry-level O.T.D. students must meet the requirements outlined in the O.T.D. program’s Essential Functions Policy for Admission, Retention, and Graduation. To view the Essential Functions document, visit https://healthsciences.nova.edu/ot/orientation/forms/otd-essential-functions-policy.pdf.

As part of our vision, our departmental mission will seek to lead the profession and community through its contributions in educational leadership, community and professional service, lifelong learning, and scholarly endeavors.

Entry-Level Doctor of Occupational Therapy Admissions Requirements
The entry-level Doctor of Occupational Therapy (O.T.D.) program selects students based on grade point average (GPA), Graduate Record Examination (GRE) scores, written essays, letters of evaluation, and an interview. Strong candidates will also demonstrate concern for people of diverse backgrounds, as well as the ability to use judgment, insight, and reasoning.

All applicants, including Certified Occupational Therapy Assistants (COTAs), as applicable, must

- complete an undergraduate or graduate degree from a regionally accredited college or university
- have a cumulative GPA of 3.0 or better on a 4.0 scale for each of the last two years of study
- have a prerequisite GPA of 3.0 or better on a 4.0 scale for each of the last two years of study
- have a grade of 2.0 or better in all prerequisite courses
- submit minimum GRE scores that are less than five years old for all three areas of the general test (verbal, quantitative, and analytical writing)
- complete a minimum of 40 volunteer hours in at least two different occupational therapy settings that provide services related to children and youth, work and industry, rehabilitation, health and wellness, mental health, productive aging, or another specified facility (or graduation from an accredited occupational therapy assistant program—volunteer hours do not apply to COTAs)
- demonstrate computer and word processing competency to include, but not limited to, World Wide web navigation, software and learning management system (e.g., BlackBoard) utilization, ecorrespondence, database explorations, etc.
- have completed a Test of English as a Foreign Language (TOEFL) or a Pearson Test of English—Academic (PTE-Academic), if applicable

Prerequisite Courses
Course Title Semester Hours
Natural Sciences
Biology with lab (introduction, general, or principles of) ............................... 3–4
Anatomy (human) and physiology including lab........................................ 4
OR Anatomy (human) with lab............................................................ 4
AND Physiology with lab................................................................. 3–4
Physics with lab (general, college) ................................................. 3–4
OR Kinesiology ............................................................................ 3–4

Social Sciences
Psychology (must include 3 credits of Introduction to Psychology and 3 credits of an upper-level psychology course—abnormal psychology, social psychology, substance abuse, etc.) .......................................................... 6
Human growth and development or developmental psychology (must cover infancy through aging) ............... 3
Other social sciences (e.g., ethnic studies, anthropology, sociology, or ethics) ......................................................... 3

Humanities
English Composition (3 of the 6 credits required should be for an advanced writing course) ......................... 6
Other humanities (e.g., art, communications, literature, foreign language, history, philosophy, logic, or humanities) .......................................................... 9

Math
Statistics .................................................................................. 3

Other
Medical terminology (college) ................................................ 1 (minimum)

NOTE: Applicants must demonstrate computer and word processing competency.

Recommended Courses
The following additional courses will also help in the occupational therapy curriculum.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Semester Hours</th>
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<tbody>
<tr>
<td>Ethics</td>
<td>3</td>
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<tr>
<td>Public speaking</td>
<td>3</td>
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<tr>
<td>Theories of personality</td>
<td>3</td>
</tr>
<tr>
<td>Logic/philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Intensive writing course</td>
<td>3</td>
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</table>

Entry-Level Doctor of Occupational Therapy Application Procedures
Candidates for admission to the O.T.D. program are responsible for the submission of an application via the Occupational Therapy Centralized Application Service (OTCAS). The OTCAS application deadline is April. Applications are processed on a rolling or periodic basis. It is in the best interest of prospective students to complete their applications early because of the limited number of positions in the class. Applications received after the deadline date will be considered subject to space availability in the entering class. The application cycle for the entry-level Doctor of Occupational Therapy (O.T.D.) program begins annually in July.

Details and fees associated with OTCAS are available on the OTCAS website at otcas.org. After the Office of Admissions has been notified of completed application processing by OTCAS, students will be asked to submit a required, separate supplemental NSU O.T.D. application form for further consideration along with a $50, nonrefundable application fee by March 1.

Official Graduate Record Examination (GRE) scores are required from within the last five years in all three areas of the general test (verbal, quantitative, and analytical writing).

The NSU institution code is 5522 and the department code is 0618.

GRE scores should be sent directly to the Office of Admissions.

Three letters of reference on NSU entry-level Doctor of Occupational Therapy forms from individuals (other than relatives) such as academic instructors and professors, health professionals, or volunteer or work supervisors are required. One reference must be from an occupational therapist (not an occupational therapy assistant). Evaluations should be submitted on forms within the OTCAS system.

All applicants, except for Certified Occupational Therapy Assistants (COTAs), as applicable, must complete a minimum of 40 volunteer hours in at least two different OT practice areas. Some of these environments include hospitals, clinics, and private practices with a variety of populations. Forms for submission will be available within the OTCAS system. In the case of an occupational therapy assistant, graduation from an accredited occupational therapy assistant program can qualify for the 40 volunteer hours.

Upon receipt of all materials from OTCAS, the supplemental application, test scores, and applicable fees, the Committee on Admissions will invite selected applicants to submit a video essay. An invitation to submit a video essay should not be construed by the applicant as evidence of acceptance.

If accepted, it is the responsibility of the applicant to ensure arrangements are made for final official transcripts from all undergraduate (including advanced placement test scores), professional, and graduate institutions attended be sent directly from each institution. All final transcripts, covering all of the applicants work, must be forwarded to

Nova Southeastern University
Enrollment Processing Services
Dr. Pallavi Patel College of Health Care Sciences
Occupational Therapy Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905
Matriculating students should be aware that a felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

**Undergraduate/Occupational Therapy Department Dual Admission Program**

Nova Southeastern University’s Health Professions Division has established a dual admission program with the university’s Office of Undergraduate Admissions for a select number of highly motivated, qualified students interested in pursuing both undergraduate and professional studies in occupational therapy. Candidates must have a cumulative grade point average of 3.0 on a 4.0 scale. Students will spend four years in an undergraduate school and will be awarded a bachelor's degree from that college. Students will then transition to the first year of education at Nova Southeastern University’s Dr. Pallavi Patel College of Health Care Sciences, Occupational Therapy Department—Tampa Bay. Students will receive the Doctor of Occupational Therapy degree after completion of the entry-level Doctor of Occupational Therapy program.

For more information and requirements, contact the NSU Office of Undergraduate Admissions, 3301 College Avenue, Fort Lauderdale, FL 33314-7796.

Occupational Therapy Assistants are eligible to apply to the entry-level Doctor of Occupational Therapy (O.T.D.) program after completing a bachelor’s degree from a regionally accredited college or university or from the online Bachelor of Health Science program at NSU.

For more information about the B.H.Sc. online degree completion program, visit [healthsciences.nova.edu/healthsciences/bhs/index.html](http://healthsciences.nova.edu/healthsciences/bhs/index.html).

**Tuition and Fees**

Tuition for 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (nova.edu/chcs/otd/index.html).

A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 also is required annually.

Eligible applicants must request in-state tuition on their applications. For tuition purposes, a student’s Florida residency status (in-state or out-of-state) will be determined at initial matriculation and will remain the same throughout the entire enrollment of the student at NSU. Accordingly, tuition will not be adjusted as a result of any change in residency status after initial enrollment registration.

**Acceptance Fee—$400.** This fee is required to reserve the accepted applicant’s place in the entering first-year class. This advance payment will be deducted from the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance.

**Preregistration Fee—$600.** This is due eight weeks after acceptance or by April 15, whichever comes first, under the same terms as the Acceptance Fee.

The first semester’s tuition and fees, less the $1,000 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.

The financial ability of applicants to complete their education at NSU is important because of the limited number of positions available in each class. Applicants should have specific plans for financing three-and-a-half years of professional education. This should include tuition, living expenses, books, equipment, and miscellaneous expenses.

It is required that each student carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

**Entry-Level Doctor of Occupational Therapy Course of Study**

The academic discipline of occupational therapy draws upon and integrates a wide range of interdisciplinary topics. Theories that illuminate the understanding of occupation in human life, the role of occupation in health and adaptation, and the art and science of using activities as therapeutic agents create the foundation for the discipline.

As part of the regular curriculum, occupational therapy students are placed in fieldwork sites that require all students to be fingerprinted and subjected to a background check in accordance with regulations of the Child Care, Licensing and Enforcement Section, Bureau of Children’s Services and Broward and Hillsborough Counties, Florida. Additionally, some placement facilities may require criminal background checks and/or drug testing.

Students may, under supervision, provide occupational therapy services to patients seen in the university clinics as part of the regular course of study.

A felony conviction may affect a graduate’s ability to sit for the National Board for Certification in Occupational Therapy, Inc. (NBCOT) certification examination or attain state licensure.
Requirements for Graduation
In order to be eligible for the O.T.D. degree, students shall
• be of good moral character
• have satisfactorily completed the program of study required for the degree (122 semester hours) with a minimum grade of 75 percent in each occupational therapy course
• successfully complete clinical internships and residency within 24 months of completion of didactic courses
• fulfill all financial and library obligations to the university
• attend in person the commencement program in the year that the diploma will be conferred

Entry-Level Doctor of Occupational Therapy Program Curriculum Outline

<table>
<thead>
<tr>
<th>First Year—Summer Semester (13 weeks)</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ANAT 5420 Anatomy</td>
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<tr>
<td>OTD 8101 Introduction to Didactic, Clinical, and Research Experiences</td>
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<td>OTD 8102 Foundations of Occupational Therapy</td>
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<td>OTD 8141 Development of Occupation Across the Life Span</td>
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<tr>
<td>OTD 8103 Kinesiology in Occupations</td>
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<td>OTD 8142 Occupational and Contextual Analysis</td>
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<tr>
<td>OTD 8151 Human Conditions and Occupations I</td>
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<td>OTD 8161 Evidence in Occupational Therapy Practice/Qualitative Design</td>
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<tr>
<td>ANAT 5423 Neuroanatomy</td>
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<td>OTD 8152 Human Conditions and Occupations II</td>
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<td>OTD 8143 Therapeutic Use of Self</td>
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<td>OTD 8162 Research Design/Quantitative Methods—Proposal/IRB</td>
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<td>OTD 8262L Research Design Lab—IRB</td>
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<td>OTD 8271 Occupational Therapy Interventions I—Psychosocial and Community</td>
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<td>OTD 8291 Level I Fieldwork Experience, Occupational Therapy Interventions I—Psychosocial and Community</td>
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<td>OTD 8244 Innovations and Technology in Occupational Therapy</td>
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### Second Year—Fall Semester (16 weeks)

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<td>Occupational Therapy Interventions II—Children</td>
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<td>OTD 8281</td>
<td>Business of Practice and Management</td>
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<td>Therapy Interventions II—Children and Youth</td>
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<td>OTD 8263</td>
<td>Research Project I—Implementation</td>
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**Total Credits** 14

### Second Year—Winter Semester (16 weeks)

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<td>Occupational Therapy Interventions III—Physical</td>
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<td>Disabilities</td>
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<td>OTD 8292</td>
<td>Level I Fieldwork Experience, Occupational</td>
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<tr>
<td></td>
<td>Therapy Interventions III—Physical Disabilities</td>
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<td>OTD 8263L</td>
<td>Research Design Lab—Analysis, Interpretation,</td>
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<td>and Paper</td>
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<td>OTD 8282</td>
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**Total Credits** 14

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<tr>
<td>OTD 8391</td>
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**Total Credits** 9

### Third Year—Fall Semester (16 weeks)

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<td>Doctoral Certification and Capstone</td>
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<td>OTD 8311</td>
<td>Occupational Science</td>
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<td>or</td>
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<td>OTD 8312</td>
<td>Wellness in Occupational Therapy</td>
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<tr>
<td>OTD 8313</td>
<td>Applying Measurement Theory to Evaluation</td>
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<td>or</td>
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<td>OTD 8314</td>
<td>Sensory Processing of Occupational Performance</td>
<td>3</td>
</tr>
<tr>
<td>OTD 8315</td>
<td>Topics in Contemporary and Emerging Practice</td>
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<tr>
<td>OTD 8364</td>
<td>Research Project II—Dissemination</td>
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**Total Credits** 13

### Third Year—Winter Semester (12 weeks)

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<th>Course Title</th>
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<td>Level II Fieldwork Experience</td>
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**Total Credits** 9
Fourth Year—Summer Semester (16 weeks)  

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<tbody>
<tr>
<td>OTD 8494</td>
<td>Doctoral Capstone, Reflections, and Exit Colloquium</td>
<td>12</td>
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</table>

Total Credits: 12

Note: Students will have time allotted for administrative purposes (bursar, financial aid, etc.) during on-campus time each semester

Total Credit Hours to Graduation: 122

Level I FWE: 360 Hours

Level II FWE: 960 Hours

Residency: 640 Hours

Total Clinical Education Hours: 1,960 Hours

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Postprofessional Doctoral Programs in Occupational Therapy

The Department of Occupational Therapy at NSU offers two postprofessional doctoral degrees: the postprofessional advanced practice doctorate—the Doctor of Occupational Therapy (Dr.O.T.), and the research doctorate—the Doctor of Philosophy (Ph.D.). Both of these doctoral programs are taught primarily by distance education with some on-campus time requirements. Applicants with master's degrees are eligible for admission to the Dr.O.T. program or the Ph.D. program. All applicants must have completed an occupational therapy entry-level program and be eligible to practice as an occupational therapist within one year of initiating the program. Graduates of Nova Southeastern University's M.O.T. Program with a GPA above 3.5 are assured consideration for admission to the Dr.O.T. program.

**Doctor of Occupational Therapy (Dr.O.T.)**

The postprofessional Doctor of Occupational Therapy (Dr.O.T.) degree prepares occupational therapists to become leaders in the advanced practice of occupational therapy, health policy, and program development. Graduates incorporate evidence-based practice, client-centered approaches, occupation-based practice, and best practice to meet society's occupational needs.

Students are required to complete 39 credits of coursework.

**Admissions Requirements**

1. An applicant must have a bachelor’s or master’s degree in occupational therapy from regionally accredited or internationally recognized universities or colleges and be eligible to practice as an occupational therapist within one year of initiating the program. If applicant’s bachelor’s degree is in occupational therapy, applicant must also have 30 graduate credits, although a master’s degree (in any field) is preferred.

Foreign applicants must present the equivalent of a bachelor’s degree and evidence of successful completion of an OT educational program approved by WFOT. All foreign coursework must be evaluated by World Education Services, Inc. (wes.org), Josef Silny & Associates, Inc. (jsilny.org), or Educational Credential Evaluators, Inc. (ece.org).

2. A minimum GPA of 3.0 on a 4.0 scale is required for admission.

3. An applicant must demonstrate writing proficiency, as determined by the program director.

4. Foreign applicants must also have a Test of English as a Foreign Language (TOEFL) score of 550 or higher for the written test or 213 or higher for the computer-based test, an International English Language Testing System (IELTS) score of 6.0, or a Pearson Test of English—Academic (PTE-Academic) score of 54.

The dean is empowered to evaluate the total qualifications of every student and to modify requirements in unusual circumstances.

The following courses are required to complete the program:

- Writing for Occupational Therapy—a no-credit, approximately five-week, online course taken prior to the beginning of the first fall semester
- OCT 7005—Evidence-Based Practice and Critical Thinking in OT (3 credits)
• OCT 7010—Theory Development for Models of Practice (3 credits)
• OCT 7103—Occupation-Centered Practice (3 credits)
• OCT 7133—Advanced Policy Issues (3 credits)
• OCT 7302—Contextual Aspects of Occupational Performance (3 credits)
• OCT 7860—Leadership Development in Multiple Contexts (3 credits)
• OCT 7762—Community Program Development
• OCT 7791—Grant Practicum
• OCT 7909—Program Evaluation and Outcome Measurement (3 credits)
• OCT 7910—Capstone I
• OCT 7920—Capstone II
• OCT 7921—Capstone III

Doctoral Tuition and Fees (Dr.O.T.)

1. Tuition for academic year 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (nova.edu/ot).

2. A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.

The first term's tuition and fees are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.

The financial ability of applicants to complete their training at the college is important because of the limited number of positions available in each class. Applicants should have specific plans for financing their professional education. This should include provision for tuition, living expenses, books and equipment, computer, travel, and miscellaneous expenses.

It is required that each student carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

Requirements for Graduation (Dr.O.T.)

In order to be eligible for the Dr.O.T. degree, students shall

• complete 39 credits of coursework including all program core course requirements within six years
• have satisfactorily completed the program of study with a minimum overall GPA of 3.0, and a minimum grade of B in all coursework

• have successfully completed the capstone paper and residency
• have satisfactorily met all financial and library obligations

Doctor of Philosophy (Ph.D.)

The Doctor of Philosophy (Ph.D.) in Occupational Therapy is conferred in recognition of a demonstrated ability to master a specific field of knowledge and to conduct significant independent research. A minimum of 61 credits of graduate work beyond the master’s degree level is required, including a research residency and a dissertation. A majority of the coursework can be completed by distance format, except for a Summer Research Institute and one-day to two-day weekends in most semesters.

Admissions requirements include a GPA of 3.5 on a 4.0 scale. Graduate-level research methods and introductory statistics are prerequisite courses.

Course of Study

The following courses are required to complete the program:

• Writing for Occupational Therapy—a no-credit, approximately five-week, online course taken prior to the beginning of the first fall semester
• HPH 7300—Fundamentals of Biostatistics (3 credits)
• HPH 7310—Principles of Statistical Inference (3 credits)
• HPH 7400—Quantitative Research Design (3 credits)
• OCT 7420—Mixed Methods Research (3 credits)
• HPH 7410—Qualitative Research (3 credits)
• HPH 7600—Grants and Publications (3 credits)
• OCT 7010—Theory Development for Models of Practice (3 credits)
• OCT 7011—The Health Professional as Academic Educator (3 credits)
• OCT 7104—Occupational Science (3 credits)
• OCT 7302—Contextual Aspects of Occupational Performance (3 credits)
• OCT 7820—Applying Measurement Theory to Evaluation (3 credits)
• OCT 7860—Leadership Development in Multiple Contexts (3 credits)
• OCT 8945—Studies for the Qualifying Examination (1 credit)
• OCT 7870—Dissertation Seminar (3 credits)
• OCT 8950—Research Residency (3 credits)
• OCT 8970—Doctoral Dissertation (9 credits)
• Electives—(9 credits)
Requirements for Graduation (Ph.D.)
In order to be eligible for the Ph.D. degree, students shall

- complete a minimum of 61 credits of graduate coursework that meets NSU doctoral program requirements within seven years of beginning the program
- complete the program of study required for the degree with a minimum overall GPA of 3.0, and a minimum grade of B in all required coursework
- successfully complete candidacy (or qualifying) examination within one year of completion of academic coursework
- complete dissertation proposal and proposal defense
- obtain IRB approval to conduct dissertation study
- complete research residency
- complete dissertation report
- submit documented evidence that dissertation research will be, or has been, presented or published in a peer-reviewed venue at the national or international level
- submit dissertation to the University of Michigan’s Dissertation Abstracts International (ProQuest/UMI)
- satisfactorily meet all financial and library obligations

Admissions Requirements
1. Applicants must have a bachelor’s or master’s degree in occupational therapy from a regionally accredited university or college and be eligible to practice as an occupational therapist within one year of initiating the program. If the applicant’s bachelor’s degree is in occupational therapy, then the applicant’s master’s degree may be in any field. International applicants must present the equivalent of a bachelor’s degree and evidence of successful completion of an OT educational program approved by WFOT.
2. Applicants must meet the minimum requirements listed below.
   - GPA of 3.5 on a 4.0 scale
   - graduate-level research methods course
   - introductory statistics course
   - master’s degree
3. Applicants must demonstrate writing proficiency, as determined by the program director.
4. International applicants also must have a Test of English as a Foreign Language (TOEFL) score of 550 or higher for the written test or 213 or higher for the computer-based test, an International English Language Testing System (IELTS) score of 6.0, or a Pearson Test of English—Academic (PTE-Academic) score of 54.
5. All students will be required to have a computer that meets the recommended minimum specifications.

The dean is empowered to evaluate the total qualifications of every applicant and to modify requirements in unusual circumstances.

Doctoral Tuition and Fees (Ph.D.)
1. Tuition for academic year 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (nova.edu/ot).
2. A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.

The first term’s tuition and fees are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.

The financial ability of applicants to complete their training at the college is important because of the limited number of positions available in each class. Applicants should have specific plans for financing their professional education. This should include provision for tuition, living expenses, books and equipment, computer, travel, and miscellaneous expenses.

It is required that each student carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

Application Procedures—Dr.O.T. and Ph.D.
Candidates for admission must submit or be responsible for submission of
1. a completed application form along with a $50, nonrefundable application fee
2. three recommendations from those who can evaluate the applicant’s capability for doctoral study
3. a letter of application stating goals and reasons for wanting to pursue doctoral work
4. a scholarly writing sample
5. TOEFL, IELTS, or PTE—A scores (international students, if appropriate)
6. official college transcripts from all undergraduate and graduate institutions attended, sent directly to
   Nova Southeastern University
   Enrollment Processing Services
   Dr. Pallavi Patel College of Health Care Sciences
   Occupational Therapy Admissions
   3301 College Avenue, P.O. Box 299000
   Fort Lauderdale, FL 33329-9905
All foreign coursework must be evaluated by World Education Services, Inc. (wes.org), Josef Silny & Associates, Inc. (jsilny.org), or Educational Credential Evaluators, Inc. (ece.org).

7. confirmation of initial certification by the National Board for Certification in Occupational Therapy

Foreign students who intend to do their dissertation research abroad may petition to be released from this requirement. Upon receipt of the completed application and required credentials, the committee on admissions will notify, in writing, applicants who are selected for interview. No applicant will be admitted to the Occupational Therapy Department without an interview, but an invitation to appear for an interview should not be construed by the applicant as evidence of acceptance. Notice of acceptance or other action by the committee on admissions will be on a “rolling” or periodic schedule. Early completion of the application is therefore in the best interest of the student.

Postprofessional O.T.D. Bridge to Ph.D. Program
This program offers another point of entry into the Ph.D. in Occupational Therapy program for occupational therapists who have earned a postprofessional O.T.D. degree. Students may potentially transfer up to two core courses (6 credits) and up to two elective courses (6 credits) for a total of 12 credits. The decision to accept transfer courses and credits is made by the Ph.D. program director through transcript and syllabus review from the completed O.T.D. program.

Admission requirements, application procedures, course of study, program tuition and fees, and requirements for graduation completion are equivalent to those listed for the Ph.D. in Occupational Therapy program.

Computer Requirements
All students must have updated and relevant computer program skills and equipment to successfully participate in the curriculum.

Nonmatriculating Students
Nonmatriculating students may take up to two courses (6 credits). An application for nonmatriculating students and relevant transcripts are required as well as approval by an occupational therapy doctoral program director.

Occupational Therapy Course Descriptions

ANA 5423—Neuroanatomy
This course offers a study of the gross structure of the brain and spinal cord and the functional relationship among their parts. It emphasizes major motor and sensory pathways and integrative mechanisms of the central nervous systems. (3 credits)

ANA 5533—Neuroanatomy
Anatomy of central and peripheral nervous systems. Laboratory activities consist of student teams studying prosected cadavers, sections, radiographs, and models. (3 credits)

PHO 5400—Physiology
The course is intended to provide students in the occupational therapy program with an understanding of the basic physiochemical concepts and physiological principles underlying the development, maintenance, and propagation of human life. It provides an examination of the physiological processes essential for students in the Dr. Pallavi Patel College of Health Care Sciences, including discussion of clinical applications where appropriate. Topics covered include basic examinations of cellular processes, membrane mechanisms, muscle physiology, the cardiovascular system, the nervous system, renal physiology, the respiratory system, endocrinology, reproductive physiology, and gastrointestinal physiology. (3 credits)

OCT 5011—Occupational Performance and Participation Throughout the Life Span
This course explores the development of occupational performance skills throughout the life span by considering the interactions between contexts and environments, personal factors, and engagement in occupations. Through exploration of the meaning and development of their own occupations, as well as observation and interactions in the community, students prepare to analyze occupational performance of future patients and clients. (3 credits)

OCT 5013—Occupational Analysis
This course focuses on analyzing occupations and occupational performance. Through engagement in selected projects, students learn to analyze occupational demands. The meaning and significance of challenge, success, and competence in occupations are explored. Students learn to structure, adapt, plan, present, and assess occupations for therapeutic use. (2 credits)

OCT 5014—Introduction to Occupation
This course introduces concepts of human occupation and the framework for practice in occupational therapy. In addition, the course examines the history of occupational therapy’s evolution and the associated influences of the social, political, and economic environment throughout the life span of the profession. (2 credits)
OCT 5015—Impact of Context and Environment on Occupational Performance
This course focuses on the impacts of environments and contexts, including products and technology; natural environments; support and relationships; attitudes; and services, systems, and policies on occupational performance. Experiences in application of models and frames of reference to assessment of, and intervention with, environments and contexts are provided to prepare students for client-centered and evidence-based practice. (3 credits)

OCT 5015L—Impact of Context and Environment on Occupational Performance Lab
This is the lab course for OCT 5015. It provides students with experiences to apply models and frames of reference to the assessment of, and intervention with, environments and contexts in preparation for client-centered and evidence-based practice. (1 credit)

OCT 5101—Theoretical Foundations of Occupational Therapy Practice
This course is an examination of occupational therapy’s philosophical and theoretical underpinnings. Emphasis is on understanding various theories, models, and frames of reference and their influence on practice and thinking. (2 credits)

OCT 5121—Effects of Chronic Illness, Injury, and Human Disorders on Occupational Performance I
This course expands upon, and integrates information from, anatomy, medical terminology, and introduction to occupations. Students learn about intrinsic human factors affected by pathophysiological conditions and begin to make the link between these factors and occupational performance. (4 credits)

OCT 5123—Effects of Chronic Illness, Injury, and Human Disorders on Occupational Performance II
This course expands and builds on the understanding of pathophysiological processes and conditions learned in OCT 5121. This course provides opportunity to apply concepts learned in context relative to the lives of individuals who are living with disorders/injuries to the immune, cardiopulmonary, urinary, gastrointestinal, endocrine, nervous, musculoskeletal, or neurocognitive systems. (4 credits)

OCT 5130—Human Interactions
This course focuses on development of therapeautic use of self when interacting with individuals, groups, and treatment teams. Through hands on experiences, the student will learn how to design, participate in, and run occupation-based groups, as well as work within a treatment team. (2 credits)

OCT 5174—Research Methods
Students will learn about quantitative and qualitative research methodologies and analyses used in occupational therapy. This course will provide students with fundamental knowledge to become critical consumers of research literature and participants of the research process. (8 credits)

OCT 5420—Anatomy
Details human anatomy. Laboratory activities consist of student teams studying prosected cadavers, sections, bone sets, videotapes, radiographs, and models. (5 credits)

OCT 5800—Applied Kinesiology for Occupational Therapy
This course focuses on principles of biomechanics, joint kinematics, joint kinetics, and muscle function to enhance understanding of normal human motion. This course provides opportunity to develop skills in analysis and assessment of muscle strength, joint range of motion, and movement in context of occupational performance. (3 credits)

OCT 5800L—Applied Kinesiology for OT
This is the lab course associated with OCT 5800. It provides opportunities to practice and develop skills in assessment of muscle strength, joint range of motion, and movement in the context of occupational performance. (1 credit)

OCT 5963—Foundations for Professional Practice
This course is designed to address fieldwork placement policies, professional behaviors, and relationship to curriculum design. Requirements to participate in level I and level II fieldwork placements will be covered. (1 credit)

OCT 6105—Occupational Therapy Practice for Mental Health and Wellness
This course focuses on the practice of occupational therapy for mental health and wellness in various settings across the continuum of care. Course content emphasizes occupation-based, client-centered assessment and interventions that empower client participation in context. Didactic, interactive, and fieldwork learning experiences are incorporated. (5 credits)

OCT 6106—Occupational Therapy Practice for Mental Health and Wellness Lab
This is the lab course associated with OCT 6106. It provides opportunities for application of practice principles for mental health and wellness in various settings across the continuum of care. (1 credit)

OCT 6107—Occupational Therapy Practice with Children and Adolescents
This course focuses on the practice of occupational therapy for children and adolescents in various settings across the continuum of care. Course content emphasizes occupation-based, client-centered assessment and interventions that empower client participation in context. Didactic, interactive, and fieldwork learning experiences are incorporated. (5 credits)
OCT 6108—Occupational Therapy Practice with Adults and Older Adults
This course focuses on the practice of occupational therapy for adults and older adults in various settings across the continuum of care. Course content emphasizes occupation-based, client-centered assessment and interventions that empower client participation in context. Didactic, interactive, and fieldwork learning experiences are incorporated. (8 credits)

OCT 6150—Professionalism and Management
Students will learn about the changing face of the U.S. healthcare delivery system and the regulatory and reimbursement mechanisms that affect delivery of OT services throughout the continuum of care. Particular emphasis will be placed on preparing students to assume varied roles within the U.S. healthcare system including manager/program director and supervisor. Students will develop the ability to recognize and respond to ethical and legal issues related to occupational therapy practice. (3 credits)

OCT 6175—Research Development Seminar
Student research teams will work with faculty mentors to develop a faculty-led research proposal that will include formulation of research questions, an analysis and synthesis of the supporting literature, selection of methodology and procedures, plan for design, data collection and analysis, and completion of a protocol to the Institutional Review Board. (2 credits)

OCT 6176—Research Practicum
This final M.O.T. research course culminates in implementing an approved study. This course fulfills the requirement for students to implement one or more aspects of research methodology, which may include one or more of the following: designing research instruments, collecting data, and analyzing or synthesizing data. The course will include practical experience in disseminating research information through written research reports or preparing a manuscript for publication, then presentation of the research information. (2 credits)

OCT 6205—Occupational Therapy Practice for Mental Health and Wellness Practicum
This course, linked to OCT 6106—Occupational Therapy Practice for Mental Health and Wellness, provides experiences that enrich didactic coursework through supervised observation and participation in parts of the occupational therapy process with clients in hospitals, clinics, and/or community-based settings. Critical thinking and critical reasoning skills are emphasized. Corequisite: OCT 6106 (1 credit)

OCT 6207—Occupational Therapy Practice with Children and Adolescents Practicum
This course consists of Level I fieldwork related to practice in settings serving children and youth in educational, medical, and community settings. It provides students with opportunities to apply knowledge and skills from the classroom to contemporary settings. Corequisite: OCT 6107 (1 credit)

OCT 6208—Occupational Therapy Practice with Adults and Older Adults Practicum
This course consists of Level I fieldwork related to practice in settings serving adults and older adults in medical and community settings. It provides students with opportunities to apply knowledge and skills from the classroom to contemporary settings. Corequisite: OCT 6108 (1 credit)

OCT 6350—Professionalism and Leadership
This course will expose students to career leadership opportunities and responsibilities. Leadership theories, models, and other topics will be discussed and applied as they relate to the various roles that students may assume throughout their careers as occupational therapy practitioners. This course includes a one-week, Level I fieldwork with opportunity for exposure to varied professional leadership roles. (2 credits)

OCT 6980—Fieldwork and Professional Practice Seminar
This course continues to emphasize the development of professionalism for fieldwork and eventual practice. Students reflect on their previous clinical experiences as they prepare for more advanced involvement in sites with adult patients. Mandatory training continues, as well as policy and procedure reinforcement. (1 credit)

OCT 6981—Fieldwork Experience II
Twelve-week supervised internship in approved practice setting. Prerequisite: Completion of M.O.T. formal coursework (12 credits)

OCT 6982—Fieldwork Experience II
Twelve-week supervised internship in approved practice setting. Prerequisite: Completion of M.O.T. coursework (12 credits)

OCT 7004—Continuing Capstone Residency
A student will only enroll in this course if more time is required to complete his or her capstone or residency requirements following completion of 3 credits of OCT 7930 Capstone III. (1–3 credits)

OCT 7005—Evidence-Based Practice and Critical Thinking in OT
This doctoral-level course is designed to provide students with the knowledge and skills to be consumers of evidence, so they can become evidence-based practitioners. Through readings and activities, students will learn the process of evidence-based practice. They will formulate a question of clinical relevance, search for current best evidence, critically assess the evidence, discuss how to implement the findings into practice, and have an opportunity to disseminate the findings by submitting the CAP assignment to the
American Occupational Therapy Association. The course is intended to facilitate the development of skills in critical thinking, analysis, and synthesis of the literature. (3 credits)

OCT 7010—Theory Development for Models of Practice
Presents occupational therapy frames of reference, models of practice, their theoretical development, research, and application. Includes study of historical antecedents, sociopolitical context, and key theorists, researchers, and developers. (3 credits)

OCT 7101—The Health Professional as Academic Educator
This course examines the role of health professionals as academic educators in an entry-level occupational therapy program from the perspectives of faculty, higher education institutions, and professional organizations. Required for Ph.D. students (3 credits)

OCT 7103—Occupation-Centered Practice
This course further develops the student’s knowledge and practice with core concepts of meaningful occupations and health and wellbeing. Students will examine meaningful occupation and health and wellbeing from historical roots through present-day works in occupational therapy and occupational science literature. (3 credits)

OCT 7104—Occupational Science
This course, required for Ph.D. students, presents an overview of conceptual frameworks, literature, taxonomies, and research strategies of occupational science. Topics will be examined from multidisciplinary perspectives on work, play, leisure, occupation, and contexts for occupation. Students will select an area for in-depth study. (3 credits)

OCT 7133—Advanced Policy Issues
In this course, students will analyze the effect public policy has on the practice of occupational therapy and consumers of occupational therapy services. Students will examine the various ways in which the occupational therapy profession can influence federal, state, and local policy throughout the various stages of policy development and implementation. Students will assume an advocacy role by meeting with state and/or federal elected representatives to increase and maintain the viability of the profession, promote the relevance of the profession, and/or assure consumer access to occupational therapy practitioners. (3 credits)

OCT 7160—Special Topics in Occupational Therapy
This seminar for doctoral students only investigates timely topics of critical interest to health care providers. (3 credits) Elective

OCT 7180—Neurosciences Foundations of Occupational Performance
Focuses on the link between neuroscience and human occupational behavior. Current neuroscience research and hypotheses are compared and contrasted with current theoretical work in occupational therapy. Presents material from the clinical practice viewpoint so students learn to use the knowledge gained to enhance their clinical reasoning and occupation-centered practice. (3 credits) Elective

OCT 7211—Sensory Processing Basis of Occupational Performance
This course includes an examination of the theory and practice of sensory processing in occupational therapy in seminal literature, current research in neuroscience, and current practice-related research across the life span. Students will apply this knowledge in developing a project related to a specific age, diagnosis, or population. Prior knowledge and experience in this area of practice is helpful. (3 credits) Elective

OCT 7241—Infant and Child Mental Health
The course will provide framework for understanding the complex processes involved in mental health for infants and children, and how this relates to occupational performance. Clinical application of theoretical approaches and contextual influences will be considered for specific diagnostic classifications. (3 credits) Elective

OCT 7242—Occupational Therapy Practice with Autistic Spectrum Disorders
This course focuses on current findings regarding autistic spectrum disorders and how they affect occupational performance. Includes a review of relevant research and readings from multiple related fields. Specific programs for working with children and adolescents with autism will be examined. (3 credits) Elective

OCT 7244—Low Vision Across the Life Span
The course focuses on vision deficits throughout the life span and their impact on the occupations of individuals and caregivers. Students will review relevant anatomy, neuroanatomy, and various visual disorders. They will then explore and learn about evaluation of vision deficits and treatment implications through current practice and research findings. (3 credits) Elective

OCT 7302—Contextual Aspects of Occupational Performance
This course is a study of contexts as related to occupational performance for advanced practitioners. Concepts and theories related to the use of context as an enabler of participation are explored. Specifically, cultural, personal, temporal, virtual, physical, and social contexts are examined. (3 credits)
OCT 7420—Mixed Methods Research
This course provides an overview of mixed methods research. Students must have completed an overview of qualitative and quantitative research methods courses (see prerequisites). Students are first introduced to the nature and foundations of mixed methods. From these theoretical and philosophical perspectives, various mixed methods designs are discussed. Understanding of mixed design is accomplished by reading and evaluation of prior studies and completing analysis of existing qualitative and quantitative data. The course uses an applied perspective with weekly discussions focused on the identification of research problems or opportunities; the development of purpose and research questions; and the choice, design, and implementation of an appropriate methodological approach. The course concludes with consideration given to mixing qualitative and quantitative data during analysis and/or interpretation and reporting and presentation of results and conclusions. Prerequisites: HPH 7300 and HPH 7310 (3 credits)

OCT 7767—Community Program Development
Evaluation and application of community organization and development theories to create occupational therapy interventions with underserved and/or nontraditional populations. Emphasizes outcome evaluation of both theory and practice. (3 credits)

OCT 7791—Grant Practicum
In this course, students will acquire skills necessary to develop a grant proposal and acquire funding for new and innovative programs, research, or education/training projects related to occupational therapy. Using an applied approach, students will learn to locate both online and conventional sources of funding at federal, foundational, and corporate levels in order to produce a finished proposal worthy of submission. (3 credits)

OCT 7792—Wellness and Health Promotion
This course examines occupational therapy’s role in wellness and health promotion, disability postponement, and prevention in general. Students critically examine various practice models with a view toward developing and refining their own roles in these practice areas. (3 credits) Elective

OCT 7820—Applying Measurement Theory to Evaluation
Provides students with a general background in measurement theory and assists students to actively apply this information to the evaluation process in occupational therapy. The application component of the course addresses evaluation at both the individual and program levels. At the completion of this course, students can critically examine and select the most appropriate evaluation tools for various practice situations using the theory and principles of measurements. (3 credits)

OCT 7860—Leadership Development in Multiple Contexts
Course examines leadership as a critical component to one’s future as an occupational therapy practitioner in a global, ever-changing environment. Students look at areas of need in the profession as well as leadership opportunities in their own careers. (3 credits)

OCT 7870—Dissertation Seminar
This core course for Ph.D. doctoral students provides an overview of the dissertation process and reviews strategies to successfully complete a dissertation study. Students are first introduced to effective scholarly writing techniques, followed by a project to critically review their own writing style to produce a scholarly writing sample. Understanding of the overall dissertation process, an acceptable dissertation topic, selecting dissertation committee, proposal writing, dissertation defense, and dissemination of dissertation results are all reviewed during the semester. (3 credits)

OCT 7890—Independent Study
Individualized study under the supervision of assigned instructor. Requires permission of a doctoral program director. (1–3 credits) Elective

OCT 7909—Program Evaluation and Outcome Measurement
In this course, students will learn the process for evaluating the effectiveness of an intervention or a program. Students will develop an evaluation plan for an intervention or program of interest including identification of relevant outcomes and methods for systematically collecting, analyzing, and interpreting quantitative and/or qualitative information to inform decision making about the program or intervention. (3 credits)

OCT 7910—Capstone I
In the first course of a three-course capstone sequence, students will explore capstone ideas related to their professional interests. They will explore the literature to develop and articulate the background and need for the capstone project. They will identify a faculty mentor for the capstone project and develop the plan for the residency experience. (3 credits)

OCT 7911—Chronicity, Occupation, and Health
Explores the relationships among chronic disease and disability, occupational performance, occupational satisfaction, and personal wellness when living with a disability from the standpoints of the individual and of society. Students examine clinical, ethical and advocate roles in the context of occupational therapy theory and professional practice standards. (3 credits) Elective
OCT 7920—Capstone II
In this second of the three-course capstone sequence, students will develop the capstone proposal with a faculty mentor, prepare the IRB protocol as applicable, and begin the residency experience to facilitate the development and implementation of the capstone project. (3 credits)

OCT 7921—Capstone III
During the third and final course of the capstone sequence, students will complete the residency experience and implement the capstone project. At the end of the semester, students will submit a final capstone paper, which is the culminating assignment in this course and the Dr.O.T. curriculum. In addition, students will develop a plan for dissemination and/or publication of the capstone project. (3 credits)

OCT 8945—Studies for the Qualifying Examination
For Ph.D. students who are preparing for, and taking, the Ph.D. qualification exam. (1 credit)

OCT 8970—Doctoral Dissertation
Supervised original study of occupational therapy evaluation and intervention. Prerequisite: admission to candidacy (3 credits)

OCT 8971—Continuing Dissertation
This course requires the approval from the Ph.D. program director and fulfills the requirement for continuous enrollment while the student is working on the dissertation. (1–3 credits)

OTD 8101—Introduction to Didactic, Clinical, and Research Experiences
This course introduces concepts of human occupation and the framework for active participation in learning about evidence-based practice of occupational therapy. It formally introduces the student to the delivery model of the curriculum including the concept, the student’s responsibilities during distance and face-to-face sessions, self-directedness, and independence. The course also serves as a preservice training on safety and health precautions as well as fieldwork placement policies, professional behaviors, and relationship to curriculum design. Requirements to participate in Level I and Level II fieldwork placements and residency requirements are covered. (3 credits)

OTD 8102—Foundations of Occupational Therapy
This course traces the historical, philosophical, and theoretical underpinnings of occupational therapy as it evolved into contemporary practice. The student applies theories, models, and frames of reference in understanding how social, political, and economic factors continually influence current and future practice. Attention is given to interdisciplinary practice. (3 credits)

OTD 8103—Kinesiology of Occupations
This course promotes the understanding of normal human motion through skills learned in applying the principles of biomechanics, joint kinematics, joint kinetics, and muscle function. Experiences in the analysis and assessment of movement, muscle strength, and joint range of motion provide the student with opportunities to articulate the connection between kinesiology and occupational performance. (4 credits)

OTD 8141—Development of Occupations across the Life Span
This course provides opportunities not only to learn the continuum of human development that influences health and independence across the life span, but also to refine observation, analysis, reflection, and communication skills. The course encourages the student to explore how culture, environment, spirituality, sex, and age influence human occupation. It includes field trips to selected facilities. (3 credits)

OTD 8142—Occupational and Contextual Analysis
This course focuses on analyzing occupations and occupational performance in different contexts, including applications of technology. The course provides opportunities for students to engage in and analyze the projects according to their occupational demands, as well as to learn the meaning of, and avenues for, success and occupational competence. Students not only learn to structure, adapt, plan, present, and assess occupations for therapeutic use, but also to articulate concepts and theories that influence engagement and participation, especially within cultural, personal, temporal, virtual, physical, and social contexts of occupational performance. (3 credits)

OTD 8143—Therapeutic Use of Self
This course provides hands-on experiences in applying the therapeutic use of self when interacting with individuals, groups, and treatment teams. Through the course, the student designs, participates in, and runs occupation-based groups, as well as works within a treatment team. (3 credits)

OTD 8151—Human Conditions and Occupation I
This course focuses on how pathophysiological conditions affect intrinsic human factors so that students can make the link between the factors and occupational performance. This course integrates information from Anatomy; Medical Terminology; and Introduction to Didactic, Clinical, and Research Experiences. (3 credits)

OTD 8152—Human Conditions and Occupation II
Building on the understanding of pathophysiological conditions learned in OTD 8151, this course expands the application of occupational concepts to people with disorders or injuries to the immune, cardiopulmonary, urinary, gastrointestinal,
endocrine, nervous, musculoskeletal, and neurocognitive systems. (3 credits)

**OTD 8161—Evidence and Occupational Therapy Practice/Qualitative Design**

This is the first course in a six-course series on research. It provides students with fundamental knowledge that will help them become critical consumers of research evidence. This course focuses on topics of relatedness of research and occupational therapy practice, critical appraisal of research evidence, and research critique of both quantitative and qualitative research, with an emphasis on the latter. It will address basic ideas behind methodologies, data collection, description, analysis, and interpretation in qualitative research. (3 credits)

**OTD 8244—Innovations and Technology in Contemporary Occupational Therapy**

Students will take a critical look at day-to-day occupations and state-of-the-art technology such as video games, computer-assisted interventions, nanotechnology, documentation, triangulation, thematic analyses and other software, robotics, etc. Within the light of person, environmental, occupation, and professional factors, the student identifies applications for a future-oriented innovative practice at any level of intervention within different contexts. (3 credits)

**OTD 8262—Research Design, Quantitative Methods, Proposal/IRB**

This course is the second of six in a series of evidence-based practice and research methods with a focus on quantitative methods. Students develop a viable research proposal by the end of the semester. (3 credits)

**OTD 8262L—Research Design Lab/IRB**

This is the lab course for OTD 8262. It provides an opportunity for students to work with evidence-based practices and research methods. (1 credit)

**OTD 8271—Occupational Therapy Interventions I: Psychosocial and Community**

This course focuses on the application of the person-environment-occupation-performance (PEOP) model for occupational therapy evaluation and treatment with emphasis on wellness, prevention, and community-based therapy practice. It includes a Level I Fieldwork Experience. (6 credits)

**OTD 8291—Level I Fieldwork Experience: Occupational Therapy Interventions I—Psychosocial and Community**

This course comprises fieldwork seminars during on-campus institutes throughout the semester and three weeks of supervised Level I fieldwork experience at an approved setting. This is the clinical education component of OTD 8271: Occupational Therapy Interventions I—Psychosocial and Community, “to introduce students to the fieldwork experience, and develop a basic comfort level with, and understanding of, the needs of clients.” These experiences are designed to enrich didactic coursework through observation and directed participation in selected aspects of the occupational therapy process. (2 credits)

**OTD 8272—Occupational Therapy Interventions II: Children and Youth**

Students apply the PEOP model in identifying barriers and supports for participation and engagement of children and youth with multiple conditions within the context of diverse environments. This course includes a Level I Fieldwork Experience. (8 credits)

**OTD 8292—Level I Fieldwork Experience: Occupational Therapy Interventions II—Children and Youth**

This course comprises fieldwork seminars during on-campus institutes throughout the semester and three weeks of supervised Level I fieldwork experience at an approved setting. This is the clinical education component of OTD 8272: Occupational Therapy Interventions II—Children and Youth, “to introduce students to the fieldwork experience, and develop a basic comfort level with and understanding of the needs of clients.” These experiences are designed to enrich didactic coursework through observation and directed participation in selected aspects of the occupational therapy process. (2 credits)

**OTD 8273—Occupational Therapy Interventions III: Physical Disabilities**

This course is the final occupational therapy interventions course. It addresses evaluation and treatment of adult and older adult occupational performance in various environments. It includes a Level I Fieldwork Experience. (8 credits)

**OTD 8293—Level I Fieldwork Experiences: Occupational Therapy Interventions III—Physical Disabilities**

This course comprises fieldwork seminars during on-campus institutes throughout the semester and three weeks of supervised Level I fieldwork experience at an approved setting. This is the clinical education component of OTD 8273: Occupational Therapy Interventions III—Physical Disabilities, “to introduce students to the fieldwork experience, and develop a basic comfort level with and understanding of the needs of clients.” These experiences are designed to enrich didactic coursework through observation and directed participation in selected aspects of the occupational therapy process. (2 credits)

**OTD 8281—Business of Practice and Management**

This course allows students to view occupational therapy from a business perspective, preparing them for different roles in the U.S. health care system, including manager/program director, supervisor, and entrepreneur. Students will articulate responses to ethical and legal issues related to the profession using information they learn about delivery systems, regulatory
systems, and reimbursement mechanisms that affect service delivery from referral to discharge. (3 credits)

OTD 8282—Professional Leadership
This course will introduce the student to the leadership responsibilities and opportunities inherent in becoming a member of a profession. Students will explore basic leadership theories and examine their own leadership strengths and opportunities to expand or improve upon, as well as apply applicable leadership theories and leadership self-analysis to the practical, contextual, and ethical dimensions that exist within the occupational therapy profession and contemporary practice. Emphasis will be placed on the occupational therapist's role in professional advocacy, professional associations, interprofessional collaboration, and role-emerging and nontraditional practice settings. (3 credits)

OTD 8263—Research Project I—Implementation
This is the third in the series of six didactic courses on evidence-based practice and research methods. In this course, the student implements an approved study or gains research experiences in faculty research projects or simulated research. The course includes practical experiences in preparing reports of presentations for disseminating research information. There is also an option of preparing a manuscript for publication. This course fulfills the requirement for students to implement one or more aspects of research methodology, possibly including designing research instruments, collecting data, and analyzing or synthesizing data. (1 credit)

OTD 8363L—Research Project I Lab—Analysis and Interpretation
This is the lab course associated with OTD 8263. It includes opportunities for students to have practical experiences in preparing reports of presentations for disseminating research information and manuscripts for publication, designing research instruments, and collecting and analyzing or synthesizing data. (1 credit)

OTD 8391—Level II Fieldwork Experience
This course is a 12-week, supervised internship in an approved practice setting. Prerequisite: completion of formal predoctoral certification courses (9 credits)

OTD 8392—Doctoral Certification and Capstone
Upon completion of all formal predoctoral certification and Level II Fieldwork Experiences, the student must pass a competency-based examination. After successfully passing the examination, the student has the opportunity, through this course, to reflect on the academic and clinical components of the curriculum, including planning for the culmination of the capstone project, and receives an introduction to the doctoral experiential component. Prerequisite: successful completion of 12 credits of Level II Fieldwork Experiences (2 credits)

OTD 8364—Research Project II: Dissemination
This is the final course of the six-course series of research methods and culminates with the opportunity for the student to prepare presentation of a research project to the community. Prerequisite: completion of doctoral residency and research project (2 credits)

OTD 8393—Level II Fieldwork Experience
This course is a 12-week, supervised internship in an approved practice setting. Prerequisite: completion of formal predoctoral certification courses and OTD 8391. (9 credits)

OTD 8494—Doctoral Capstone
This 16-week doctoral experiential component provides the student with the opportunity to develop advanced skills, e.g., beyond a generalist level in an approved specialization area for clinical practice skills. Other options include in-depth experience in one or more of the following research skills: administration, leadership, program and policy development, advocacy, education, or theory development. The course concludes with the dissemination of the capstone project, an exit colloquium, and reflection on the student's doctoral education. Prerequisite: doctoral certification (12 credits)

Doctoral Level Courses
Doctoral seminars provide in-depth exploration, study, and training, occurring after returning from the first Level II Experience. The following four courses provide the student with the opportunity to select two courses of 3 credits each from the four courses listed below. The fifth course, OTD 8315 Topics in Contemporary and Emergent Practice, provides focused training in one of four tracks. (3 credits)

OTD 8311—Occupational Science
This course presents an overview of conceptual frameworks, literature, taxonomies, and research strategies of occupational science. Topics will be examined from multidisciplinary perspectives on work, play, leisure, occupation, and contexts for occupation. Students will select an area for in-depth study.

OTD 8312—Wellness in Occupational Therapy
This course examines occupational therapy's role in wellness and health promotion, disability postponement, and prevention in general. Students critically examine various practice models with a view toward developing and refining their own roles in these practice areas.

OTD 8313—Applying Measurement Theory to Evaluation
Provides students with a general background in measurement theory and assists students in actively applying this information to the evaluation process in occupational therapy. The application component of the course addresses evaluation at both the individual and program levels. At the completion of this course, students can critically examine and select the most
appropriate tools for practice situations using the theory and principles of measurements.

**OTD 8314—Sensory Processing Basis of Occupational Performance**
This course provides examination of the theory and practice of sensory processing in occupational therapy through the original literature and current information from neuroscience and evidence-based practice found in articles and through interaction with classmates. Students will apply this knowledge to a specific group of individuals or to a curriculum plan. This is an advanced-level course. It is anticipated that students in this course will have some prior knowledge and experience in this area of practice.

**OTD 8315—Topics in Contemporary and Emergent Practice**
This course provides focused training in one of four learning tracks that addresses occupation-based contemporary and emerging practice areas, advanced skills, and/or professional development. The four learning tracks are 1) skills, 2) mental health, 3) children and youth, and 4) physical disabilities. Each track will contain no more than four modules, including, but not limited to, 1) skills: physical agent modalities, anatomy, neuroanatomy, and kinesiology; 2) mental health: addictions, trauma-induced care, Post-Traumatic Stress Disorder, violence, and abuse; 3) children and youth: NDT, NICU, school system, and behavioral interventions; and 4) physical disabilities: oncology, work programs/ergonomics, splinting, and hands specialty. (3 credits)

**HPH 7200—Research Ethics**
Health care professionals are required to act morally and ethically. This course is designed to expand the student’s basic understanding of ethics to promote ethical awareness and enable students to derive better health care decisions that reduce risk of potential ethical consequence. By exposing students to bioethics and controversial ethical issues typically encountered in current health care practice, students practice making difficult decisions. Students will synthesize and implement strategies for applying morals, values, and ethics systematically in the various settings in which health care is delivered. Considering the perspectives of all stakeholders and the role of the health care provider, patient advocate, professional, and consumer of medical care, students will gain workable knowledge of contemporary ethical issues and appreciate that ethics permeate the majority of decisions made in health care. (3 credits)

**HPH 7300—Fundamentals of Biostatistics**
The application of quantitative techniques has expanded rapidly in medical decision making. The emphasis on evidence-based health care means that health care workers must be able to evaluate the results from published health care research studies. This course is the first of two courses designed to provide students with the knowledge of quantitative techniques. The course will cover descriptive statistics, parametric group comparison statistics, and basic nonparametric statistics, as well as provide an introduction to linear modeling. (3 credits)

**HPH 7310—Principles of Statistical Inference**
The focus of this course is on advanced and multivariate statistical methods. Topics include multiple regression, multivariate analysis of variance and covariance, factor analysis, discriminate analysis, cluster and canonical analysis, and related statistical procedures. Emphasis is on understanding and applying statistical concepts and techniques to research data as well as developing the ability to critically analyze research methods used in the scientific literature. Emphasis is on understanding and applying statistical concepts and techniques to research data within the health sciences. (3 credits)

**HPH 7400—Quantitative Research Design**
This course will provide students with an understanding of the methods and approaches used in quantitative, health-related research. It will prepare students to be both consumers and producers of quantitative research. A major emphasis of the course will be on the conceptualization and design of research studies. Moreover, the course will cover ethics, formulation of research questions, research designs, reliability, validity, sampling, and measurement. It will also prepare students to critically evaluate published research articles. (3 credits)

**HPH 7500—Philosophy of Science**
This course will address classical issues in the philosophy of science, including demarcation, the distinction between what science is and is not, hypothesis development, confirmation and falsification, causation, and explanation. The course will also explore the ontological, epistemological, methodological, and axiological foundations of the major paradigms within which inquiry in the human services professions are located. Issues of congruence between research question selection and paradigm selection will also be addressed. (3 credits)

**HPH 7600—Grants and Publications**
This course is designed to provide writing experiences which prepare the learner for manuscript and grant proposal submissions. This introductory experience into the grant process from proposal to funding to management will include project management, funding sources, and funding challenges. Other course requirements include a research proposal (manuscript) that is ready for submission for publication and development of a dissertation proposal. (3 credits)
Department of Physical Therapy

Physical Therapy Overview

Physical therapists are health care professionals who diagnose and treat movement dysfunction that results in physical impairment and disability. In addition to providing direct patient care services, physical therapists serve as administrators of physical therapy services, educators, and consultants. They screen people for potential risk for movement dysfunction in order to prevent impairment and disability and engage in critical inquiry to conduct and review research.

Physical therapists work in a range of settings including acute and subacute care hospitals, rehabilitation centers, outpatient clinics, home health, skilled nursing facilities, school systems, and industrial settings. Physical therapists work as employees of health care systems, may independently contract their services, or own and manage a private practice. In any setting, for every patient, physical therapists perform a history and physical examination; conduct assessments to determine a diagnosis; select, perform, and supervise appropriate physical therapy interventions; and monitor the effectiveness of treatment.

Physical therapists are licensed in all states and may practice without physician referral in most of them. They are integral members of health care teams in a variety of service systems who serve to improve and maintain the quality of life for millions of people.

Nova Southeastern University’s Department of Physical Therapy prepares professional and postprofessional physical therapists with the skills, knowledge, and values to effectively practice, educate, lead, and conduct physical therapy education and research in interprofessional environments. The curricula foster clinical inquiry and reasoning, professionalism, and evidence-based practice. The programs facilitate accessibility to physical therapist education through innovative instructional delivery models and promote intellectual curiosity, reflection, and lifelong learning skills. Faculty members, students, and alumni actively participate in the profession through scholarship, service, collaboration, mentoring, and serving those in need of PT services locally, nationally, and globally.

Professional Doctor of Physical Therapy (D.P.T.)

Course of Study
The Professional Doctor of Physical Therapy (D.P.T.) Program at Nova Southeastern University is offered in two distinct formats: A traditional, campus-based D.P.T. program located on our Fort Lauderdale/Davie Campus and a blended (hybrid) program on our Tampa Bay Regional Campus. The traditional program in Fort Lauderdale is completed in three years, while the hybrid program in Tampa Bay is completed over four years to accommodate those who need flexibility to work or for personal/geographical reasons.

Delivery Methods
1. Fort Lauderdale: Campus-based, using a combination of interactive classroom and online instruction, clinical lab skills training, and clinical education
2. Tampa Bay: Blend of online and face-to-face instruction so that students have three weeks of engaging, online, asynchronous instruction and four days per month (Thursday–Sunday) focusing on hands-on practice, intensive review, and application of information learned online. Face-to-face instruction times are created four years in advance, because this time on-campus is mandatory.

Students in both the full-time and the hybrid programs are admitted once annually, in the summer semester. The Fort Lauderdale program includes 40 weeks of full-time clinical education. In the Tampa Bay hybrid program, clinical education is integrated into the classroom during on-campus institutes in the second and third years and occurs full time for 36 weeks in the fourth year of the program.

Accreditation Status
The Professional Doctor of Physical Therapy Program at Nova Southeastern University is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 1111 North Fairfax Street, Alexandria, Virginia 22314; telephone: 703-706-3245; email: accreditation@apta.org; website: capteonline.org.

If needing to contact the program/institution directly, please call (954) 262-1662 or email ptinfo@nova.edu.

Nova Southeastern University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate’s, baccalaureate, master’s, educational specialist, doctorate, and professional degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Nova Southeastern University.

Admissions Requirements
Fort Lauderdale Program
All applicants must submit
• proof of baccalaureate degree from a regionally accredited institution
• proof of minimum 3.0 cumulative, prerequisite, and science GPAs on a 4.0 scale and a grade of C (2.0) or better in each of the required prerequisite courses
• official transcripts of all graduate or undergraduate institutions attended
• proof of official GRE scores (analytical writing score is required)
• three letters of recommendation from nonrelatives, at least one of which must be a physical therapist
• volunteer community service and leadership exposure
• official copy of TOEFL scores (international students only)
• 100 hours of physical therapy observation or work experience (recommendation only)

Tampa Bay Program
All applicants must submit
• proof of baccalaureate degree from a regionally accredited institution
• proof of minimum 3.0 cumulative, prerequisite, and science/math GPAs
• official transcripts of all graduate and/or undergraduate institutions attended
• proof of official GRE scores, including analytical writing
• three letters of recommendation from employers, professors, and/or physical therapists
• official copy of TOEFL scores (international students only)

NSU D.P.T. Programs Prerequisite Requirements*

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Required Credits</th>
<th>Psychiatry/Sociology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fort Lauderdale</td>
<td>6</td>
<td>Any two of the following choices will be accepted: introduction/general psychology, abnormal psychology, developmental psychology, or introduction to sociology.</td>
</tr>
<tr>
<td>Tampa Bay</td>
<td>6</td>
<td>One general psychology course and one additional sociology or psychology course are required.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Required Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Biology</td>
<td>3</td>
</tr>
<tr>
<td>Anatomy and Physiology</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry</td>
<td>8</td>
</tr>
</tbody>
</table>

*Applied sciences are not acceptable for admission.

All prerequisite courses must be completed before the first day of classes. No exceptions will be made. While not required, exercise physiology, biomechanics/kinesiology, and motor control are strongly recommended prerequisite courses.

The dean is empowered to evaluate the total qualification of every applicant and to modify requirements in unusual circumstance

Background Checks
Level I and Level II background checks are required for clinical practicum and internship placement. Some citations on the background checks may prevent a student from being assigned to, or result in the student being denied placement at, clinical sites. A student who cannot be placed at required clinical sites due to information of concern on his or her background check(s) may not be able to complete the program. Students are required to inform the program director immediately if any circumstance has happened in the past, or occurs during the student’s tenure in the program, which may impact the background check.

Computer Requirements
D.P.T. Program—Fort Lauderdale Campus
System Requirements
Laptop Computer
You are required to have a laptop computer with a built-in webcam and updated operating systems. Your computer and/or tablet must have capability for the following functions:
• wireless Internet capability
• word processing software (e.g., Microsoft Word)
• presentation software (e.g., Microsoft PowerPoint)
• video editing software (e.g., Movie maker, iMovie)

Accessories
• external charging devices/power supply
• computer privacy filter, which blacks out the view from side angles (outside 60 degrees)

D.P.T. Program—Tampa Bay Regional Campus
System Requirements
Laptop Computer
• nova.edu/publications/it-standards/
Recommended Web Browsers
• Most recent version of Chrome or Firefox

High Speed Internet Connection
• Broadband connection: At least 10-15 mbps

Word Processor and Presentation Software
• Microsoft Office Suite (Office365 free to NSU students) or Apple pages, keynote, numbers

Photo Capability
• Camera Device with the ability to produce still photos and a photo file. Acceptable file formats are jpg.
  Note: many cell phones are capable of this and are acceptable as long as the photo quality is adequate.
• Photo editing software
  It may be necessary to edit or format photos for assignment
  There are free apps available.
  – iPhoto and Preview for Mac (both free in App Store, included in Operating System)

Video Capability
• Video Camera Device with ability to record video and produce a video file. Acceptable file formats are wmv, mp4, and mov.
  Note: many photo cameras and cell phones have this capability. Either is acceptable as long as the video quality is adequate.
• Web Cam for the purposes of web-based communication with classmates or faculty members
  Note: many laptops come with integrated webcams, which are acceptable.
• Video editing software
  It may be necessary to edit or format videos for assignments.
  There are free apps available.
  – iMovie for Mac (included with operating system, App Store)
  – YouTube Editor: youtube.com/create_detail/YouTubeVideoEditor

Audio Capability
• External Microphone
  A quality microphone is required. This can be a headset or microphone-only model.
  Note: many laptops come with integrated microphones; these frequently offer inadequate sound quality.

NSU Student Technology Support
The Office of Innovation and Information Technology (OIIT) offers a wide variety of technological resources to support NSU’s students. It is recommended you explore the following resource websites.

OIIT Homepage for students: nova.edu/oiit
Help Desk: nova.edu/help/students
(954) 262-HELP (4357) • 800-541-6682

Hardware Discounts/Free Software: Personal computer discount pricing is available for NSU students through NSU. Free Software is also available for download for our students. nova.edu/compromo.html

Technical Standards/Essential Functions of the D.P.T Student
The professional PT programs have a responsibility to the public to assure that graduates can become fully competent and caring physical therapists who are capable of providing benefit and doing no harm. Individuals admitted and retained in these programs must possess the intelligence, integrity, compassion, humanitarian concerns, physical and emotional capacity, communication skills, and professionalism necessary to practice physical therapy. To this end, all entry-level D.P.T. students must meet the requirements outlined in the Technical Standards/Essential Functions of the D.P.T. Student document on admission and while matriculating through the programs. To view the form, visit healthsciences.nova.edu/ptessentials.

Application Procedures
Both Professional Doctor of Physical Therapy programs participate in the Physical Therapist Centralized Application Service (PTCAS).

To apply, follow the procedures below.
1. Complete the online PTCAS application at portal.ptcas.org. PTCAS applications open July 1. All applicants to the Professional D.P.T. program must apply online. Refer to the PTCAS website for each program’s application deadline.

As part of application, please enter contact information (email preferred) for three professional references into PTCAS. (Professional references are individuals other than relatives, such as academic instructors and professors, health professionals, work supervisors, or volunteer supervisors.) At least one of the individuals referenced must be a physical
therapist. PTCAS will supply these references with evaluation forms to be filled out and returned.

2. Send all official transcripts to PTCAS. Ensure official transcripts are mailed directly to PTCAS from the registrar’s office of each graduate and undergraduate institution attended.

PTCAS
P.O. Box 9112
Watertown, MA 02471

For information, contact PTCAS at ptcasinfo@ptcas.org or (617) 612-2040.

3. Have GRE scores sent to PTCAS (NSU school code is 7741) or directly to NSU’s EPS at

Nova Southeastern University
Enrollment Processing Services
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

GRE scores must be less than five years old.

4. Complete the supplemental application that is available online once NSU has received the PTCAS application. Please follow the instructions to complete and submit the supplemental application and $50 fee by December 21 for the Tampa Bay program and by January 31 for the Fort Lauderdale program. (Note: Applicants can apply to the Tampa Bay Program, Fort Lauderdale Program, or both programs.)

What happens after I apply?
Once NSU receives the PTCAS application, supplemental application, and $50 application fee, your file will be reviewed by the admissions counselor. If you are missing any required application materials, the admissions counselor will contact you. Upon receipt of the completed application and required credentials, the Committee on Admissions will review the application. The Committee on Admissions may or may not require a phone or personal interview. An invitation to appear for an interview should not be construed by the applicant as evidence of acceptance. Applicants will be notified of the committee’s decision via the admissions counselor.

Please note that PTCAS may take up to six weeks to verify supporting documents. The university does not receive the application from PTCAS until the verification has been completed. Once received by the university, the application is processed in a timely manner, but there may be a lag time of three–four months between the time the application is submitted and the time the student receives a decision from the admissions committee. Therefore, early application is highly recommended.

Interviews
Fort Lauderdale—Applicants may be interviewed on a case-by-case basis. Students are admitted on a rolling basis beginning in October.

Tampa Bay—Selected applicants to the Professional D.P.T. Program will be invited to a face-to-face interview on NSU’s Tampa Bay Regional Campus in February.

Undergraduate/Professional Doctor of Physical Therapy Dual Admission Program
Nova Southeastern University Health Professions Division has established a dual admission program with Nova Southeastern University’s Halmos College of Arts and Sciences for a select number of highly motivated, qualified students seeking to pursue both an undergraduate degree and professional studies in physical therapy. Candidates must maintain a specified GPA and achieve acceptable scores on the Graduate Record Examination (GRE).

Students will be awarded a bachelor’s degree from the Halmos College upon completion of degree requirements. Students will receive a Doctor of Physical Therapy degree upon completion of the three-year D.P.T. curriculum in Fort Lauderdale or four-years in Tampa Bay.

For complete information and requirements, contact the Office of Admissions, Halmos College of Arts and Sciences, Nova Southeastern University, 3301 College Avenue, Fort Lauderdale, FL 33314-7796.

Tuition and Fees
Tuition and fees are equivalent for the Fort Lauderdale and Tampa Bay programs; however the three-year tuition is prorated over four years for the Tampa Bay program. Tuition for 2020–2021 will be posted on our website (nova.edu/pt/dpt). All tuition and fees are subject to change by the board of trustees without notice.

- Acceptance Fee—$1,000. This fee is required to reserve the accepted applicant’s place in the entering first-year class. This advance payment will be deducted from the tuition payment due on registration day, but is nonrefundable in the event of a withdrawal. The application fee is due by January 15 if the applicant was accepted before January 1. Those accepted after January 1 will have two weeks after the acceptance letter is received to pay the acceptance fee.

- A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.

All tuition charges and fees are subject to change by the board of trustees without notice. The first semester’s tuition and fees, less the $1,000 previously paid, are due on or before the appropriate registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.
The financial ability of applicants to complete their training is important because of the limited number of positions available in each class. Applicants should have specific plans for financing professional education. This should include tuition, living expenses, books, equipment, and miscellaneous expenses.

It is required that each student carry adequate personal medical and hospital insurance throughout the program. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

### Requirements for Graduation

**Professional Doctor of Physical Therapy—Fort Lauderdale**
- maintain student APTA membership throughout the program
- successfully complete the required credits of didactic and clinical coursework
- successfully pass a comprehensive examination
- successfully complete professional D.P.T. student portfolio
- perform all required hours of service learning
- demonstrate professional behavior consistent with the APTA core values
- attend all required professional meetings

**Professional Doctor of Physical Therapy—Tampa Bay**
- maintain student APTE membership throughout the program
- successfully complete the required credits of didactic and clinical coursework
- successfully pass a comprehensive examination

### Physical Therapy Student Organizations

#### Student Government Association
The Physical Therapy Student Council is the official voice of all students. The organization is open to all students and welcomes proposals and participation from the entire student body. Its responsibilities include collecting and expressing student opinion, dispensing funds for student activities, acting as liaison for the student body, promoting physical therapy, supporting club and class activities, and working to improve the quality of life for physical therapy students.

#### Other Student Organizations
Many student organizations addressing various professional interests are open for student membership, including
- American Physical Therapy Association
- The Student Assembly of the American Physical Therapy Association
- The Student Special Interest Group of the Florida Physical Therapy Association
- campus-based student clubs

### Fort Lauderdale Professional Doctor of Physical Therapy Curriculum Outline

<table>
<thead>
<tr>
<th>First Year—Summer Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 5400 Physiology</td>
<td>3</td>
</tr>
<tr>
<td>PHT 5420 Anatomy for Rehabilitation Professionals</td>
<td>5</td>
</tr>
<tr>
<td>PHT 5611 Introduction to Physical Therapy</td>
<td>3</td>
</tr>
<tr>
<td>PHT 5610 Clinical Anatomy for Physical Therapists</td>
<td>2</td>
</tr>
<tr>
<td>PHT 5609 Medical Terminology for Physical Therapists</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14</strong></td>
</tr>
<tr>
<td>First Year—Fall Semester</td>
<td>Credits</td>
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<tr>
<td>--------------------------</td>
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</tr>
<tr>
<td>PHT 6710</td>
<td>Clinical Skills I</td>
</tr>
<tr>
<td>PHT 6715</td>
<td>Essentials of Biomechanics and Kinesiology</td>
</tr>
<tr>
<td>PHT 6705</td>
<td>Essentials of Exercise Physiology</td>
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<tr>
<td>PHT 6717</td>
<td>Systems Management I: Medical Pathology and Pharmacology</td>
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<td>Cardiovascular and Pulmonary Physical Therapy</td>
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<td>ANA 5423</td>
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<td>PHT 6721</td>
<td>The Health Care Educator</td>
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<td>PHT 6815</td>
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<td>PHT 6835</td>
<td>Systems Management III: Medical Screening and Differential Diagnosis for Physical Therapists</td>
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<td>PHT 6813</td>
<td>Gender-Specific Issues in Physical Therapy</td>
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<td>Prosthetics and Orthotics</td>
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### Professional D.P.T. Program—Tampa Bay Curriculum Outline

#### First Year—Summer Semester (12 weeks)

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
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<td>PHTT 5400</td>
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<td>PHTT 5420</td>
<td>Anatomy for Physical Therapists I</td>
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<td>PHTT 5611</td>
<td>Professional Issues in Physical Therapy</td>
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<td>Communication and Cultural Competence</td>
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#### First Year—Fall Semester (16 weeks)

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#### First Year—Winter Semester (16 weeks)

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<td>PHTT 6710</td>
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<td>Essentials of Biomechanics and Kinesiology</td>
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<td>PHTT 6761</td>
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<td>Health Promotion, Disease Prevention, and Wellness</td>
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#### Second Year—Summer Semester (12 weeks)

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<td>Application of Evidence-Based Practice</td>
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<td>Physical Agents</td>
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<td>Patient/Client Management Post Amputation</td>
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<td>PHTT 5423</td>
<td>Neuroanatomy and Neurophysiology</td>
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<td>Cardiovascular and Pulmonary Physical Therapy*</td>
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## Third Year—Summer Semester (12 weeks)

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## Third Year—Fall Semester (16 weeks)

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<td>PHTT 6817</td>
<td>Pediatrics*</td>
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<td>Musculoskeletal III Lab*</td>
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<td>Gender-Specific Health Issues in Physical Therapy</td>
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## Third Year—Winter Semester (16 weeks)

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<td>Neuromuscular I Lab*</td>
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<tr>
<td>PHTT 6812</td>
<td>Topics in Clinical Education‡</td>
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<td>PHTT 6835</td>
<td>Systems Management III: Differential Diagnosis for Physical Therapists</td>
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## Fourth Year—Summer Semester (12 weeks)

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<tr>
<td>PHTT 6920</td>
<td>Systems Management IV: Applied Clinical Decision Making of Complex Patients</td>
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Fourth Year—Fall Semester (16 weeks)                      Credits
PHTT     6941  Clinical Experience I** (12 weeks)                  6
PHTT     6951  Clinical Experience II** (12 weeks)                 6

Total 12

Fourth Year—Winter Semester (18 weeks)                      Credits
PHTT     6930  Wrap Up and Review*                                          2
PHTT     6904  Evidence in Practice Capstone Project                           2
PHTT     6961  Clinical Experience III** (12 weeks)                          6

Total 10

Total Hours for Graduation 118

* This course includes patient experiences or an integrated clinical experience.
† This course includes a one-week, integrated clinical experience.
**Students do not attend classes in Tampa Bay during Clinical Experience I–III.
* This course will include one week when students will have to return to Tampa Bay to prepare for graduation and licensure examination.

The course sequence outlined is preliminary and subject to revision. The final approved curriculum sequence will be posted online at nova.edu/pt.

Professional Doctor of Physical Therapy Course Descriptions

PHY 5400—Physiology
This foundational course will provide students in the Physical Therapy Program with an understanding of the basic physiochemical concepts and physiological principles underlying the development, maintenance, and propagation of human life. It provides an examination of the essential physiological processes with reference to clinical applications where appropriate. Topics covered include basic examinations of subcellular processes, membrane mechanisms, muscle physiology, the cardiovascular system, connective tissue matrices, the nervous system, renal physiology, the respiratory system, endocrinology, reproductive physiology, and gastrointestinal physiology. (3 credits)

PHT 5420—Anatomy for Rehabilitation Professionals
This foundational science course develops the knowledge of human anatomy necessary for the practice of the rehabilitation professions. It presents the anatomy of the human body in both lecture and lab format. Teaching and learning methods involve models, prosected cadavers, basic imaging, and virtual laboratories and is performed in an active learning and collaborative environment. The course addresses gross structures and systems of the human body and integrates topographic and radiographic anatomy, stressing the importance to clinical practice. (5 credits)

PHT 5609—Medical Terminology for Physical Therapists
This blended-learning course introduces students to basic medical terminology. It includes understanding elements used to build and define medical words; pronunciation of commonly used terms in physical therapy practice; and understanding the meaning of commonly used prefixes, root words, and suffixes. Students will identify terminology used to organize the human body and learn to diagram and interpret the meaning of medical terms used in each body system (including the integumentary; digestive; respiratory; cardiovascular; blood,
lymphatic, and immune; musculoskeletal; urinary; male and female reproductive; endocrine; and nervous systems). The course is delivered through interactive, online instruction and in-person classroom interaction. By the end of the course, students will be able to define and pronounce commonly used terms in physical therapy practice and diagram and interpret the meaning of medical terms in context of body systems and pathology. Students will also begin using medical terminology in documentation of health-care activities. (1 credit)

PHT 5610—Clinical Anatomy for Physical Therapists
This course addresses anatomical knowledge specific to the practice of physical therapy. It is an in-depth study of joint anatomy including muscular attachments, ligamentous structures, neutral innervations, and contribution to movement. Palpation of key bony- and soft-tissue structures will be introduced. Corequisite: ANA 5420 (2 credits)

PHT 5611—Introduction to Physical Therapy
This course introduces PT students to the physical therapy profession, its state and national associations, and the multiple roles assumed by physical therapists historically and in current practice. Students will grow professionally by utilizing relevant medical terminology, beginning the development of a student portfolio, and gaining familiarity with the core values and ethical standards for physical therapy. Professional standards for conduct are developed by applying ethical principles, theories, and the APTA Code of Ethics, as well as using ethical decision-making. Students will gain a working knowledge of the more common state and federal laws, rules, and regulations that impact physical therapist practice, patient/client rights, responsibilities related to patient-centered care, and risk management strategies to avoid medical errors and reduce legal liability. Cultural competency is introduced and promoted by students identifying and exploring their own biases, diversity dimensions, and factors that affect health care outcomes. Students will start preparing for clinical experiences. Students will be able to define and pronounce commonly used medical terms in context of body systems and diagram and interpret medical terms in physical therapy practice and. (3 credits)

PHT 6715—Essentials of Exercise Physiology
Exercise physiology describes the response to exercise and training on the cardiac, pulmonary, musculoskeletal, neural, and endocrine systems of the human body. Nutritional considerations, as well as enhancing supplements, will be discussed as they relate to exercise, athletics, and physical therapy. The various methods of training for increased strength, hypertrophy, power, cardiovascular fitness, and endurance, and the effects of physical activities and work-related stress on the human organism will be discussed. Energy liberation, circulation and respiration, physical work capacity, physical training, energy cost of various activities, nutrition and performance, temperature regulation, factors affecting performance and fitness, and the physiology of various sport activities will be covered. Students will gain the knowledge required for designing exercise programs in the general and special populations based on established needs for function and performance. This course will also explore the professional role of physical therapists as advocates of health, wellness, and prevention, including the following topics: Healthy People 2020 initiative, APTA’s Vision 2020, wellness theory/models, dimensions of wellness, holistic versus conventional medicine, outcome measurements of wellness and quality of life, screening for health/fitness/wellness, and considerations for special populations. Upon completion of this course, students are encouraged to prepare for the National Strength and Conditioning Association (NSCA), Certified Strength and Conditioning Examination. (3 credits)

PHT 6710—Clinical Skills I
This course introduces students to basic physical therapy clinical examination, assessments and evaluation in accordance with the patient/client management model found in the Guide to Physical Therapist Practice. Students will learn to safely interact and communicate with clients/patients, including history taking and documentation. The course will provide students with an understanding of cultural competence as an integral part of the clinical evaluation. An overview of documentation terms related to CPT-coding, ICD 9 & 10 coding, and reimbursement will be provided. Safe performance of psychomotor skills, such as assessing patient posture, vital signs, sensory assessment, positioning/draping, goniometry, manual muscle testing, functional mobility, gait assessment, assistive devices, and patient guarding and handling techniques will be emphasized. In partial fulfillment of this course, students will attend a service-learning activity that has been preidentified by faculty members to supplement classroom and clinical education experiences. Service learning experiences provide students with opportunities to apply their knowledge and clinical skills to benefit the local community with follow-up reflection on the impact of their service. (4 credits)

PHT 6715—Essentials of Biomechanics and Kinesiology
This is a basic science course to introduce physical therapy students to the study of biomechanics and kinesiology. The
students will integrate their anatomy knowledge of muscle and joint structures into the study of joint motion and functional movements. The course introduces the student to basic principles of biomechanics, which serves as the foundation for understanding kinesiology. The course will be structured by body parts: the upper extremity, the lower extremity, and the spine. Once the regional knowledge of kinesiology is understood, the final outcome of the course will be to learn and comprehend complex kinesiologic analysis: gait, posture, and functional movements. (3 credits)

PHT 6717—Systems Management I: Medical Pathology and Pharmacology

This course provides an introductory overview of medical pathology and pharmacology commonly seen by physical therapists in patients/clients across the life span. The relationship between pathology and movement dysfunction will be emphasized and this relationship will be conceptualized within the International Classification of Functioning, Disability and Health (ICF). Students will be introduced to normal immunity, tissue response to injury, healing processes, and the normal functioning of various body organs and systems. Students will also gain knowledge of signs and symptoms, pathogenesis, differential diagnosis, and prognosis of selected pathological disorders. Medical and pharmacological management of selected disorders will be introduced and the effects of those interventions on the physical therapy management of the patient will be discussed. Course content will be delivered through a combination of video lectures, interactive live lectures, and readings. An emphasis will be placed on the development of students’ early clinical reasoning abilities related to physical therapy patient management by integrating knowledge about the various pathologies into case-based examples using the ICF model. (3 credits)

ANA 5423—Neuroanatomy

This course will examine the structural, functional, and developmental features of the human nervous system with reference to different disease states. The purpose of this course is to establish an anatomical basis for the study and understanding of the nervous system as presented in the classroom and the lab. Application of these studies will help in the solving of problems encountered in the student’s career as a future health care professional. (3 credits)

PHT 6700—Evidence-Based Practice I

This course allows students to gain skill in reviewing research literature. It includes an overview of the principles of measurement, reliability, and validity as well as an understanding of the four levels of measurement (nominal, ordinal, interval, and ratio), research ethics, and critical literature analysis. It employs a creative, problem-solving experience during which students will develop a global understanding of the concepts and principles of research and begin to critically analyze health care research literature. The student will also begin to recognize the importance of and the role of research in clinical practice. (3 credits)

PHT 6720—Clinical Skills II

This course presents models for clinical decision making including the patient care management model as presented in the Guide to Physical Therapist Practice. This course includes interventions using therapeutic exercise including passive, active, and resistive range of motion; strengthening programs; stretching exercises; soft tissue mobilization; and gait training. Students will develop and write home programs, design exercise programs for therapeutic purposes, and critically analyze interventions. Students will learn to safely apply intervention techniques that address body structure/functional impairments in range of motion, musculoskeletal strength, gait deviations, and activity limitations. Safe performance of psychomotor skills such as gait training, functional mobility, therapeutic exercises, and PNF will be emphasized. All sessions will be a combination of lecture, demonstration, interactive presentation, case study application, and psychomotor lab skill practice. (3 credits)

PHT 6721—The Health Care Educator

Teaching is an integral part of physical therapy practice and one of the foundations of a doctoring profession. This course explores both the theoretical basis and the practical techniques related to patient-related instruction, designing educational programs/in-services, evaluating program/teaching effectiveness, facilitating behavior change, creating professional presentations, and engaging in clinical education. Students will also explore learning styles and factors that impact learning across the life span, as well as the many issues that impact patient education, from both a health care professional and management perspective. Adult education theory, patient/therapist interaction, communication barriers, strategies for success, web-based patient education, documentation, federal laws and initiatives, and standards for patient education are some of the topics that will be examined. Knowledge and skills in teaching and learning are essential for a successful outcome for any patient treatment or program. Students will have the opportunity to design their own educational program/tools, applying the principles and strategies covered in this class. (1 credit)

PHT 6722—Integumentary System

The focus of the course is on the identification and management of integumentary pathologies obtained as primary injuries or as secondary complications of other diseases. Acute and chronic wound etiologies, burns, lymphedema, and diseases with integumentary manifestations will be reviewed and discussed. Physical therapy management strategies and interventions—including soft tissue mobilization, biophysical agents, debridement, integumentary tests and measures, and
patient education—will be reviewed and practiced. The use of evidence-based practice to guide clinical decision-making will be emphasized. (2 credits)

PHT 6725—Cardiovascular and Pulmonary Physical Therapy
This course provides an overview of the related pathologies and diagnostic and medical-surgical procedures of the cardiovascular and pulmonary systems. Physiological principles of exercise will be applied to cardiovascular and pulmonary examination and intervention for given pathologies. Students will demonstrate PT cardiovascular and pulmonary examination, interventions, treatment planning, documentation, and outcome measurement across all clinical settings and explore interventions related to exercise, functional activities, and airway clearance. The relevance of clinical laboratory values and medical/surgical diagnostics and interventions associated with cardiovascular and pulmonary dysfunctions will also be covered. **Prerequisites:** PHT 6705 Exercise Physiology and PHT 6717 Systems Management I (4 credits)

PHT 6807—Systems Management II: Medical Issues in the Acute Setting
This course is a continuation of PHT 6717—Systems Management I: Medical Pathology and Pharmacology. Systems Management II has a two-fold purpose: 1) to present those body system pathologies not covered in PHT 6717, and 2) to specifically address medical and treatment issues found in acute care settings. Renal, urologic, hepatic, pancreatic, biliary, and gastrointestinal systems will be presented first. Students will gain knowledge of signs/symptoms, pathogenesis, differential diagnosis, and pharmacological aspects of treatment related to disorders in these systems. The second half of the course addresses physical therapy examination and management of the acute care patient. Included in this section are patient testing, condition diagnosis/prognosis, and patient disposition. Concomitant attention is given to issues of patient safety, management of the treatment environment, and proper use of specialized equipment. Treatment precautions, recognition of adverse responses, and emergency procedures will be emphasized. Case studies and laboratory sessions will focus on patient mobilization principles; interprofessional coordination of care; and acute nonsurgical, acute postsurgical, and medically complicated patient management. Adding further depth to the course will be discussions of biopsychosocial and cultural factors affecting the rehabilitation process. (2 credits)

PHT 6810—Musculoskeletal I
This is the first of three courses designed to introduce the entry-level D.P.T. student to the elements of patient/client management in the orthopedic setting. This course emphasizes the musculoskeletal system and follows both the sequence and nomenclature outlined in the Guide to Physical Therapist Practice including examination, evaluation, diagnosis, prognosis, intervention, and outcomes. Specific areas to be covered will include communication and history taking, systems review, symptom physiology, selection and administering tests and measures, principles of manual therapy, soft tissue/myofascial intervention, extremity and spine mobilization (non-thrust), common disorders and injuries, musculoskeletal radiology, and principles of musculoskeletal disorder/injury management. Students will acquire the cognitive, psychomotor, and affective skills necessary to conduct a general musculoskeletal examination and perform interventions relevant to physical therapy practice. At completion of this course, students will have acquired the requisite knowledge to learn advanced diagnoses and interventions covered in PHT 6820, PHT 6820L, PHT 6821, and PHT 6821L. Case studies will be utilized in conjunction with lecture, laboratory skill practice, and interactive teaching and learning methods to integrate didactic knowledge into real-life clinical scenarios. (2 credits)

PHT 6810L—Musculoskeletal I Lab
This lab course will emphasize the psychomotor and affective skills required when providing the associated musculoskeletal examination and interventions addressed in PHT 6810, Musculoskeletal I. Students are instructed and mentored in the selection and application of tests, measurements, and physical therapy interventions. Case studies are utilized in conjunction with interactive teaching and learning to assist students in integrating the techniques into simulated and real-life scenarios relevant to the musculoskeletal system. (2 credits)

PHT 6814—Clinical Practicum I
This course includes classroom instruction and integrated clinical education (ICE) experiences. It concludes with a four-week, full-time clinical experience in the skilled nursing facility (SNF) setting. Classroom instruction focuses on orientation and preparation for both integrated and full-time clinical experiences. The ICE experiences employ a self-contained collaborative clinical education model in which academic faculty members directly supervise students in a clinical setting. Students practice examination/evaluation, screening, and treatment skills learned in the curriculum concurrently and cumulatively throughout the semester. They practice with underserved geriatric and other adult populations in an acute care hospital joint replacement unit, an outpatient clinic, and a skilled nursing facility. The course concludes with a four-week, full-time clinical education experience in the SNF setting with students directly supervised by community-based clinicians in a 1:1 or 2:1 model. The course focuses on application and integration of coursework to date including, but not limited to, Basic Medical Sciences, Clinical Anatomy, Clinical Skills, Cardiopulmonary, Integumentary, Gerontology, and Systems Management I. The students will develop confidence and skills in professional behavior; clinical safety; communication; therapeutic presence; assessment;
examination; screening; basic treatment planning; and performance of basic interventions, patient/client education, interprofessional collaborative practice, documentation, and reimbursement/billing. Students will self-assess and reflect on their clinical performance. Academic and clinical faculty members will provide students with real-time feedback with formative and summative assessment regarding their clinical skills and professional behavior. In partial fulfillment of this course, students will complete pre-identified, service-learning activities selected by faculty members to supplement classroom and clinical education experiences. Service learning experiences will provide students with opportunities to apply their knowledge and clinical skills to benefit the local community, with reflection on the impact of their service required following the activity. (3 credits)

PHT 6815—Physical Agents
This course will emphasize both cognitive and psychomotor knowledge related to appropriate use of physical agents within the context of the Patient/Client Management Model of Physical Therapy Practice. Basic science information related to physiological effects, indications, and contraindications for physical agents will be discussed. Course content will be delivered through classroom lectures, video demonstrations (student lead), and lab practice to facilitate integration of the didactic knowledge into simulated and real-life scenarios. (2 credits)

PHT 6802—Evidence-Based Practice II
In this course, students will be exposed to Sackett’s model of evidence-based medicine in order to lay a foundation for understanding the global concept of evidence-based practice (EBP). Students will learn to use the PICO format to ask clinically relevant questions. Students will learn to locate sources of evidence, evaluate the evidence, and make recommendations based on the evidence. Students will also explore the work of the Philadelphia Panel, the Pedro scale, and Hooked on Evidence as methods for critiquing the literature. Lastly, students will contribute to APTA’s Hooked on Evidence database. (3 credits)

PHT 6816—Neuroscience
In this course, students will acquire the foundational knowledge of human neurophysiology, motor control, and motor learning. Students will also learn the underlying neuropathology that manifests into clinical signs and symptoms of common neuromuscular dysfunctions, which is necessary for the physical therapy examination and management of patients with neuromuscular dysfunctions. Emphasis will also be placed on understanding of principles of normal human motor control and motor learning and its relation to movement dysfunctions resulting from common neuromuscular dysfunctions. The classroom learning of students will be facilitated using lecture, small and large group discussions, case studies, literature review, and simulations. Prerequisite: ANA 5423 (3 credits)

PHT 6817—Pediatrics I
This is the first of two pediatrics courses. This course introduces students to pediatrics as a specialty practice area in physical therapy. Students gain an understanding of typical infant and child development as it relates to movement and have the opportunity to practice observation and evaluation skills, including the use of standardized tools, to screen children for atypical and delayed development. Typical development is presented in the context of applying current motor control theories to predictable developmental sequences, motor progressions, and achievement of motor milestones. Using this foundation, students begin to analyze movement dysfunction exhibited in high-risk infants and children who have common childhood pathologies. Content is presented through lecture, lab, large and small group discussion, and community-based activities. (1 credit)

PHT 6819—Pediatrics II
This course is the second part of a series that focuses on the physical therapy management and family-centered care for the pediatric patient/client. In Pediatrics I, students have gained an understanding of typical infant and child development related to movement and how to use the ICF model as a framework to determine assessment/intervention needs and goals. Students also practiced observation and interaction skills through projects and lab experiences. Using this foundation, students in Pediatrics II will analyze movement dysfunction exhibited in high-risk infants and children who have common childhood pathologies. Atypical child motor dysfunction related to developmental delays; CNS damage; orthopedic conditions; respiratory conditions; sensory processing dysfunction; multisystem impairments; and congenital, neurological, and neuromuscular disorders content is covered to promote critical thinking and establishment of appropriate physical therapy management principles. Students will become familiar with commonly used pediatric tests and measurements. The Guide to Physical Therapist Practice, and the ICF framework are applied in context. Management incorporating use/need for assistive devices, technologies, adapted equipment (i.e., wheelchair prescription and seating), orthotics, and bracing and use of newer interventions for the pediatric patient/client are presented. Delegation and supervision of support personnel, legal/ethical issues related to delivery of care, documentation, interprofessional team management, cultural issues, reimbursement, and patient/family and teacher education will be explored. Students will also have the opportunity to collaborate with students in other disciplines for case analysis and treatment planning. Content is presented through lecture, lab, case studies, large and small group discussion, and community-based activities. (3 credits)
PHT 6820—Musculoskeletal II
Students will acquire the skills needed to manage and prevent disorders of the musculoskeletal system. Students will address relevant practice patterns as they relate to the upper/lower quarter, diagnostic classifications, ICD-10 codes, examination, evaluation, diagnosis, prognosis, and interventions. Case studies are utilized in conjunction with lecture to assist students in integrating the didactic knowledge into simulated and real-life scenarios. (3 credits)

PHT 6820L—Musculoskeletal II Lab
This course emphasizes the psychomotor and affective skills required when providing the musculoskeletal interventions and tests addressed in PHT 6820. Students will acquire the psychomotor skills needed to manage and prevent disorders of the musculoskeletal system by addressing relevant practice patterns as they relate to the upper/lower quarter, ICD-10 codes, examination, evaluation, diagnosis, prognosis, and interventions related to these patterns. Corequisite: PHT 6820 (2 credits)

PHT 6813—Gender-Specific Issues in Physical Therapy
This course provides a review of diseases unique to the male and female body systems. Students will gain knowledge of gender-specific pathologic processes associated with selected diseases as well as disease-specific signs and symptoms. Common medical diagnostic and treatment approaches of gender-specific conditions are discussed, including both medical management and an introduction to physical therapy intervention. Changes to body systems during normal pregnancy will be discussed in addition to common pregnancy-related musculoskeletal problems. Topics will include male and female incontinence, prostate disease, erectile dysfunction, pregnancy-related movement dysfunction, pelvic floor dysfunction, urinary and fecal incontinence, lymph edema management, premenstrual dysphoric syndrome, female athlete triad, postmenopausal considerations, and osteoporosis. Students will be exposed to entry-level physical therapy examination techniques and interventions used to manage gender-specific diseases, including recognition of key subjective or historical information that may warrant a pelvic floor examination or referral to another professional. Students will also learn effective approaches to the discussion of sensitive topics and will learn to perform culturally appropriate screening and management of patients who have gender-specific diseases. (2 credits)

PHT 6821—Musculoskeletal III
PHT 6821 (lecture) is an evidence-based approach to the management of musculoskeletal disorders of the spine. Students will acquire the requisite skills necessary to examine, manage, and prevent musculoskeletal impairments; functional limitations; and disabilities of the spine. The course will address lumbar, thoracic, costal, cervical, sacroiliac, pelvis, temporomandibular, and headache disorders. Students are prepared for entry-level patient/client management including the ability to perform an examination, evaluation, diagnosis, prognosis, and the ability to select optimum interventions. Moreover, students will acquire the knowledge necessary to accurately disseminate information (verbal and written/documented) related to the examination and management of spine disorders to patients and clients and across the broad range of health care disciplines. Case studies are utilized in conjunction with lecture and interactive teaching and learning to assist students in integrating the didactic knowledge into simulated and real-life scenarios. (2 credits)

PHT 6821L—Musculoskeletal III Lab
PHT 6821L (lab) will emphasize the psychomotor and affective skills required when providing the associated musculoskeletal examination and interventions addressed in PHT 6821, Musculoskeletal III. Students are instructed and mentored in the selection and application of tests, measurements, and physical therapy interventions. Case studies are utilized in conjunction with interactive teaching and learning to assist students in integrating the techniques into simulated and real-life scenarios relevant to the musculoskeletal system. Corequisite: PHT 6821 (2 credits)

PHT 6824—Clinical Practicum II
This is a clinical education course utilizing a self-contained, collaborative, clinical education model where students are directly supervised in the clinic by academic faculty members. Students concurrently practice examination/evaluation and treatment skills learned in the curriculum in outpatient settings, including servicing underserved and/or underinsured adults.

In partial fulfillment of this course, students will select and complete service-learning activities that have been preidentified by faculty members to supplement classroom and clinical education experiences. Service-learning experiences will provide students with an opportunity to apply their knowledge and clinical skills to benefit the local community with follow-up reflection on the impact of their service. (1 credit)

PHT 6830—Neuromuscular I
Neuromuscular Systems I addresses the examination and treatment of adults with neuromuscular disorders. Students apply knowledge from Neuroanatomy and Neuroscience to the clinical management of patients with neurological conditions. Neuromuscular Systems I provides the foundational concepts and clinical reasoning for choosing tests and measures used during PT examination of the neurological patient, including sensory and motor tests; examination of motor function, motor learning, and coordination; cranial nerves; functional mobility; self-care and activities of daily living; community function; arousal, attention, and cognition; and balance, gait, and disease-specific tests. The foundational concepts for procedural interventions related to neurorehabilitation will
be addressed. These include indications, precautions, and contraindications, as well as evidence-based recommendations for therapeutic exercise; balance and gait retraining; manual techniques and facilitation; electric stimulation; mobility training; upper extremity reach, grasp, and manipulation training; positioning, supportive, and protective devices; wheelchairs; and community re-entry. Prerequisites: ANA 5423 and PHT 6816 (3 credits)

PHT 6830L—Neuromuscular I Lab
This course is the laboratory component of Neuromuscular Systems I which addresses the psychomotor skills needed for the examination and treatment of patients with neuromuscular disorders. The students will be exposed to a variety of clinical tests and measures including patient history; sensory testing (superficial, deep, and cortical sensations) by both peripheral nerve distribution and dermatome; myotome and manual muscle testing; motor function and coordination testing; balance, gait, and mobility testing; arousal, attention, and cognitive tests; environmental, home, and work/play barriers; self-care and home management (including ADLs and IADL tests); job/school/play reintegration testing; and adaptive/adaptive device testing. Disease-specific tests and measures will also be performed. Psychomotor treatment skills will include balance and gait training, including body weight-supported treadmill training; therapeutic exercise to improve muscle performance, mobility, balance, and coordination for the neurological patient; functional training, self-care and home management in ADLs and IADLs; work/play integration; manual therapy techniques, positioning, and facilitation; and prescription and application of assistive and supportive devices; as well as physical agents and electrotherapeutic modalities. Prerequisites: ANA 5423 and PHT 6816 (2 credits)

PHT 6834—Clinical Practicum III
This course includes classroom instruction and integrated clinical education (ICE) experiences. It concludes with a four-week, full-time, intermediate clinical experience in an outpatient orthopedic setting. Classroom instruction focuses on orientation and preparation for both integrated and full-time clinical experiences. The ICE experiences employ a self-contained collaborative clinical education model in which academic faculty members directly supervise students in a clinical setting. Students practice examination/evaluation and treatment skills learned in the curriculum concurrently and cumulatively throughout the semester in outpatient settings. The four-week, full-time, intermediate clinical education experience is a community-based experience in an adult outpatient setting (primarily musculoskeletal), in which community-based clinicians in a 1:1 or 2:1 model. The course focuses on refining and implementing skills based upon application and integration of coursework to date, including, but not limited to, Basic Medical Sciences, Clinical Anatomy, Clinical Skills, Cardiopulmonary, Integumentary, Gerontology, and Systems Management, Musculoskeletal, and Neuromuscular I. The students will develop confidence and competency in professional behavior; clinical safety; communication; therapeutic presence; assessment; examination; screening; treatment planning; and performance of skill interventions, patient/client education, interprofessional collaborative practice, documentation, and reimbursement/billing. Students will self-assess and reflect on their clinical performance. Academic and clinical faculty members will provide students with real-time feedback with formative and summative assessment regarding their clinical skills and professional behavior. In partial fulfillment of this course, students will complete pre-identified, service-learning activities selected by faculty members to supplement classroom and clinical education experiences. Service learning experiences will provide students with opportunities to apply their knowledge and clinical skills to benefit the local community, with reflection on the impact of their service required following the activity. (2 credits)

PHT 6835—Systems Management III: Medical Screening and Differential Diagnosis for Physical Therapists
This course provides students with the opportunity to develop their skills to identify patients with medical conditions outside the physical therapy practice, and to identify comorbidities and external factors that affect patient response to physical therapy treatment. The focus of this course is on the development of the skill of differential diagnosis as practiced by the physical therapist. This will be accomplished through the evaluation of information gained during the examination processes of intake, history, and physical examination, as well as the evaluation of a patient’s response to physical therapy treatment. The synthesis of this information will be combined with the student’s knowledge of medical pathology of the various systems to allow for an understanding of when a patient should be referred to another health care provider and when the patient is appropriate for physical therapy treatment. The differential diagnosis considered in this course will assist in differentiating between musculoskeletal system dysfunction and medical pathologies of all systems, including the musculoskeletal system. The identification and effects of cognitive-behavioral influences on patient management and patient prognosis will also be considered. This course emphasizes the ability to identify the presence of these conditions and identify when referral to another health care practitioner is required or when specific considerations should be made in the approach of physical therapy treatment. Prerequisites: PHT 6810 and PHT 6716 (3 credits)

PHT 6829—Practice Management
This course prepares students for the practice management demands of contemporary physical therapy practice essential to being successful, responsive, and adaptable to the evolving needs of the health care industry. Students are introduced
to the business perspective of health care service delivery, including leadership and managerial skills related to direct patient care and organizational operations. Topics covered include the continuum of care, regulatory and reimbursement mechanisms, coding, billing, documentation, compliance, the Triple Aim, interprofessional collaborative practice, leadership, management, ethical practice, quality improvement, health informatics, risk management, marketing, and public relations. (2 credits)

PHT 6907—Clinical Education Experience Orientation
This course will include all final preparation necessary for students to begin their Clinical Education Experience series. In the orientation course, students complete compliance requirements and review behavior and professional expectations during clinic time. Students are also oriented to the weekly reporting and assessment tools that will be utilized during the series, including the CPI instrument. Additionally, students develop initial goals and communication strategies for the clinical series. (0 credits)

PHT 6914—Neuromuscular II
Neuromuscular II integrates concepts from Neuroscience and Neuromuscular Systems I to engage students in the patient/client management of patients with neuromuscular dysfunction. Students are exposed to a variety of case studies, representing all adult neuromuscular practice patterns in the Guide to Physical Therapist Practice, to integrate and apply previously learned neuromuscular skills to patient scenarios. Emphasis is placed on clinical reasoning during all steps of patient/client management; the ability to apply evidence in practice, design, and execution of patient/client-related instruction; delegation to support personnel; and documentation of all aspects of care. This class also addresses primary, secondary, and tertiary prevention for patients with neuromuscular conditions. (2 credits)

PHT 6914L—Neuromuscular II Lab
This course is the laboratory component of Neuromuscular II. In it, students will perform all aspects of patient/client management including examination, evaluation, diagnosis, prognosis, development of a plan of care, procedural interventions, and outcome measurement. Students will apply these techniques to a variety of case studies, representing the scope of adult practice patterns in the Guide to Physical Therapist Practice. Neuromuscular II culminates in an intense, one-week laboratory experience, the Neuro Boot Camp, in which students work with real patients who have complicated neuromuscular disorders in a faculty-supervised setting. Students are responsible for performing a thorough examination, writing a comprehensive plan of care, performing procedural interventions, providing patient instruction, and communicating with caregivers. (2 credits)

PHT 6915—Prosthetics and Orthotics
In this course, students will acquire the skills necessary to evaluate need, analyze pathological gait, develop a plan of care, and treat patients for whom prosthetic or orthotic devices are indicated from a medical or rehabilitation standpoint. Students will learn how to manage movement-related problems in patients with amputations because of diabetes, burns, trauma, cancer, or genetic conditions. They will learn about the components, fabrication, and application of upper and lower extremity prosthetic and orthotic devices and spinal orthoses. The course includes a full-day laboratory experience in which students work with real patients with amputations in a faculty-supervised setting. Students will also explore the contemporary literature to facilitate an evidence-based approach to orthotic and prosthetic rehabilitation. (5 credits)

PHT 6917—Clinical Education Experience A
The Clinical Education Experience series consists of three consecutive, full-time, supervised experiences for senior D.P.T. students. Students are provided with opportunities to practice clinical decision-making based on evidence and develop entry-level physical therapy skills for patient/client management in inpatient and outpatient settings. Students will apply their knowledge, skills, attitudes, and behaviors, in various community-based settings representative of the common practice settings in which physical therapists work. Clinical Education Experiences encompass campus orientation in the summer of year three, followed by a total of 32 weeks of full-time clinical education during fall and winter semesters. Students will typically rotate through three clinical placements—10, 12, and 10 weeks—in a variety of health care organizations; schedule modifications may be made to accommodate facility requirements or other needs. The goal of all placements is student achievement of entry-level competency and professional behaviors in all settings. Students must complete at least one experience in an acute care/inpatient, or the equivalent, such as an LTACH; subacute inpatient or outpatient with a neurorehabilitation component; and outpatient. During the full-time experiences, students will focus on patient/client management models by performing patient examinations, evaluations, determination of diagnoses, prognoses, and interventions (POC) within the context of the clinical setting, utilizing the Guide to Physical Therapist Practice. It is expected that, through the clinical experiences, students will demonstrate appropriate management skills of patients/clients across adulthood or the life span and across the continuum of care commonly seen in physical therapy practice. They will also demonstrate progressively greater independence in effectively managing less medically complex to more medically complex patients in each practice setting. Students are expected to demonstrate effective communication and documentation skills, professionalism consistent with the APTA core values, cultural competence, and ethical and legal practice. (5 credits)
PHT 6920—Systems Management IV: Applied Clinical Decision Making
Students apply problem solving heuristics, analyze case presentations of multifactor movement dysfunction, synthesize patient problem lists from collected data, develop intervention strategies, and evaluate the outcome of assessment and intervention decisions. The course integrates material from the foundational medical and clinical sciences and student clinical experiences. Accordingly, students demonstrate differential diagnosis and treatment planning across the life span as well as select and justify interventions, recommend referrals, and establish discharge dispositions.

Student learning and course participation is driven by mock and real clinical cases and clinical experiences. Content experts guide cognitive domain discussion and the decision-making process, assess the affective domain and compliance with professional ethical standards, and evaluate complex overt performance of psychomotor tasks. Students will develop initial plans for examination and assessment, perform assessments, analyze and interpret test results, prepare written intervention plans, perform interventions, and suggest potential outcome assessments. Students will justify and modify treatment plans to account for changes in the patients’ status. In addition, students will prepare and present a clinical case report to the assembled class at the conclusion of the term. Topics for the clinical cases and clinical experiences will cover a broad spectrum of conditions seen by physical therapists in the clinical setting. (4 credits)

PHT 6927—Clinical Education Experience B
This is the second of three full-time clinical experiences for seniors. Students will complete an extended experience in multifaceted health care organizations with the goal of bringing their skills to entry level for both inpatient and outpatient care. Students may also have the opportunity to complete an experience in a specialty area in physical therapy practice. See PHT 6917 for a complete description of Clinical Education Experiences. (6 credits)

PHT 6946—Wrap-up
This course is offered at the completion of the student’s clinical and didactic coursework. Students participate in a hybrid format, online and on-campus review of the curriculum, leading to the comprehensive examination. Activities include online review modules, self-assessment, and practice examinations. Debriefing of the clinical education experiences takes place when students return to campus and participate in summative assessment of the curriculum and preparation for employment as a physical therapist. The comprehensive examination is also held when the students return to campus. (2 credits)

PHT 6937—Clinical Education Experience C
This is the third of three full-time clinical experiences for seniors. Students will complete an extended experience in multifaceted health care organizations with the goal of bringing their skills to entry level for both inpatient and outpatient care. Students may also have the opportunity to complete an experience in a specialty area in physical therapy practice. See PHT 6917 for a complete description of Clinical Education Experiences. (5 credits)

PHT 6904—Independent Study Research Project
This course requires students to complete a single or group research project with other students in the same class. The topic, methodology, and depth of the study will be determined by the supervising faculty member(s). Though this is an individual or group project, students receive individual grades for the work they contributed to the project. (1–5 credits)

PHT 6910—Independent Study
The topic and requirements of this course will be determined by the supervising faculty member(s). (1–6 credits)
Doctor of Physical Therapy Tampa Bay Course Descriptions

Year One

Summer

PHTT 5400—Physiology for Physical Therapists
The course is foundational and intended to provide students in the Physical Therapy Program with an understanding of the basic physiochemical concepts and physiological principles underlying the development, maintenance, and propagation of the human body. It provides an examination of the essential physiological processes with reference to clinical applications where appropriate. Topics covered include subcellular processes, membrane mechanisms, muscle physiology, connective tissue matrices, the cardiovascular system, the nervous system, renal physiology, the respiratory system, endocrinology, and gastrointestinal physiology. (3 credits)

PHTT 5420 Anatomy for Physical Therapists I
This course integrates the study of gross anatomy with clinical practice for the profession of physical therapy. As a blended course, students learn by participating in online and face-to-face sessions. Online instruction includes lectures, assignments using a virtual reality anatomy application, quizzes, and video demonstration of palpation techniques. Face-to-face instruction includes prosected cadaver lab, palpation lab, and active learning exercises linking anatomy to clinical practice. This course is a 12-week, 2-credit class that covers head/face (skull, brain, brainstem, cranial nerves, facial structures, major vessels, and nerves), thorax (ribs, thoracic viscera, thoracic spine, diaphragm, major vessels, and nerves), and abdomen (abdominal viscera, major vessels, and nerves). (2 credits)

PHTT 5611—Professional Issues in Physical Therapy
This course introduces the foundational frameworks for the profession of physical therapy, including the patient/client management model, patient-centered care, the Guide to Physical Therapist Practice, and the International Classification of Functioning, Disability, and Health (ICF) Model. The history of the physical therapy profession and the guiding documents (mission, vision, core values, code of ethics, and standards of practice) of the American Physical Therapy Association (APTA) are analyzed in context of the professional roles and responsibilities of physical therapists, including that of collaborator on an interprofessional team. Students discuss the broader role of physical therapists in promoting local/global health initiatives related to optimizing movement, preventing injury, and removing barriers to function and participation in society. Students begin to internalize the roles of the physical therapist through their membership in the APTA, creation of their values portfolio, and organization of their compliance documents. (3 credits)

PHTT 6701—Communication and Cultural Competence
This course explores concepts of cultural competence related to health care delivery. Interprofessional and interpersonal communication and group processes needed to function effectively as part of a team in the health care environment will also be addressed. Communication (written, verbal, and nonverbal) methods used to enhance interactions with the patient/client, families, and other members of the health care team will be discussed and practiced. Discussions will include epidemiology and health care access issues as they relate to cultural barriers. (2 credits)

Fall

PHTT 6705—Essentials of Exercise Physiology
This course describes the response to exercise and training on the cardiac, pulmonary, musculoskeletal, neural, and endocrine systems of the human body. The various methods of training for increased strength, hypertrophy, power, cardiovascular fitness, and endurance, and the effects of physical activities and work-related stress on the human organism will be discussed. Other major topics of discussion will be energy liberation, circulation and respiration, physical work capacity, physical training, energy cost of various activities, nutrition and performance, temperature regulation, factors affecting performance, and fitness. Students will gain the knowledge required for designing exercise programs in the general and special populations based on established needs for function and performance. (3 credits)

PHTT 6741—Systems Management I
This course describes the response to exercise and training on the cardiac, pulmonary, musculoskeletal, neural, and endocrine systems of the human body. The various methods of training for increased strength, hypertrophy, power, cardiovascular fitness, and endurance, and the effects of physical activities and work-related stress on the human organism will be discussed. Other major topics of discussion will be energy liberation, circulation and respiration, physical work capacity, physical training, energy cost of various activities, nutrition and performance, temperature regulation, factors affecting performance, and fitness. Students will gain the knowledge required for designing exercise programs in the general and special populations based on established needs for function and performance. (3 credits)
Pharmacotherapeutic knowledge will be brought into practice of physical therapy. It is an in-depth study of musculoskeletal anatomy including bony landmarks, muscular attachments, ligamentous structures, and neutral structures. Palpation of key bony- and soft-tissue structures will be introduced. (4 credits)

Winter

PHTT 6710—Clinical Skills I
This course introduces students to the basic clinical skills associated with physical therapy examination and evaluation, including administering culturally appropriate and age-related tests and measures such as gait, balance, range of motion/muscle length, muscle strength, and functional performance testing, as well as producing documentation of these portions of an examination. Both psychomotor skills and clinical reasoning skills are addressed based on tests and measures in the Guide to Physical Therapist Practice. This course will allow the students to apply examination and evaluation skills with patients as part of the integrated clinical experiences. (3 credits)

PHTT 6715—Essentials of Biomechanics and Kinesiology
This is a basic science course to introduce physical therapy students to the study of biomechanics and kinesiology. The students will integrate their anatomy knowledge of muscle and joint structures into the study of joint motion and functional movements. The course introduces the student to basic principles of biomechanics, including kinetics, kinematics, and tissue biomechanics. Basic biomechanics serves as the foundation for understanding kinesiology. The study of kinesiology will be separated by body parts: kinesiology of the upper extremity, the lower extremity, and the spine. Once the regional knowledge of kinesiology is understood, the final outcome of the course will be to facilitate the students to learn and comprehend complex kinesiologic analysis: gait, posture, and functional movements. (3 credits)

PHTT 6761—Systems Management II
This course is a continuation of Systems Management I. This course provides an introductory overview of medical pathology and pharmacology commonly seen by physical therapists across the life span. Students will be introduced to the medical management, pharmacological aspects, signs and symptoms, pathogenesis, and differential diagnosis of selected pathological disorders. Application of the ICF Model will be used to determine the effect of pathological disorders on functional ability. Drug classification, pharmacokinetics, pharmacodynamics, mechanism of action, and indications for use of selected medication classes will be addressed. Pharmacotherapeutic knowledge will be brought into the clinical perspective of physical therapy patient/client management. Students will continue introductory skills of patient care within inpatient environments, including bed mobility, transfers, and management of medical equipment such as lines, tubes, and catheters during patient mobility. (3 credits)

PHTT 6822—Health Promotion, Disease Prevention, and Wellness
This course addresses two integral concepts in physical therapist practice: health promotion/disease prevention and education/instruction of patients, clients, and communities. Students explore health promotion, disease prevention, and wellness theories and models, including behavior-change theories and the factors that promote or impede change. Students apply the Healthy People 2020 and APTA's Vision Statement for the Physical Therapy Profession initiatives to individuals and communities for primary, secondary, or tertiary prevention. Students explore principles of teaching and learning needed to plan and implement educational programs, in-services, or patient education, including learning theories, needs assessments, instructional strategies, and assessments of learning effectiveness. (2 credits)

Year Two

Summer

PHTT 6700—Introduction to Evidence-Based Practice
Evidence-based practice (EBP) integrates evidence from three sources to answer clinically relevant questions that deal with 1) research literature; 2) clinician knowledge, experience, and judgment; and 3) patient preferences, values, and circumstances. This course introduces the role of the physical therapist as a scientific, evidence-based practitioner of physical therapy and provides a foundation for the integration of critical inquiry and evidence-based practice throughout the curriculum. (3 credits)

PHTT 6720—Clinical Skills II
This course integrates all three aspects of physical therapist interventions described in the Guide to Physical Therapist Practice, including a) coordination, communication, and documentation; b) patient-related instruction; and c) procedural interventions. Students will learn, practice, and apply basic procedural interventions (clinical skills), including therapeutic exercise, as an intervention. This course is taught after Clinical Skills I, so students can apply examination, evaluation, and intervention skills with patients as part of our integrated clinical experiences. (3 credits)
PHTT 6623—Practice Management
This course prepares students for the practice management demands of contemporary physical therapy practice that are essential to being successful, responsive, and adaptable to the evolving needs of the health care industry. Students are introduced to the business perspective of health care service delivery, including leadership and managerial skills related to direct patient care and organizational operations. Topics covered include the continuum of care, regulatory and reimbursement mechanisms, coding, billing, documentation, compliance, the Triple Aim, interprofessional collaborative practice, leadership, ethical practice, quality improvement, health informatics, risk management, marketing, and public relations. (3 credits)

Fall
PHTT 6722—Integumentary PT
Integumentary PT addresses the patient/client management of patients with integumentary dysfunction or those who have the potential for integumentary disorders as described in the Guide to Physical Therapist Practice. The course builds on the students’ knowledge of skin anatomy and physiology as related to skin structure, function, pathology, and tissue healing as well as the relationship of movement to the prevention and management of wounds. Topics include screening of the skin as a system as well as the examination, evaluation, diagnosis, prognosis, plan of care, and interventions for people with superficial, partial-thickness, or full-thickness wounds. Students learn to use clinical reasoning along with best-available evidence to select appropriate tests/measures and apply PT interventions to address wounds of all etiologies, depths, and stages. Infection control is addressed throughout the course, as is the role of the PT as part of an interprofessional team, including the referral to other health care professionals for diagnostic testing and medical/surgical interventions. (2 credits)

PHTT 6623—Practice Management
This course prepares students for the practice management demands of contemporary physical therapy practice that are essential to being successful, responsive, and adaptable to the evolving needs of the health care industry. Students are introduced to the business perspective of health care service delivery, including leadership and managerial skills related to direct patient care and organizational operations. Topics covered include the continuum of care, regulatory and reimbursement mechanisms, coding, billing, documentation, compliance, the Triple Aim, interprofessional collaborative practice, leadership, ethical practice, quality improvement, health informatics, risk management, marketing, and public relations. (3 credits)

PHTT 6810—Musculoskeletal I
This course focuses on the patient/client management of people with amputations, including examinations, evaluations, diagnoses, prognoses, plans of care, interventions, and outcomes. Topics include the etiology, psychological considerations, medical management, and complications of amputations; physical therapy examination and evaluation of the acute and chronic patient; prosthetic fabrication, fit, and components; and physical therapy interventions to maximize patient outcomes. Students will also explore current literature to demonstrate an evidence-based approach to rehabilitation using prosthetics. This course also provides an introduction to the role of orthotic devices in patient/client management. The clinical indications and principles of orthotics presented in this class form the foundation for discussion of orthotic prescription and modification in subsequent patient management classes throughout the curriculum. (2 credits)

PHTT 6802—Application of Evidence-Based Practice
Evidence-based practice (EBP) integrates evidence from three sources to answer patient-focused, clinically relevant questions. The sources are 1) research literature; 2) clinician knowledge, experience, and judgment; and 3) individual patient values and circumstances. This course reviews and builds on content introduced in Introduction to Evidence-Based Practice, developing the role of the physical therapist as a scientific, evidence-based practitioner of physical therapy, and continues the integration of critical inquiry and evidence-based practice throughout the curriculum. Students will practice critical appraisal of different study designs. The role of individual patient/client preferences and values, as related to the use of evidence, will also be explored. (3 credits)

Winter
PHTT 6725—Cardiovascular and Pulmonary Physical Therapy
This course provides an overview of the related pathologies, diagnostic, and medical-surgical procedures of the cardiovascular and pulmonary systems. Physiological principles of exercise will be applied to cardiovascular and pulmonary examination and intervention for given pathologies. Students will demonstrate PT cardiovascular and pulmonary examination, interventions, treatment planning, documentation, and outcome measurement across all clinical settings. They will also explore interventions related to exercise, functional activities, and airway clearance. The relevance of clinical laboratory values and medical/surgical diagnostics and interventions associated with cardiovascular and pulmonary dysfunctions will be covered as well. (4 credits)

PHTT 6810—Musculoskeletal I
This is the first of three courses designed to introduce the D.P.T. student to the elements of musculoskeletal orthopedic patient/client management. This course will emphasize the musculoskeletal system and follows both the sequence and nomenclature outlined in the Guide to Physical Therapist Practice including examination, evaluation, diagnosis, prognosis, intervention, and outcomes. Specific areas to be covered will include communication and history taking, systems review, symptom physiology, selection and administration of tests and measures, principles of manual therapy, soft tissue/myofascial interventions, extremity and spinal joint
mobilization (non-thrust), common musculoskeletal disorders and injuries, assessment and management of pain, effects of injury and pain on human movement, musculoskeletal radiography/imaging, and principles of musculoskeletal disorder/injury management. Students will acquire the cognitive, psychomotor, and affective skills necessary to conduct a general musculoskeletal examination and perform interventions relevant to physical therapy practice across the life span and in various practice settings. At the completion of this course, students will have acquired the requisite knowledge to learn advanced diagnoses and interventions skills covered in PHTT 6820, PHTT 6820L, PHTT 6821, and PHTT 6821L. Case studies will be utilized with interactive teaching and learning methods to integrate didactic knowledge into real-life clinical scenarios. (2 credits)

PHTT 6810L—Musculoskeletal I Lab
Laboratory sessions will emphasize the psychomotor and affective skills required to perform the examination and interventions addressed in PHTT 6810. (2 credits)

PHTT 5423—Neuroanatomy and Neurophysiology
This course introduces physical therapy students to the study of the human nervous system's structures, pathways, connections, and functions. Students are introduced to basic anatomical and physiological principles of the brain, spinal cord, and peripheral nervous system and relate these structures to the clinical signs and symptoms of neurological dysfunction. Neuroanatomy and Neurophysiology serves as the basic scientific foundation for subsequent physical therapy coursework including motor control, Neuromuscular Systems I, and Neuromuscular Systems II. Appropriate applications will be discussed. (3 credits)

Year Three

Summer
PHTT 6816—Motor Control Across the Life Span
This course provides the foundational knowledge about motor control theory and practice across the life span. Principles of motor control and motor learning are discussed as they relate to normal human movement from birth through older adulthood, as well as movement dysfunction that results from neurologic pathology. Concepts of neuroplasticity and the recovery of function are also addressed. This class provides the foundations for neurologic and pediatric physical therapy practice through a review of normal human development, as well as development of body structure impairments and activity restrictions in postural control, mobility, and the control of reach/grasp/manipulation. Classroom activities include lectures, case studies, lab simulations, and observation and analysis of normal childhood development, mental functions (arousal, attention, cognition), postural control, mobility, and upper extremity. (3 credits)

PHTT 6820—Musculoskeletal II
This is the second of three courses designed to build upon the introduction to the elements of the musculoskeletal/orthopedic patient/client management. This course will emphasize the musculoskeletal system of the upper quarter and uses nomenclature outlined in the Guide to Physical Therapist Practice including examination, evaluation, diagnosis, prognosis, intervention, and outcomes. Specific areas to be covered will include upper-quarter-specific communication and history taking, selecting and administering tests to examine movement dysfunction; evaluation of the movement system according to the International Classification of Functioning, Disability, and Health model; patient-centered care planning; principles of manual therapy such as advanced mobilization (thrust and non-thrust); common upper quarter musculoskeletal dysfunctions, injuries, and pain conditions; upper quarter radiography/imaging; and interventions to address pain and movement dysfunction in the upper quarter. Students will acquire the skills necessary to conduct an evaluation of the upper quarter, determine the need for interprofessional referral, and manage and prevent disorders of the musculoskeletal system at various levels of acuity across the life span. Case studies are utilized in conjunction with lecture to assist students in integrating the didactic knowledge into simulated and real-life scenarios. (3 credits)

PHTT 6820L—Musculoskeletal II Lab
Laboratory sessions will emphasize the psychomotor and affective skills required to perform the examination and interventions addressed in PHTT 6820. (2 credits)

Fall
PHTT 6821—Musculoskeletal III
This is the third of three courses designed to build upon the elements of musculoskeletal/orthopedic patient/client management and will emphasize an evidence-based approach to the management of musculoskeletal disorders of the lower quarter. This course follows both the sequence and nomenclature outlined in the Guide to Physical Therapist Practice including examination, evaluation, diagnosis, prognosis, intervention, and outcomes. Specific areas to be covered will include lower-quarter-specific communication and history taking, selecting and administering tests and measures, principles of manual therapy including advanced mobilization (thrust and non-thrust), specific musculoskeletal disorders and injuries, specific radiography/imaging, and selected specific interventions. Students will acquire the skills necessary to conduct an examination of the lower quarter and perform interventions relevant to physical therapy practice required to manage and prevent disorders of the musculoskeletal system.
across the life span and the broad range of health care settings. Case studies are utilized in conjunction with lecture to assist students in integrating the didactic knowledge into simulated and real-life scenarios. (2 credits)

PHTT 6821L—Musculoskeletal III Lab
Laboratory sessions will emphasize the psychomotor and affective skills required to perform the examination and interventions addressed in PHTT 6821. (2 credits)

PHTT 6813—Gender-Specific Issues in Physical Therapy
This course is an overview of pathology and musculoskeletal issues that impact the male and female body. Students will gain knowledge of anatomy and physiology, disease processes, and medical management of gender-specific pathology, as well as physical therapy interventions. Students will be educated on the musculoskeletal changes to the female body and other body systems during normal pregnancy. The topics that will be covered will include anatomy and physiology, urologic and colorectal dysfunction, pregnancy-related musculoskeletal issues, prostate disease, the female athlete, osteoporosis, and other gender-specific issues. The students will gain entry-level knowledge on how to interview and perform a basic evaluation and how to develop a plan of care particular to gender-specific health issues. They will gain efficiency in recognizing what treatment strategies they can implement and when it is appropriate to refer a patient to another professional for a more precise pelvic floor examination. (2 credits)

PHTT 6817—Pediatrics
This course introduces students to the physical therapy management of pediatric patients within the frameworks of the APTA Guide to Physical Therapist Practice; ICF; the Hypothesis-Oriented, Pediatric-Focused Algorithm; and reflective practice. Course content incorporates the Academy of Pediatric Physical Therapy essential care competencies for entry-level pediatric physical therapy education: human development; age-appropriate patient/client management; family-centered care for all patient/client and family interactions; health promotion and safety; and legislation, policy, and systems. Topics include family-centered care, common pediatric health conditions/diagnoses, interview/history, tests and measures, diagnosis and prognosis, plan of care, procedural interventions, child/family-related instruction, assistive technology, health and wellness, interprofessional collaborative practice, pediatric health care settings, IDEA, environmental safety considerations, and legal/ethical issues. Students will be guided through the clinical decision-making process using a combination of lectures, simulations, cases, and integrated clinical experiences with pediatric patients. Common pediatric physical therapy examination and intervention techniques will be practiced in lab sessions with peers and performed during integrated clinical experiences with pediatric patients. (3 credits)

Winter
PHTT 6830—Neuromuscular I
Neuromuscular Systems I addresses the examination and interventions for adults with neuromuscular disorders. Students will apply knowledge from Neuroanatomy and Neuropathology and Motor Control Across the Life Span to the clinical management of patients with neuromuscular disorders. Neuromuscular Systems I provides the foundational concepts and clinical reasoning for choosing tests and outcome measures used during the PT examination of the neurological patient. These include sensory and motor tests, examination of motor function, motor learning, coordination, cranial nerve integrity, functional mobility, self-care, activities of daily living, community function, mental function, balance, and gait. The foundational concepts and clinical reasoning for procedural interventions related to neurorehabilitation will be addressed. These include indications; precautions; evidence-based recommendations for therapeutic exercise; balance and gait retraining; facilitation; electric stimulation; mobility training; upper extremity reach, grasp, and manipulation training; positioning, supportive, and protective devices; wheelchairs; and community re-entry. (3 credits)

PHTT 6830L—Neuromuscular I Lab
This is the lab component of Neuromuscular Systems I. This course will allow students the opportunity to practice what they learned in that course. (2 credits)

PHTT 6835—Systems Management III: Differential Diagnosis for PT
This course reviews information related to differential diagnosis of the major body systems—including cardiovascular, pulmonary, hematological, gastrointestinal, renal and urinary, hepatic and biliary, endocrine, and immune systems. It provides students with the opportunity to recognize and identify patients with medical conditions outside the scope of physical therapy practice. The focus is on differential diagnosis through thorough history taking and physical examination. The course will also discuss the findings of special tests in screening for diseases affecting the musculoskeletal system, including cancer, infection, cardiovascular disease, and inflammatory arthritis. Students are expected to apply the information learned in this course to their clinical internships and future practice. This course is taught under the assumption of direct access practice. (3 credits)

PHTT 6812—Topics in Clinical Education
This course is designed to prepare students for the full-time clinical experiences that take place in the fall and winter semesters of their fourth year. Topics such as professional expectations related to the clinical setting, legal practice, and professional behaviors will be covered. Students will be trained in the use of the clinical performance instrument (CPI) and educated on how to effectively use it for self-assessment and
goal-writing. Federal and state practice regulations will be reviewed to ensure compliance in the clinic. Students will be introduced to the capstone project and expectations related to the clinical experiences, including CPI assessments, in-service presentations, and completing the APTA PT Student Evaluation. The clinical education handbook will be reviewed and discussed in detail during this class. (2 credits)

Year Four

Summer

PHTT 6914—Neuromuscular II
Neuromuscular Systems II integrates concepts from Neuroanatomy and Neurophysiology, Motor Control Across the Life Span, and Neuromuscular Systems I to engage students in the patient/client management of individuals with neuromuscular diseases and dysfunction. Students are exposed to a variety of case studies, in order to integrate and apply previously learned neuromuscular skills. Emphasis is placed on disease-specific tests and measures and application of clinical reasoning during all steps of patient/client management and throughout the course of management (acute to chronic); the ability to apply evidence in practice; the design and execution of patient/client-related instruction; delegation to support personnel; and documentation of all aspects of care. This class also continues to address primary, secondary, and tertiary prevention for patients with neuromuscular conditions. (2 credits)

PHTT 6914L—Neuromuscular II Lab
This course is the laboratory component of Neuromuscular Systems II. In it, students will perform all aspects of patient/client management including examination, evaluation, diagnosis, prognosis, development of a plan of care, procedural interventions, and outcome measurement for individuals with various neuromuscular diseases and conditions. Students will apply these techniques to a variety of case studies. Neuromuscular Systems II culminates in an intense, one-week laboratory experience, the Neuro Boot Camp, in which students work with real clients who have complicated neuromuscular disorders in a faculty-supervised setting. Students are responsible for performing a thorough examination, writing a comprehensive plan of care and daily notes, performing procedural interventions, providing patient instruction, and communicating with caregivers. (2 credits)

PHTT 6920—Systems Management IV: Applied Clinical Decision Making of Complex Patients
This course focuses on strengthening students’ clinical reasoning skills in the physical therapy management of complex patients in different health care settings utilizing the Physical Therapist Patient/Client Management model, ICF model, and reflective-practice framework. Students integrate content from foundational and clinical courses to make clinical decisions under complex, ambiguous, and unpredictable situations. Online and face-to-face learning activities mimic real-life clinical scenarios where students are required to demonstrate their ability to formulate hypotheses, select appropriate tests and measures, interpret findings, select evidence-based interventions, modify the plan of care based on patient responses and/or changes in status, and reflect on their clinical decision-making processes. Synchronous, case-based discussions led by expert clinicians utilize probing questions to foster clinical reasoning and develop critical thinking routines. Students engage in authentic simulation experiences to practice making real-time clinical decisions while managing complex patients in different health care settings. (4 credits)

Fall–Winter

PHTT 6941—Clinical Experience I
The clinical experiences consist of three consecutive, full-time, supervised clinical education experiences for fourth-year D.P.T. students. Students are provided with the opportunities to practice clinical decision-making based on evidence and the experience of their clinical instructor(s). They will develop entry-level physical therapy skills required for patient/client management in a variety of settings. Additionally, they will apply their knowledge, skills, attitudes, and behaviors, in a variety of patient care settings across the life span. The clinical experiences occur following the completion of the didactic portion of the curriculum and total 36 weeks, which will span from the fall semester through the winter semester of the fourth year. During the full-time experiences, students will focus on patient/client management models by performing patient examinations and evaluations and determining diagnoses, prognoses, and interventions within the context of the clinical setting. It is expected that, through these experiences, students will demonstrate appropriate management skills of patients/clients across adulthood or the life span and across the continuum of care commonly seen in physical therapy practice. They will also demonstrate progressively greater independence in effectively managing less medically complex to more medically complex patients within each practice setting. (6 credits)

PHTT 6951—Clinical Experience II
This is the second of three consecutive, full-time, supervised clinical education experiences for fourth-year D.P.T. students. Students are provided with the opportunities to practice clinical decision-making based on evidence and the experience of their clinical instructor(s). They will develop entry-level physical therapy skills required for patient/client management in a variety of settings. Additionally, they will apply their knowledge, skills, attitudes, and behaviors, in a variety of patient care settings across the life span. The clinical experiences occur following the completion of the didactic portion of the
curriculum and total 36 weeks, which will span from the fall semester through the winter semester of the fourth year. During the full-time experiences, students will focus on patient/client management models by performing patient examinations and evaluations and determining diagnoses, prognoses, and interventions within the context of the clinical setting. It is expected that, through these experiences, students will demonstrate appropriate management skills of patients/clients across adulthood or the life span and across the continuum of care commonly seen in physical therapy practice. They will also demonstrate progressively greater independence in effectively managing less medically complex to more medically complex patients within each practice setting. *(6 credits)*

**PHTT 6961 Clinical Experience III**

The third of three consecutive, full-time, supervised clinical education experiences for fourth-year D.P.T. students. Students are provided with the opportunities to practice clinical decision-making based on evidence and the experience of their clinical instructor(s). They will develop entry-level physical therapy skills required for patient/client management in a variety of settings. Additionally, they will apply their knowledge, skills, attitudes, and behaviors, in a variety of patient care settings across the life span. The clinical experiences occur following the completion of the didactic portion of the curriculum and total 36 weeks, which will span from the fall semester through the winter semester of the fourth year. During the full-time experiences, students will focus on patient/client management models by performing patient examinations and evaluations and determining diagnoses, prognoses, and interventions within the context of the clinical setting. It is expected that, through these experiences, students will demonstrate appropriate management skills of patients/clients across adulthood or the life span and across the continuum of care commonly seen in physical therapy practice. They will also demonstrate progressively greater independence in effectively managing less medically complex to more medically complex patients within each practice setting. *(6 credits)*

**PHTT 6930—Wrap-up and Review**

This final course in the curriculum provides students with a guided process for comprehensive review of the physical therapy curriculum, study strategies and preparation for the National Physical Therapy Examination (NPTE), summative assessment of the curriculum, preparation for employment as a physical therapist, and self-reflection on personal growth in the core values of the physical therapy profession. Activities include online review modules, self-assessment and practice examinations, a formal NPTE review course, outcomes data collection, presentation of the values portfolio, and preparation for commencement and job readiness. The class begins during clinical internships and culminates during the week prior to graduation. *(2 credits)*

**PHTT 6904—Evidence in Practice Capstone Project**

Evidence-based practice (EBP) integrates evidence from three sources to answer clinically relevant, patient-related questions concerning 1) research literature; 2) clinician knowledge, experience, and judgment; and 3) patient preferences, values, and circumstances. This is the last of three courses in evidence-based practice. The focus of this course is on the integration of content from the entire curriculum, including clinical education and the application of evidence-based practice to a patient or clinical situation from a clinical affiliation experience. *(2 credits)*

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**Postprofessional Doctoral Programs in Physical Therapy**

The Physical Therapy Department at Nova Southeastern University offers a postgraduate program for practicing physical therapists—the Doctor of Philosophy in Physical Therapy (Ph.D.). This distinct program is designed to meet the diverse needs of physical therapists who are seeking to advance their education and skills from an accredited institution. The program is offered primarily in an online format to meet the needs of working professionals. There is an on-campus component for each core course taken, generally two days per course, per semester. Nova Southeastern University is a recognized leader of distance education and has a well-respected history of innovation and leadership in the health professions.
Doctor of Philosophy in Physical Therapy (Ph.D.)

As our health care delivery systems change and our knowledge base broadens, it becomes important for licensed physical therapists to continue their formal education to assume roles as consultants, educators, researchers, and health care leaders.

The Department of Physical Therapy at NSU offers the Doctor of Philosophy Program to address these needs by offering a curriculum that will prepare its students to become leaders of the profession.

Curriculum Overview

The Doctor of Philosophy in Physical Therapy (Ph.D.) degree program is taught in a distance/hybrid education format. Sixty semester hours are required beyond the entry-level master’s or doctoral degree in physical therapy or beyond an advanced master’s degree (in which the undergraduate or master’s degree was in physical therapy).

Expected Outcomes of Student Learning

Graduates of the program will be able to

- serve as change agents in health care organizations
- address health care issues of patients through the life span
- educate patients, students, peers and other health care providers in order to accomplish treatment goals and the goals of the program
- consult with organizations for the development of health care services.
- contribute to physical therapy practice through educational, translational, and clinical research
- critically appraise the evidence from scientific literature, synthesize findings across studies, and draw appropriate inferences based on current knowledge
- formulate study questions that will advance scientific knowledge about topics of importance
- ensure that the study meets accepted standards for the use of human subjects and ensures the responsible conduct of research in design, implementation, and dissemination

Admissions Requirements

1. Applicants must be licensed physical therapists who are graduates of schools accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE). Graduates of physical therapy schools in other countries are also eligible with review of academic credentials by an appropriate agency and a review of TOEFL, IELTS, or (PTE-Academic) scores, when appropriate. Applicants also need to have a minimum of three years of clinical experience before starting the program.

2. Selection of students for the physical therapy Doctor of Philosophy (Ph.D.) program is based on prior academic performance, clinical experience, and references. We seek students who have qualities such as assertiveness, initiative, leadership, self-understanding, openness, strong communication skills, and who are critical thinkers. Students must also be motivated and self-directed.

3. Applicants must hold either a bachelor’s degree in physical therapy with a master’s or doctoral degree, an entry-level master’s degree (e.g., M.S.P.T., M.P.T.), or an entry-level doctoral degree (D.P.T.) in physical therapy.

4. Completion of the Graduate Record Examination (GRE) with writing component is required.

Computer Requirements

All students are required to have a computer that meets the specifications according to the Hardware Guidelines for Computing at NSU (nova.edu/publications/it-standards).

Application Procedures

Applicants must submit

1. a completed application form along with a nonrefundable application fee of $50

2. official transcripts from all undergraduate, professional, and graduate institutions attended, sent directly to

Nova Southeastern University
Enrollment Processing Services
Dr. Pallavi Patel College of Health Care Sciences
Physical Therapy Department Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905.

3. three letters of evaluation from individuals who can evaluate the applicant’s performance as a physical therapist and the applicant’s capability for doctoral studies (At least one reference should come from a faculty member of a physical therapy school with a terminal research doctoral degree.)

4. official GRE scores and TOEFL, IELTS, or (PTE-Academic) scores, if appropriate
**Foreign Coursework**

Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed following.

- World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org

- Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org

- Educational Credential Evaluators, Inc.
  101 West Pleasant Street, Suite 200
  Milwaukee, WI 53212-3963
  (414) 289-3400 • ece.org

- Foreign Credentialing Commission on Physical Therapy*
  (FCCPT)
  511 Wythe Street
  Alexandria, VA 22314, USA
  (703) 684-8406 • fccpt.org

- International Consultants of Delaware, Inc.
  3600 Market Street
  Suite 450
  Philadelphia, PA 19104
  (215) 222-8454, ext. 603 • icdeval.com

* This agency specializes in evaluation for U.S. PT licensure.

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University, Enrollment Processing Services, Dr. Pallavi Patel College of Health Care Sciences, Department of Physical Therapy Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, FL 33329-9905.

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**Doctoral Tuition and Fees**

Tuition for 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (nova.edu/pt/dpt). An NSU Student Services Fee of $1,500 maximum is also required annually.

The first term’s tuition and fees are due on registration day. Tuition for each subsequent semester is due on the appropriate registration day.

**Requirements for Graduation**

In order to be eligible for the Ph.D. degree, students shall

- be of good moral character
- complete a minimum of 60 semester hours of coursework
- successfully pass the comprehensive examination
- satisfactorily complete the program requirements for the degree with a minimum grade of B in each course
- satisfactorily meet all financial and library obligations
- successfully complete and defend their dissertation and have it approved.

Students will have up to seven years to complete the degree requirements.

**Course of Study**

For students holding a master’s, entry-level master’s, or doctoral degree in physical therapy:

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>Required HPD core courses</td>
<td>12</td>
</tr>
<tr>
<td>Required PT core courses</td>
<td>23</td>
</tr>
<tr>
<td>Elective courses</td>
<td>9</td>
</tr>
<tr>
<td>Dissertation</td>
<td>16</td>
</tr>
</tbody>
</table>

Students may transfer up to 6 credits from an accredited postprofessional or advanced degree program (doctoral level only). Final determination of acceptable transfer credits will be at the discretion of the program director.

Courses will be conducted in a distance-hybrid format and as independent study under faculty supervision. The distance education format enables students to continue their practice as physical therapists while earning the degree. The distance education program does require students to be in residence on campus twice per year for two days per registered course. Graduates will be awarded the Ph.D. degree upon satisfactory completion of all degree requirements.
Doctor of Philosophy in Physical Therapy Course Descriptions

Note: Listed after each entry are semester credits.

*Required core course

HPH 7200—Ethics
Health care professionals are required to act morally and ethically. This course is designed to expand the student’s basic understanding of ethics to promote ethical awareness and enable students to derive better health care decisions that reduce risk of potential ethical consequence. By exposing students to bioethics and controversial ethical issues typically encountered in current health care practice, students practice making difficult decisions. Students will synthesize and implement strategies for applying morals, values, and ethics systematically in the various settings in which health care is delivered. Considering the perspectives of all stakeholders and the role of the health care provider, patient advocate, professional, and consumer of medical care, students will gain workable knowledge of contemporary ethical issues and appreciate that ethics permeate the majority of decisions made in health care. (3 credits)*

HPH 7300—Biostatistics I
The application of quantitative techniques has expanded rapidly in medical decision making. The emphasis on evidence-based health care means that health care workers must be able to evaluate the results from published health care research studies. This course is the first of two courses designed to provide students with the knowledge of quantitative techniques. The course will cover descriptive statistics, parametric group comparison statistics, and basic nonparametric statistics, as well as provide an introduction to linear modeling. (3 credits)*

HPH 7310—Biostatistics II
The aim of this course is to enable students to appreciate the richness of statistical science and to invite them to the concepts of probabilistic thinking. Statistics is the science of the future. Any technique that they are going to learn will help them to understand the unknown better, and in turn, it will increase their success in other courses and in future professional careers. Principles of statistical inference build upon the Biostatistics I course. As such, a prerequisite for enrolling in this course is Biostatistics I. The goals of this course are threefold: (1) introduce the basic concepts of probability and methods for calculating the probability of an event, (2) assist students in developing an understanding of probability theory and sampling distributions, and (3) familiarize students about inferences involving one or two populations, ANOVA, regression analysis, and chi-square tests. (3 credits)*

HPH 7400—Quantitative Research Design
This course will provide students with a basic understanding of the methods and approaches used in health-related research. A major emphasis of the course will be on the conceptualization and design of research studies. The course will cover ethics, formulation of research questions, study design, reliability, validity, sampling, measurement, and interpretation of research findings. It will prepare students to critically evaluate published literature and to design sound research studies. The course will be both theoretical and applied. Students will be challenged to apply the theoretical concepts presented in the classroom and in the readings to design a study to address a health-related issue of their choice. (3 credits)*

HPH 7410—Qualitative Research Design
The focus of this course is to introduce students to qualitative research methods of inquiry, and to provide the knowledge and skill competencies needed to critique, design, and conduct qualitative research. Phenomenological inquiry, grounded theory, ethnography, and other commonly used approaches to qualitative research will be examined. Students will gain understanding of the history of qualitative research, the philosophies that drive the various methodologies, strategies for data collection and analysis, ethical considerations, applications, and implications of using qualitative research methods in health care. Students will have the opportunity to experience qualitative data collection and analysis. Current published qualitative research in health professions and education literature will be analyzed in the context of topics covered in this course. Upon completion of the course, students will have demonstrated mastery of the basic competencies needed to create, plan, and complete a qualitative research study. As part of the HPH Ph.D. core curriculum, students in this course represent various health professions programs throughout the HPD and the college of education. This affords unique and valuable opportunities for discussion, collaboration, and sharing of ideas and perspectives among students with varied professional experiences and research goals. (3 credits)

PHT 7010—Professional Issues in Physical Therapy and Health Care
Current issues facing the physical therapy profession. Students participate in group discussions and complete a written project on a selected topic. (3 credits)*

PHT 7020—Legal Issues in Health Care
Students explore more global and controversial bioethical topics in the health care arena. Legal and ethical issues related to topics including animal and human research, genetic
engineering, cloning, alternative medicine, life support, organ donation, and telemedicine are analyzed. Students will participate in group discussions, conduct interviews of local legal authorities, and complete written assignments on highly controversial health care practices. (3 credits)*

**PHT 7030—Health Care Policy and Health Care Reform**
Covers global issues of health care reform, examining the theories, methodologies of reform, the impact of each on physical therapy, and how practitioners can effect change. (4 credits)*

**PHT 7111—Qualitative Research Methods**
The focus of this course is to introduce students to qualitative research methods of inquiry. Phenomenological inquiry, grounded theory, ethnography, and other approaches to qualitative research will be examined. Students will gain understanding of the history of qualitative research, the philosophies that drive the various methodologies, strategies for data collection and analysis, ethical considerations, applications and implications of using qualitative research methods in physical therapy. Students will have the opportunity to experience qualitative data collection and analysis. (3 credits)

**PHT 7112—Measurement Issues in Physical Therapy Research**
The course is designed for the health professionals to gain an overview of measurement theory and methods. It will focus on problems and challenges of validity and reliability of measurement, and emphasize development, testing, and refinement of norms and criteria-referenced data collection instruments. It will help the student in the development of an analytical view of measurement issues. (3 credits)*

**PHT 7113—Advanced Methods and Design**
The focus of this course is to introduce the research design and analysis that is involved in advanced and multivariate statistical methods. Topics include multiple and logistic regression, multivariate analysis of variance, factor analysis, discriminate analysis, and time series analysis. Single subject design and research synthesis will also be introduced. Emphasis is on understanding and applying statistical concepts and techniques to research data as well as developing the ability to critically analyze research methods used in the scientific literature. (3 credits)

**PHT 7114—Essentials of Clinical Trials in Physical Therapy**
Clinical trials play a pivotal role in evidence-based medicine. This course will provide an introduction to the scientific, statistical, and ethical aspects of clinical trials research. All aspects of the development of a study protocol will be addressed, including criteria for the selection of participants, treatments, multicenter collaboration, clinical trial registration, randomization procedures, implementation across facilities, use of electronic medical records, data analysis, and study interpretation. The ethical issues that arise at each phase will be explored. Specific requirements from related professional and federal funding agencies will also be discussed. (3 credits)

**PHT 7120—Critical Inquiry**
Students are required to evaluate research literature in a scientific and systematic way. Knowledge gained in this course will help in developing research proposals using different designs. This course is required for students entering with a bachelor's degree. **Prerequisites:** HPH 7300 and HPH 7310 (3 credits)

**PHT 7130—Dissertation Research Seminar**
The purpose of this course is to prepare students for writing their dissertations as the final requirement for completion of the Ph.D. Students will be guided in the development of a research question, related research design, data collection, and the appropriate statistical methods as steps toward developing an idea paper and a dissertation proposal. Attention will also be paid to how results of research might be presented and how the discussion portion of a dissertation should be approached. Various referencing methods will be discussed and the advantages and disadvantages of each presented. A variety of writing styles that are appropriate for scientific writing and various ways to improve dissertation writing will be examined. Students will be required to investigate the application of research designs to research problems in physical therapy by analyzing classmates' research questions, proposed research designs, data collection methods, and proposed statistics. (3 credits)*

**PHT 7140—The Therapist and Cultural Diversity**
In this course, the impact of ethnocultural issues, policies, and procedures on the therapist will be assessed and analyzed. The complex issues of policy implementation and planning in dealing with ethnocultural issues will be explored. Continuation of PHT 6140. No prerequisite. (3 credits)

**PHT 7200—Teaching and Learning in Physical Therapy**
Examines the complexity of learning and behavioral change. Students explore their own learning styles as well as a variety of learning theories, including computer-based learning. (3 credits)*

**PHT 7210—Patient Education**
Applies teaching-learning theories to patient education issues. Students will complete a project related to teaching and learning for patient groups or for individual patient care. Offered as independent study as needed. **Prerequisite:** PHT 7200 (3 credits)

**PHT 7300—Consulting Skills**
The roles and skills of consultants. Students complete a paper on selected topics in consultation. (3 credits)
PHT 7310—Consulting as a Physical Therapist
Independent study course. Students apply consulting concepts to prepare a report on a hypothetical or actual consulting situation in physical therapy. (3 credits)

PHT 7400—Independent Study
Individualized study under the supervision of assigned instructor. Requires permission of program director. (1–10 credits)

PHT 7401—Independent Study
Individualized study under the supervision of assigned instructor. Requires permission of program director. (1–4 credits)

PHT 7420—Health Care Delivery Systems
Addresses issues in various health care systems where physical therapists work. Students discuss and complete a report on management of physical therapy services in selected delivery systems. (3 credits)

PHT 7430—Physical Therapy Management
Addresses management of fiscal and human resources. Students take part in discussions and complete a case study. (3 credits)

PHT 7510—Designing Educational Material for the Web
This course explores current concepts and principles of designing educational material for the web. Through “discovery learning,” students develop principles of multimedia design for the web, identify best and worst websites based on those principles, apply the newly acquired design principles to the development of individual home pages, and create a web-based course using Blackboard. (3 credits)

PHT 7700—Advanced Clinical Competency I
Students will enroll in an advanced clinical course of their choice. The course may be offered by the physical therapy program or in the form of a clinical certificate that is approved by the Doctoral Committee. (3 credits)

PHT 7710—Advanced Clinical Competency II
A project in the area of chosen clinical competency will be completed under the direction or agreement of the assigned mentor. (3 credits)

PHT 7720—Leadership
This online course explores leadership methods and theories in health care and physical therapy in a rapid changing environment. The student is expected to gain knowledge to be able to critically analyze leadership styles and compare and contrast leadership skills and management skills. (3 credits)

PHT 7740—Comprehensive Examination
Students in the Ph.D. program in physical therapy must take and pass the comprehensive examination (pass/fail) to be eligible to start the dissertation phase. To be eligible to take the examination, all core courses must be completed. The examination includes questions related to research, ethical and legal issues, health care policies, and professional issues. The student has six hours to complete the examination without using any resources. (0 credit)*

PHT 7800—Dissertation
Supervised, original project on a physical therapy-related topic will be completed under the supervision of the Dissertation Committee. (16 credits)*

PHT 7801—Research Seminar
This sequence of four, one credit courses is intended to prepare the student for the processes of analysis and understanding of the research literature, which is crucial to the dissertation process. These courses designed as one credit per semester are required during the first four semesters that students are taking courses in the physical therapy Ph.D. program. Other students in the program are encouraged to participate. These courses are designed to reinforce the material being presented in the research courses and to promote intellectual discussion on physical therapy science and scholarly works. Students will be required to read and discuss the research literature related to physical therapy illustrating the relationship of research design to statistical analysis and how researchers approach research questions and problems. Students must take 1 credit per semester for the first four semesters they are in the program. (1 credit)*
Department of Physician Assistant

Physician Assistant Program—Fort Lauderdale

Physician assistants (PAs) serve as essential components of a medical system that continues to struggle to provide quality, affordable health care for all Americans. Their roles in the system will continue to grow as changes in health care indicate. Today, more than 100,000 individuals are in practice as PAs in the United States. PAs provide care that would otherwise be provided by physicians. PAs take medical histories, perform physical examinations, order and interpret tests, diagnose and treat illnesses, perform medical/surgical procedures, assist in surgery, and can write prescriptions in all states. PAs work in most medical specialties and in all types of communities. Many PAs practice family and internal medicine, and more than one-third are in towns with fewer than 50,000 residents. The PA profession is one of the fastest growing health care professions. According to the Bureau of Labor statistics (BLS) U.S. Department of Labor, as published in the 2016–2017 Occupational Outlook Handbook, employment of PAs is expected to grow 30 percent from 2014 to 2024.

It is the obligation of each physician/PA team to ensure that the PA’s scope of practice is identified; that delegation of medical tasks is appropriate to the PA’s level of competence; that the relationship of, and access to, the supervisory physician is defined; and that a process of performance evaluation is established. Adequate responsible supervision of the PA contributes to both high-quality patient care and professional growth.

The Department of Physician Assistant offers an innovative program that lasts 27 months. Upon successful completion of study, students will be awarded the master of medical science degree in physician assistant. The curriculum includes rigorous instruction in basic science subjects, followed by clinical medicine, physical diagnosis, clinical laboratory medicine, clinical pathophysiology, clinical procedures and surgical skills, electrocardiography, pharmacology, and others.

The clinical year is devoted to 12 months of training in nine required rotations. Students are required to complete six-week rotations in family medicine, emergency medicine, pediatrics, general surgery, and internal medicine. Students are also required to complete three-week rotations in women's health and behavioral medicine. In addition, students have three elective rotations in any area of medicine they wish to pursue. Two of the elective rotations are six weeks in length. The remaining elective rotation is four weeks in length.

Accreditation

The Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) has granted Accreditation—Continued status to the Nova Southeastern University—Fort Lauderdale Physician Assistant Program sponsored by Nova Southeastern University—Fort Lauderdale. Accreditation—Continued is an accreditation status granted when a currently accredited program is in compliance with the ARC-PA Standards.

Accreditation remains in effect until the program closes or withdraws from the accreditation process or until accreditation is withdrawn for failure to comply with the Standards. The approximate date for the next validation review of the program by the ARC-PA will be March 2022. The review date is contingent upon continued compliance with the Accreditation Standards and ARC-PA policy.

Mission Statement

To provide a primary care training program designed for, and dedicated to, producing competent, caring physician assistants who will provide quality health care in rural, urban, underserved, and culturally diverse communities; to increase the accessibility of quality health care, mainly in the primary care setting, as well as in specialty care areas, to prepare students for lifelong learning and leadership roles; and to promote the physician assistant profession.

Admissions Requirements

Prospective students are selected on a rolling admissions basis. The Committee on Admissions (COA) considers the overall qualities of the applicant. Areas of consideration include interpersonal skills, personal motivation, knowledge and understanding of the PA profession, academic performance and level of achievement, life experiences, quality and length of prior health care experience, and recommendations/evaluations. Personal interviews are offered to the most qualified applicants to assess interpersonal and communication skills, maturity, integrity, altruistic attitude, and commitment to a PA career.

1. Applicants must have a minimum cumulative GPA of 3.0 and a minimum science GPA of 3.0 on a 4.0 grading scale at the time of application.

Successful applicants in the past have typically had both cumulative and science GPAs of 3.4 or higher, GRE score (verbal, quantitative, and analytical) in the 40th percentile.
or higher in each of the three categories, and letters of recommendation from individuals with whom the applicant has had a professional working relationship in the health care field. Greater consideration will be given to applicants with prior patient-contact experience.

2. Prior to matriculation, applicants must have received a baccalaureate degree from a regionally accredited college or university. A baccalaureate degree in any field of study is acceptable as long as all prerequisites are met.

3. The college requires the students to earn a grade of C (2.0) or better in each of the following required courses:
   • college math (3 semester hours)
   • English (6 semester hours, including 3 of English composition)
   • humanities/arts (3 semester hours)
   • social sciences (9 semester hours)
   • general biology (or zoology), including laboratory (4 semester hours)
   • microbiology, including laboratory (4 semester hours)
   • general chemistry I and II, including laboratory (8 semester hours)
   • human anatomy and physiology (6 semester hours)
   • biochemistry (3 semester hours)
   • genetics (3 semester hours)
   • Medical Terminology (1 semester hour)

Applicants are encouraged to complete their elective coursework in the areas of behavioral, physical, and social sciences or in the humanities. (Science prerequisites must be completed by end of the fall semester, prior to matriculation.) Additionally, science prerequisites must be completed prior to being invited for a personal interview.

The following courses are recommended:
   • biochemistry laboratory (1 semester hour)
   • Anatomy laboratory (1 semester hour)
   • Physiology laboratory (1 semester hour)
   • Introduction to Statistics (3 semester hours)

4. Graduates of foreign institutions where English is not the primary language of instruction must present transcripts showing at least 18 semester hours (or equivalent quarter hours) of study from a regionally accredited college or university in the United States. Of these 18 semester hours,
   • 3 semester hours must be in English composition (courses do not include ESOL)
   • 3 semester hours must be in English literature (courses do not include ESOL)

   The remaining 9 semester hours can be any course of the applicant’s choosing (excluding physical education).

5. All applicants are required to submit official scores from the Graduate Record Examination (GRE) general test as part of the CASPA application. The test must have been taken within the past five years and must be taken early enough for official scores to be received in the admissions office by the supplemental application due date of January 31. Applications will not be considered complete without GRE scores. Testing information for the GRE may be obtained from gre.org or by telephone at (609) 921-9000. If multiple exams have been taken, only the most recent GRE scores will be considered.

6. Prior health care experience is highly recommended and is considered for admission. Those applicants who have prior health care experience must submit verifiable information about their experience. Those applicants with a formal certification in a health care field are considered more competitive.

**Computer Requirements**

All students are required to have a laptop computer and printer. The computer must have the following minimum specifications:

• combo DVD and RW drive
• sound capability and speakers
• Internet connection with private Internet service provider (ISP) for universal access to the Internet
• wireless capability
• printer
• webcam (internal or attached)

**The following are recommended features:**

• Intel Core i5 or i7 processor
• 4GB RAM (upgradeable to 6GB or more)
• 250 GB hard disk or larger (7200 RPM)
• Windows 7, SP1 or higher OR Mac OS X 10.6 or Mac OS X 10.7
• Microsoft Office 2007 with PowerPoint, Word, and Excel minimum
• surge suppressor electrical outlet
• flash drive
Application Procedures

1. Apply to CASPA
The Physician Assistant Program participates in the Centralized Application Service for Physician Assistants (CASPA) for the receipt and processing of all applications. CASPA takes no part in the selection of students. CASPA application packets may be obtained and submitted online at caspaonline.org or by writing CASPA
P.O. Box 9108
Watertown, MA 02471

The CASPA application deadline is December 1 in order to be considered for admission in June.

2. Send transcripts and letters of recommendation/evaluation to CASPA
All official college transcripts from all undergraduate, graduate, and professional institutions attended must be sent directly from the institutions.

Two letters of recommendation/evaluation must be sent to CASPA. The first letter must be from a physician assistant. The second letter must be from a health care professional involved with direct patient care. None of the letters may be from relatives or friends. Applications submitted without these letters will not be given consideration.

3. Report GRE scores directly to CASPA
Official Graduate Record Exam (GRE) scores must be admitted directly to CASPA as part of the CASPA application. The school code number for NSU’s PA—Fort Lauderdale program is 0947. The GRE must have been taken in the last five years and must be taken early enough for official scores to be available by the supplemental application deadline of January 15.

4. Complete Supplemental Application
Once the CASPA application has been received by Nova Southeastern University, a supplemental application will be made available online.

Your complete supplemental application must be received no later than January 15 in order to be considered for admission for the May entering class. Once we receive your GRE scores, supplemental application, and $50 fee, your file will be reviewed.

The applicant will not be considered for a possible interview until all of these requirements have been received by the EPS.

5. Competitive Interview Criteria
These include higher cumulative and science GPAs, a higher GRE score, two letters of recommendation (including one from a physician or physician assistant), and health care experience.

Personal Interviews
Once your application is complete, the Committee on Admissions will decide whether or not your application is strong enough to warrant an invitation for a personal interview. Interviews are conducted on the Nova Southeastern University, Fort Lauderdale, Florida, campus and are by invitation only. Interviews are usually held during the months of October through February. An invitation to interview is not a guarantee of admission. Applicants will only be invited for an interview after demonstrating completion of all science prerequisites.

Current College Coursework
All prerequisite coursework must be completed by the end of April in order to be considered for the May entering class. If, at the time of application, coursework is in progress or anticipated, please identify these courses on the supplemental application.

Transcripts
All applicants who are accepted must submit official transcripts from all schools attended to the NSU EPS Physician Assistant Admissions Office prior to matriculation. It is the responsibility of the applicant to ensure that arrangements are made for these transcripts to be sent.

Tuition and Fees
• Tuition for 2020–2021 will be posted on our website healthsciences.nova.edu/pa/fortlauderdale/faq.html.
• Acceptance fee is $500. This fee is required to reserve the accepted applicant’s place in the entering first-year class. This advance payment will be credited to the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance.
• Deposit is $500. This is due February 15, under the same terms as the acceptance fee.
• A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.
• A clinical support charge of $400 will be assessed in each of the three semesters of clinical training.

The first semester’s tuition and fees, less the $1,000 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.

Applicants should have specific plans for financing 27 months of professional education. This should include tuition, living expenses, books, equipment, and miscellaneous expenses. Each student is required to carry adequate health insurance.
Students may avail themselves of the insurance plan obtainable through the university.

There are a limited number of part-time work-study assignments available. Due to the demands of the PA curriculum, the program discourages any outside employment.

**Academic Promotions and Progression**
The progress of each student through the curriculum requires continuous, satisfactory academic and professional performance. No student may advance to the clinical year of study without satisfactorily completing all of the requirements for the didactic year’s courses. In addition, no student may complete the clinical year curriculum and graduate without satisfactorily completing all the requirements of the clinical year coursework.

**Requirements for Graduation**
In order to be eligible to graduate from the Physician Assistant Program, students shall

- successfully complete all academic and clinical courses and degree requirements
- have satisfactorily met all financial and library obligations
- attend in person the commencement program, at which time the degree is conferred

**Academic Dismissal in the Physician Assistant Program**
See the suspension/dismissal section of the student handbook.

**Readmission Policy in the Physician Assistant Program**
In selected cases, and only with the approval of the program director, department chair, and college dean, a student may be allowed to be noncompetitively matriculated with the next first-year class. It is emphasized that this only refers to those few students with special academic or personal issues.

**Course of Study**
The Physician Assistant Program curriculum is completed following a baccalaureate degree from a regionally accredited college or university in the United States. The comprehensive curriculum, completed in a consecutive manner, is oriented to primary care and prepares the student to practice in a wide variety of clinical settings. The first 15 months of study consist of basic sciences and clinically related didactic courses. All courses are required and must be successfully completed before advancing to the clinical year. During this time frame, students are generally in class from Monday through Friday, 8:00 a.m. to 5:00 p.m., although there are occasional evening and/or weekend hours. Because of its highly integrated and compact curriculum, the PA department requires matriculants to complete the entire curriculum at this campus. No advanced placement, transfer of credit, or credit for experiential learning will be granted.

The clinical year is devoted to 12 months of training in nine required rotations. Students are required to complete six-week rotations in family medicine, emergency medicine, pediatrics, general surgery, and internal medicine. Students are also required to complete three-week rotations in women’s health and behavioral medicine. In addition, students have three elective rotations in any area of medicine they wish to pursue. Two of the elective rotations are six weeks in length. The remaining elective rotation is four weeks in length.

Each required rotation has assigned readings and learning objectives. At the end of each required rotation, a written comprehensive subject examination is administered and must be passed. During rotations, students will be supervised by licensed practitioners and will actively participate in patient assessments, perform common laboratory procedures, interpret common diagnostic examinations, and help manage common medical problems. The work hours during clinical rotations are set by the preceptor and can include evening and weekend hours. Students are required to work approximately 40 hours per week, however many rotation sites require students to work substantially more hours per week.

Upon completion of the course of study, students will be awarded the master of medical science degree in physician assistant. Graduates will be eligible to take the Physician Assistant National Certification Examination (PANCE) administered by the National Commission on Certification of Physician Assistants.

The role of the physician assistant requires a high level of expertise and responsibility. The applicant must possess the ability and desire to complete a rigorous academic and clinical program and make a commitment to continued learning.
Curriculum Outline for the Master of Medical Science (M.M.S.) in Physician Assistant Program—Fort Lauderdale

Start Date: June
Length: 27 months
Degree: Master of Medical Science (M.M.S.) in Physician Assistant
Didactic: 15 months
Clinical: 12 months

<table>
<thead>
<tr>
<th>First Semester—Summer I (June–August)</th>
<th>Lecture</th>
<th>Laboratory</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANA 5420</td>
<td>Anatomy</td>
<td>48</td>
<td>32</td>
</tr>
<tr>
<td>PHS 5400</td>
<td>Physiology</td>
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<tr>
<td>PAC 5400</td>
<td>Clinical Pathophysiology</td>
<td>46</td>
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</tr>
<tr>
<td>PAC 5000</td>
<td>Physical Diagnosis I</td>
<td>24</td>
<td>36</td>
</tr>
<tr>
<td>PAC 5020</td>
<td>Fundamentals of Medical Imaging</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>PCO 5300</td>
<td>Biomedical Principles</td>
<td>16</td>
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<tr>
<td>PAC 5001</td>
<td>Introduction to the PA Profession</td>
<td>28</td>
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Total Hours: 230 78 18

<table>
<thead>
<tr>
<th>Second Semester—Fall (September–December)</th>
<th>Lecture</th>
<th>Laboratory</th>
<th>Credit Hours</th>
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<tr>
<td>MIC 5400</td>
<td>Microbiology</td>
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<tr>
<td>PAC 5404</td>
<td>Legal and Ethical Issues in Health Care</td>
<td>32</td>
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<tr>
<td>PAC 5100</td>
<td>Physical Diagnosis II</td>
<td>32</td>
<td>36</td>
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<tr>
<td>PCO 5400</td>
<td>Pharmacology I</td>
<td>38</td>
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<tr>
<td>PAC 5110</td>
<td>Clinical Medicine and Surgery I</td>
<td>128</td>
<td>6</td>
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<tr>
<td>PAC 5130</td>
<td>Clinical Laboratory Medicine I</td>
<td>14</td>
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<tr>
<td>PAC 5229</td>
<td>Electrocardiography</td>
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Total Hours: 330 38 24

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<thead>
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<th>Third Semester—Winter (January–May)</th>
<th>Lecture</th>
<th>Laboratory</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PAC 5200</td>
<td>Physical Diagnosis III</td>
<td>32</td>
<td>38</td>
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<td>PAC 5210</td>
<td>Clinical Medicine and Surgery II</td>
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<td>PAC 5310</td>
<td>Clinical Medicine and Surgery III</td>
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<tr>
<td>PAC 5412</td>
<td>Interpretation and Evaluation of Medical Literature</td>
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<tr>
<td>PAC 5131</td>
<td>Clinical Laboratory Medicine II</td>
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Total Hours: 230 78 18
### Fourth Semester—Summer II Advanced Didactic (June–July)

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Lecture</th>
<th>Laboratory</th>
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<tr>
<td>PAC 5460</td>
<td>Life Support Procedures and Skills</td>
<td>24</td>
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<td>PAC 5510</td>
<td>Clinical Procedures and Surgical Skills</td>
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<td>PAC 5129</td>
<td>Health Promotion and Disease Prevention</td>
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<tr>
<td>PAC 5010</td>
<td>Clinical Applications</td>
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<td>PAC 5407</td>
<td>Clinical Pharmacology</td>
<td>48</td>
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<td>PAC 5408</td>
<td>Clinical Genetics</td>
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**Total Contact Hours:** 210

### Clinical Curriculum—Second Year (August–August)

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Weeks</th>
<th>Contact Hours</th>
<th>Credit Hours</th>
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<tr>
<td>PAC 6301</td>
<td>Behavioral Health</td>
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<td>PAC 6302</td>
<td>Women's Health</td>
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<tr>
<td>PAC 6311</td>
<td>Internal Medicine</td>
<td>6</td>
<td>270</td>
<td>6</td>
</tr>
<tr>
<td>PAC 6313</td>
<td>Surgery</td>
<td>6</td>
<td>300</td>
<td>6</td>
</tr>
<tr>
<td>PAC 6315</td>
<td>Emergency Medicine</td>
<td>6</td>
<td>270</td>
<td>6</td>
</tr>
<tr>
<td>PAC 6317</td>
<td>Pediatrics</td>
<td>6</td>
<td>240</td>
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<tr>
<td>PAC 6318</td>
<td>Family Medicine</td>
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<tr>
<td>PAC 6401</td>
<td>Elective I</td>
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<tr>
<td>PAC 6402</td>
<td>Elective II</td>
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<td>6</td>
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<td>PAC 6308</td>
<td>Elective III</td>
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<td>160</td>
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<tr>
<td>PAC 6500</td>
<td>Graduate Project</td>
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**Total Contact Hours:** 2,300

Curriculum is subject to change as directed by the department.
Physician Assistant—Fort Lauderdale Course Descriptions

Note: Listed at the end of each entry are lecture clock hours, laboratory clock hours, and semester hours.

*Core competency course (Failure of a core competency course will result in automatic dismissal from the program. Students must successfully complete core competency courses prior to moving on to the next semester.)

ANA 5420—Anatomy
The study of structural and functional features of the human body addressed in both lecture and cadaver format. The student will have an anatomical basis for understanding and applying information presented in the basic science and clinical courses and for understanding clinical problems. Students will also learn integrated topographic and radiographic anatomy to stress the application and importance of clinical anatomy. (48-32-4)

MIC 5400—Microbiology
This course explores the relationship of microbes to human disease and the host-immune response. Characteristics and properties of clinically significant bacteria, viruses, fungi, and selected parasites as well as the prevention, control, and diagnostic laboratory tests of their associated specific infectious diseases. (50-0-3)

PAC 5000—Physical Diagnosis I*
The Physical Diagnosis I course is an introduction to clinical medicine. Students will acquire the knowledge and skills essential to obtain a comprehensive medical history and perform a complete, head-to-toe physical examination. Emphasis is placed on normal physical findings. The course emphasizes patient interviewing, acquiring a medical data base, and performing a comprehensive physical examination. A combination of lectures, discussions, case studies, and performance skills labs will be used to present and practice the necessary concepts and skills. Lab sessions are used to optimize teaching of concepts. The student will be required to demonstrate Competency-Based Learning during the performance of the required procedures and skills. Prerequisite for PAC 5100 (24-36-3)

PAC 5001—Introduction to the Physician Assistant Profession
This course will be taught in a hybrid format. Hybrid learning has been defined as the thoughtful fusion of face-to-face and online learning experiences. This course will provide a historical perspective of the PA profession, as well as content related to current trends and the political and legal issues affecting PA practice, both within the state and on a national level. This course will also discuss the physician-PA team relationship and the team approach in medicine. During this course, we will explore and participate in PA professional organizations and the roles these organizations play in the profession. (28-0-2)

PAC 5020—Fundamentals of Medical Imaging
This course provides an introduction to medical imaging with emphasis on normal imaging of the human body systems. The course will enable the student to acquire the skills necessary to recognize normal findings on radiographs and other selective imaging modalities. (16-10-1)

PAC 5010—Clinical Applications*
This course serves as a cumulative evaluation of the student’s knowledge after completion of the initial 12 months of the didactic curriculum. Student competency will be evaluated by a comprehensive written examination and an OSCE practical examination. The course also reinforces concepts related to critical thinking and application of medical knowledge to clinical scenarios through the utilization of case studies and simulation exercises. (12-5-1)

PAC 5100—Physical Diagnosis II*
This course will build upon the skills learned in Physical Diagnosis I and will cover the essential skills for performing both complete and focused medical interviews and physical examinations. A combination of lectures, discussions, case studies, and performance skills labs will be used to present and practice the necessary concepts and skills. Lab sessions are used to optimize teaching of concepts. The student will be required to demonstrate competency-based learning during the performance of the required procedures and skills. Using the skills developed in Physical Diagnosis I, students learn to accurately integrate and record historical and physical findings in the correct written format. This course introduces the student to the concept of medical problem solving. Emphasis is on the correlation of historical information and physical findings to the process of formulating a differential diagnosis and treatment plan. Through case presentations and medical simulations, students will use knowledge acquired from previous and concurrent didactic courses to develop their problem-solving skills. Prerequisite for PAC 5200 (32-36-3)

PAC 5110—Clinical Medicine and Surgery I
Lectures, group discussions, case studies, evidence-based medicine, problem-based learning, online coursework, simulation, web-based education, independent study, EKG, and diagnostic and radiological images interpretation are included in presentations. Medical and surgical entities of ophthalmology, dermatology, hematology, cardiovascular, and pulmonary disease, as well as disorders of the ears, nose, throat, and neck will be presented. Emphasis will be placed on symptoms and signs, diagnostic evaluation, and therapy. The focus will be on common diseases of medical and surgical nature that may be encountered in clinical practice. (128-6-9)
PAC 5130—Clinical Laboratory Medicine I
Students will learn how to appropriately order and accurately interpret laboratory tests. These skills will help them diagnose common diseases related to major organ systems. (14-0-1)

PAC 5131—Clinical Laboratory Medicine II
Continuation of Clinical Laboratory Medicine I. Students will learn how to appropriately order and accurately interpret laboratory tests. These skills will help them diagnose common diseases related to major organ systems. (34-0-2)

PAC 5200—Physical Diagnosis III*
A combined lecture and laboratory format will be used to present the concepts and skills required to elicit a medical history and perform a physical examination for specific patient complaints. Small group and laboratory presentations will be used to refine the medical history concepts and physical examination skills acquired in Physical Diagnosis I and II. Instructional methods, including supervised clinical experience and patient simulations, will facilitate the students’ integration of clinical information in order to diagnose disease and record historical and physical findings in written format. The course will expand on the skills essential for performing a thorough medical interview and physical examination and will enhance medical documentation skills. This course also continues to develop medical problem-solving skills. The student will be taught the concepts and skills necessary to develop a differential diagnosis and management plan for medical problems encountered in the primary care setting. Emphasis is on correlation of historical information, physical findings, and pertinent laboratory results to formulate a diagnosis. Through case presentations and medical simulations, the student will also utilize knowledge acquired from previous and concurrent didactic courses to develop these skills. (32-38-3)

PAC 5210—Clinical Medicine and Surgery II
This course covers common disease entities of major organ systems and primary care aspects of disease evaluation and treatments. Medical and surgical entities of gastroenterology, orthopedics, rheumatology, neurology, the reproductive system, endocrinology, and geriatrics will be presented. The focus will be on common diseases of medical and surgical nature that may be encountered in clinical practice. (120-0-8)

PAC 5219—Health Promotion and Disease Prevention
This course will focus on wellness through preventative interventions and services. Students will learn methods of promoting health and wellness initiatives in multiple settings including health care organizations and team-based practices. The course focuses on the importance of taking responsibility for one’s own health, the community’s efforts to protect against disease, and environmental hazards, as well as barriers to health promotion. Emphasis is placed on public health initiatives and resources available within the community. (48-0-3)

PAC 5229—Electrocardiography
Provides the foundation for learning to interpret 12-lead ECG tracings and applying those principles to evaluate the ECG tracings of common cardiac diseases, including the recognition of more subtle ECG abnormalities (36-2-3)

PAC 5310—Clinical Medicine and Surgery III
Clinical Medicine and Surgery III will be presented with pediatrics, nephrology/urology, emergency medicine, and surgery. Emphasis will be placed on symptoms and signs, diagnostic evaluation, and therapy. The focus will be on common diseases of medical and surgical nature that may be encountered in clinical practice. (112-0-8)

PAC 5311—Clinical Behavioral Medicine
Common psychosocial problems and disorders encountered by health care professionals. The course emphasizes the diagnosis and understanding of development of these behaviors, including the patient-clinician relationship, varieties of psychotherapy, communication skills, and appropriate interventions and treatment regimens, including relevant medications. (45-0-3)

PAC 5400—Clinical Pathophysiology
This course introduces the student to pathophysiologic concepts that form the biologic basis of disease. It builds on the knowledge gained in Human Anatomy and Physiology courses. However, physiologic concepts will be reviewed and emphasized in order for the student to fully appreciate the progression from the normal physiologic state to the diseased state with its resultant clinical signs and symptoms. The course begins with discussions of general biologic and pathologic processes such as immunity, inflammation, wound healing, pain, and neoplasia. The remainder of the course addresses disease-producing perturbations in the physiology, regulatory mechanisms, and anatomy within organ systems. (46-0-3)

PAC 5404—Legal and Ethical Issues in Health Care
This course is designed to introduce the students to the more important influences of the law and ethics on health care and the practice of medicine. (32-0-2)

PAC 5407—Clinical Pharmacology
At the completion of this course, students will be able to appropriately prescribe medications in various clinical settings. Preparation for appropriate prescribing and administration of medicines is accomplished by studying drug classifications, pharmacodynamic actions, and the rationale for therapeutic use of prescription and nonprescription medications. In addition, students will be able to describe the potential advantages and disadvantages of specific therapeutic regimens, universal indications and contraindications for usage, dosing schedules, and the relative cost of commonly prescribed medications. Common errors involving prescription writing will be discussed and practical exercises will require students to accurately write
prescriptions and treatment orders. This course will enhance the fund of knowledge acquired in Pharmacology and Clinical Medicine and Surgery courses upon which to build during clinical rotations. It will also provide a general understanding of the clinical aspects of the pharmacological treatment of common illnesses and disease processes. (48-0-3)

PAC 5408—Clinical Genetics
This course prepares physician assistant students for medical practice in the age of genomics. Areas of focus include dysmorphology; family history with pedigree risk analysis; chromosomal abnormalities, single gene disorders, and familial cancer syndromes; genetic testing and screening; pharmacogenomics; gene therapy; and the genetic ethical, legal, and social issues (ELSI) impact on primary care. Students will hear from medical geneticists and genetic counselors about their role in patient care. Patients will present their diagnostic odyssey, so students will appreciate the importance of genetics and lifelong learning in primary care. (30-0-2)

PAC 5410—Complementary Medicine and Nutrition
Survey of human nutrition in health care, and the principles for maintaining good health through nutrition. Addresses health hazards associated with dietary deficiencies, obesity, fad dieting, food contamination, diet management of selected diseases, and functional roles of vitamins and minerals. Additionally, this course will address introductory concepts, procedures, education, potential integration, and licensing in alternative and complementary medicine. (30-0-2)

PAC 5412—Interpretation and Evaluation of Medical Literature
This course is designed to introduce the student to the process of interpretation and evaluation of the medical literature. The components of published medical papers and physician assistant-authored research papers are evaluated in this course. The course will be hybrid in that students will have online access via Blackboard and have face-to-face interactions. (30-0-2)

PAC 5460—Life Support Procedures and Skills
Introduction to the principles of advanced life support used in medical and surgical emergencies. Includes a review of the most common emergency situations encountered and provides hands-on practical training that will assist the student in developing the skills required to stabilize patients with life-threatening conditions. Includes certification in basic (BLS) and Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS). (24-20-2)

PAC 5510—Clinical Procedures and Surgical Skills
A combined lecture, discussion, case study, human patient simulation (HPS), and laboratory format will be used to present the concepts and skills required in performing common clinical procedures and surgical skills. The student will be required to demonstrate competency-based education in the performance of the procedures and skills required. The course is designed to prepare the student for the clinical procedures and surgical skills that will be performed on clinical rotations during the second year and real-world patient encounters. The course also will serve as the summative examination of competency-based skills. (48-32-4)

PAC 6301—Behavioral Medicine
This is a required, three-week rotation for Mental and Behavioral Health. This rotation takes place in outpatient and/or inpatient settings. The purpose of this rotation is to educate the physician assistant student in the diagnosis, management, and treatment of acute and chronic behavioral health problems seen in the behavioral health practice. (3-135-3)

PAC 6302—Women’s Health
This is a required, three-week rotation in obstetrics and gynecology. This rotation takes place in outpatient and/or inpatient settings. The purpose of this rotation is to educate the physician assistant student in the diagnosis, management, and treatment of acute and chronic problems related to women’s health, as well as pregnancy and the puerperium. (3-135-3)

PAC 6308—Clinical Elective III
This is a required four-week rotation for Elective III. This rotation takes place in outpatient and/or inpatient settings. The purpose of this rotation is to educate the physician assistant student in the diagnosis, management, and treatment of acute and chronic medical problems seen in the specialty practice. Elective rotations are provided to allow students to gain knowledge and skill in an area of medicine that they have not experienced or to have additional exposure in an area of interest. (4-160-4)

PAC 6311—Internal Medicine
This required, six-week rotation is conducted in both the clinical and hospital settings. The purpose of this rotation is to educate the physician assistant student in the diagnosis, treatment, and management of both the inpatient and outpatient surgical patient. Emphasis is placed on surgical disorders commonly encountered in various settings by the physician assistant. (6-270-6)

PAC 6313—Surgery
Required six-week rotation in outpatient and inpatient settings. Students learn to diagnose, treat, and manage the surgical patient. Emphasizes surgical entities commonly encountered in the primary care setting. (6-300-6)
PAC 6315—Emergency Medicine
This is a required, six-week rotation that takes place in the emergency department environment. The purpose of this rotation is to educate the physician assistant student in the diagnosis, management, and treatment of emergent, urgent, and nonurgent medical problems commonly encountered in the emergency department setting. (6-270-6)

PAC 6317—Pediatrics
This is a required, six-week rotation that takes place in outpatient and/or inpatient settings. The purpose of this rotation is to educate the physician assistant student in the diagnosis, management, and treatment of acute and chronic medical problems seen in pediatric practice. Emphasis is placed on growth and development from the infant to the adolescent. (6-240-6)

PAC 6318—Family Medicine
This is a required, six-week rotation that takes place primarily in the outpatient setting. The purpose of this rotation is to educate the physician assistant student in the diagnosis, management, and treatment of primary care patients. Emphasis is placed on the primary care needs of patients in rural and inner city communities. (6-250-6)

PAC 6401—Clinical Elective I
This is a required, six-week rotation for Elective I. This rotation takes place in outpatient and/or inpatient settings. The purpose of this rotation is to educate the physician assistant student in the diagnosis, management, and treatment of acute and chronic medical problems seen in the specialty practice. Elective rotations are provided to allow students to gain knowledge and skill in an area of medicine that they have not experienced or to have additional exposure in an area of interest. (6-270-6)

PAC 6402—Clinical Elective II
This is a required, six-week rotation for Elective II. This rotation takes place in outpatient and/or inpatient settings. The purpose of this rotation is to educate the physician assistant student in the diagnosis, management, and treatment of acute and chronic medical problems seen in the specialty practice. Elective rotations are provided to allow students to gain knowledge and skill in an area of medicine that they have not experienced or to have additional exposure in an area of interest. (6-270-6)

PAC 6500—Graduate Project
The Graduate Project is the capstone educational event for the program curriculum. It allows the student to demonstrate his or her ability to research and compile information and to present that information in two formats while working with his or her advising group: 1) presentation to peers of an evidence-based analysis of available research on a clinical question and 2) a written clinical review article suitable for publication in a peer-reviewed journal. (0-90-3)

PCO 5300—Biomedical Principles
Physiologic and biochemical basis for drug action. Basic biochemical pathways in which drugs intervene: metabolism, protein synthesis, and coagulation. Principles of pharmacokinetics: drug absorption, distribution, and metabolism are studied and applied to designing dosage regimens. (16-0-1)

PCO 5400—Pharmacology I
This course will provide the student a thorough understanding of the classes of drugs commonly used in clinical practice. The course includes an in-depth study of drugs that affect the autonomic nervous, renal, cardiovascular, and endocrine systems. Emphasis will be on the mechanism of action, clinical indications, side effects, contraindications, important drug interactions, and the basic pharmacokinetics of each drug class. (38-0-3)

PCO 5410—Pharmacology II
This course will provide the students with a thorough understanding of the classes of drugs commonly used in medical practice. The course includes an in-depth study of antimicrobial drugs, chemotherapeutic drugs, respiratory and gastrointestinal drugs, vitamins, and drugs affecting the central nervous system and inflammation. Emphasis will be on the mechanism of action, clinical indications, side effects, important drug interactions, and the basic pharmacokinetics of each drug class. (56-0-4)

PHS 5400—Physiology
The course provides an overview of physiological processes of critical importance to students in the Dr. Pallavi Patel College of Health Care Sciences. Topics covered include basic examinations of cellular processes, membrane mechanisms, muscle physiology, the cardiovascular system, the nervous system, renal physiology, the respiratory system, endocrinology, reproductive physiology, and gastrointestinal physiology. (52-0-4)
Physician Assistant Program—Fort Myers

Physician assistants (PAs) serve as essential components of a medical system that continues to struggle to provide quality, affordable health care for all Americans. Their roles in the system will continue to grow as changes in health care indicate. Today, there are more than 100,000 nationally certified physician assistants in the United States. PAs provide care that would otherwise be provided by physicians. PAs take medical histories, perform physical examinations, order and interpret tests, diagnose and treat illnesses, perform medical/surgical procedures, assist in surgery, and can write prescriptions in all states. PAs work in most medical specialties and in all types of communities. Many practice family and internal medicine, and more than one-third are in towns with fewer than 50,000 residents. According to the Bureau of Labor statistics (BLS) U.S. Department of Labor, as published in the 2017 Occupational Outlook Handbook, employment of PAs is expected to grow 37 percent from 2016 to 2026.

It is the obligation of each physician/PA team to ensure that the PA’s scope of practice is identified; that delegation of medical tasks is appropriate to the PA’s level of competence; that the relationship with, and access to, the supervisory physician is defined; and that a process of performance evaluation is established. Adequate responsible supervision of the PA contributes to both high-quality patient care and professional growth.

The Physician Assistant Program—Fort Myers offers an innovative program that lasts 27 months. Upon successful completion of study, students will earn a master of medical science (M.M.S.) in physician assistant degree. The curriculum includes rigorous instruction in the basic sciences, clinical medicine, physical diagnosis, clinical laboratory medicine, clinical pathophysiology, clinical procedures and surgical skills, electrocardiography, radiology, clinical behavioral medicine, legal and ethical issues in health care, cultural issues in health care, interpretation and evaluation of medical literature, complementary medicine and nutrition, and clinical pharmacology.

During the clinical year of study, the student participates in clinical rotations throughout the state of Florida, primarily within 80–100 miles from NSU’s Fort Myers Campus. These rotations include family medicine, internal medicine, pediatrics, gynecology and prenatal care, emergency medicine, and surgery, all complemented by two elective rotations and a selective rotation in one of the following areas: behavioral health, otorhinolaryngology, orthopedics, rural or underserved primary care medicine, or an internal medicine subspecialty. Each student should expect to complete one or more rotations in a rural or underserved area. This will likely entail traveling beyond the 80–100 mile radius of Fort Myers. For core rotations assigned by the program outside of the 100-mile radius, housing will be provided for the student. With a sound foundation in medical training, NSU graduates are prepared to work in many clinical areas, both in primary care and specialty medicine.

Accreditation

The NSU Physician Assistant Program—Fort Myers is accredited by the Accreditation Review Commission on Education for Physician Assistants, Inc., (ARC-PA). The NSU PA Program—Fort Myers was initially awarded provisional accreditation in 2005. The ARC-PA has granted Continued Accreditation to the Physician Assistant Program—Fort Myers, sponsored by Nova Southeastern University. Continued accreditation is an accreditation status granted when a currently accredited program is in compliance with the ARC-PA Standards. Continued Accreditation remains in effect until the program closes or withdraws from the accreditation process or until accreditation is withdrawn for failure to comply with the Standards. The approximate date for the next validation review of the program, formerly the comprehensive review, by the ARC-PA will be March 2028. The program is a member of the Physician Assistant Education Association (PAEA).

Mission Statement

In keeping with the principles of both Nova Southeastern University (NSU) and the Dr. Pallavi Patel College of Health Care Sciences (PCHCS) mission statements, the NSU Physician Assistant (PA) Program—Fort Myers endeavors to

• provide an educational experience that emphasizes primary medical care
• provide health care experiences in medically underserved communities
• prepare students for lifelong learning
• prepare students for leadership roles
• produce PAs who uphold the tenets of professionalism
• enable graduates to demonstrate competency and skill in a variety of clinical and cultural settings

Admissions Requirements

Prospective students are selected by the committee on admissions (COA), which considers the overall qualities of the applicant. Areas of consideration include interpersonal skills, personal motivation, knowledge and understanding of the PA profession, academic performance and level of achievement, life experiences, quality and length of prior health care experience, and recommendations/evaluations. Personal
interviews are offered to the most qualified applicants to assess interpersonal and communication skills, maturity, altruistic attitude, and commitment to a PA career.

1. Prior to matriculation, applicants must have completed a baccalaureate degree from a regionally accredited college or university.
   • A baccalaureate degree in any field of study is acceptable, as long as all prerequisites are met.
   • The program requires applicants to have earned grades of C (2.0) or better in each of their upper-division courses.
   • Applicants must have a minimum cumulative GPA of 3.0 and a minimum science GPA of 3.0 on a 4.0 grading scale.
   • Successful applicants in the past have typically had cumulative GPAs in the range of 3.2 to 3.4 and higher.

2. The college requires the students to earn a grade of C (2.0) or better in each of the following required courses:
   • college math (3 semester hours)
   • English (6 semester hours, including 3 of English composition)
   • humanities/arts (3 semester hours)
   • social sciences (9 semester hours)
   • general biology (or zoology), including laboratory (4 semester hours)
   • microbiology, including laboratory (4 semester hours)
   • general inorganic chemistry I and II, including laboratory (8 semester hours)
   • human anatomy and physiology (6 semester hours)
   • biochemistry (3 semester hours)
   • Medical Terminology (1 semester hour)
   • human genetics (3 semester hours)
   • electives (43 semester hours) Applicants are encouraged to complete their elective coursework in the areas of behavioral, physical and social sciences, or the humanities.

*Science course prerequisites must be completed by the end of the fall semester prior to matriculation

Upon review of a student’s record, the Committee on Admissions may require additional coursework and testing as a condition of acceptance.

The following courses are recommended:
• organic chemistry (3 semester hours)
• anatomy laboratory (1 semester hour)
• physiology laboratory (1 semester hour)
• Introduction to Statistics (3 semester hours)

3. Graduates of foreign institutions or of institutions where English is not the primary language of instruction must present transcripts showing at least 18 semester hours (or equivalent quarter hours) of study from a regionally accredited college or university in the United States. Of these 18 semester hours,
   • 3 semester hours must be in English composition (courses do not include ESOL)
   • 3 semester hours must be in English literature (courses do not include ESOL)
   • 3 semester hours must be in public speaking (courses do not include ESOL)

The remaining 9 semester hours can be any courses of the applicant’s choosing.

4. Prior health care experience is highly recommended and is considered for admission. Those applicants who have prior health care experience must submit verifiable information about their experience. Greater consideration will be given to applicants who have prior patient-contact experience.

5. All applicants are required to submit official scores from the Graduate Record Examination (GRE) general test to CASPA as part of the CASPA application. Our student code is 0951. The test must have been taken within the past five years and must be taken early enough for official scores to be received in the admissions office by the supplemental application due date of January 15. Applications will not be considered complete without GRE scores. Successful applicants in the past have typically had GRE scores (verbal, quantitative, and analytical writing) in the 40th percentile or higher in each of the three categories. Testing information for the GRE may be obtained from gre.org or by telephone at (609) 921-9000.

Computer Requirements
All students are required to have a laptop computer. Please see the Hardware Guidelines for Computing at NSU, available at nova.edu/publications/it-standards.

The clinical year will require the student to track clinical experiences via a web-based program.

Application Procedures
1. Apply to CASPA
The Physician Assistant Program participates in the Centralized Application Service for Physician Assistants (CASPA) for the receipt and processing of all applications. CASPA takes no part in the selection of students. CASPA application packets may be obtained and submitted online at caspaonline.org or by writing

CASPA
P.O. Box 9108
Watertown, MA 02471

Dr. Pallavi Patel College of Health Care Sciences—Department of Physician Assistant
Questions regarding completion of the online application may be directed to CASPA’s email address, caspainfo@casponline.org, or by telephone at (617) 612-2080 or (617) 926-3571. The CASPA application may be submitted as early as April 15, the year prior to the admission cycle. The CASPA application deadline is December 1 to be considered for admission in May/June of the following year.

2. Send transcripts and letters of recommendation/evaluation to CASPA
All official college transcripts from all undergraduate, graduate, and professional institutions attended must be sent directly from the institutions to CASPA.

Two letters of recommendation/evaluation must be sent to CASPA. The first letter must be from a physician assistant. The second letter must be from a health care professional involved with direct patient care. None of the letters may be from relatives or friends. Applications submitted without these letters will not be given consideration.

3. Report GRE scores directly to CASPA
Official Graduate Record Exam (GRE) scores must be admitted directly to CASPA as part of the CASPA application. The school code number for NSU’s PA—Fort Myers program is 0951. The GRE must have been taken in the last five years and must be taken early enough for official scores to be available by the supplemental application deadline of January 15.

4. Complete Supplemental Application
Once the CASPA application has been received by Nova Southeastern University, a supplemental application will be made available to the applicant online.

Your completed supplemental application must be received no later than January 15 in order to be considered for admission for the May/June entering class. Once we receive your GRE scores; copies of all professional certifications, registrations, licenses, or relevant credentialing materials; supplemental application; and $50 fee, your file will be reviewed. Completed applications are reviewed on a “rolling” or periodic basis.

The applicant will not be considered for a possible interview until the application from CASPA, the supplemental application (signed and dated), the nonrefundable, $50 supplemental application fee, and the Graduate Record Evaluation (GRE) test scores are received by the Nova Southeastern University Physician Assistant Office of Admissions.

Personal Interviews
Once your application is complete, the Committee on Admissions (COA) will decide whether or not your application is strong enough to warrant an invitation for a personal interview. Interviews are conducted on the Nova Southeastern University campus in Fort Myers, Florida, and are by invitation only. Interviews will be held from September through February. An invitation to interview is not a guarantee of admission. Notice of acceptance or action by the COA will be on a “rolling” or periodic schedule; therefore, early completion of the application is in the best interest of the candidate.

Transcripts
All applicants who are accepted must submit official transcripts of all coursework to the NSU EPS Physician Assistant admissions office prior to matriculation. It is the responsibility of the applicant to ensure that arrangements are made for these transcripts to be sent.

Tuition and Fees
• Tuition for 2020–2021 will be posted on our website (healthsciences.nova.edu/pa/fort-myers/faq.html). All tuition and fees are subject to change by the board of trustees without notice.

• Acceptance fee is $500. This fee is required to reserve the accepted applicant’s place in the entering first-year class. This advance payment will be deducted from the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance.

• Deposit is $500. This is due February 15, under the same terms as the acceptance fee.

• A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.

• A clinical support charge of $400 will be assessed in each of the three semesters of clinical training.

The first semester’s tuition and fees, less the $1,000 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met. The financial ability of applicants to complete their training at the college is important because of the limited number of positions available in each class.

Applicants should have specific plans for financing 27 months of professional education. This should include tuition, living expenses, books, equipment, and miscellaneous expenses. Each student is required to carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

Opportunity for a limited number of part-time work-study assignments is available. Due to the demands of the PA curriculum, the program discourages any outside employment.
Requirements for Graduation
In order to be eligible to graduate from the Physician Assistant Program, students must

• successfully complete the program of study required for the degree with a minimum cumulative GPA of 2.0 (C)
• successfully complete all didactic and clinical coursework
• demonstrate professional behavior throughout the program
• satisfactorily meet all financial and library obligations
• attend, in person, the commencement program, at which time the degree is conferred

Academic Dismissal in the Physician Assistant Program
See the suspension/dismissal section of the student handbook.

Readmission Policy in the Physician Assistant Program
In selected cases, and only with the approval of the department chair and college dean, a student may be allowed to be noncompetitively matriculated with the next first-year class. It is emphasized that this only refers to those few students with special academic or personal issues.

Course of Study
The Physician Assistant Program curriculum is completed following attainment of a baccalaureate degree, including specified course prerequisites. The comprehensive curriculum, completed in a consecutive manner, is oriented to primary care and prepares the student to practice in a wide variety of clinical settings. The first 14.5 months of study consist of basic sciences and clinically related didactic courses. All courses are required and must be successfully completed before advancing to the clinical year. During this time frame, students are generally in class from Monday through Friday, 8:00 a.m. to 5:00 p.m., although there are occasional evening and/or weekend hours. Because of its highly integrated and compact curriculum, the PA program requires matriculants to complete the entire curriculum at the NSU Fort Myers Campus and will not grant requests for advanced placement, transfer of credit, or credit for experiential learning.

The clinical year is devoted to 12.5 months of training with required six-week rotations in family medicine, emergency medicine, pediatrics, prenatal care/gynecology, general surgery, and internal medicine; one six-week selective rotation of behavioral health, otorhinolaryngology, orthopedics, rural or underserved primary care medicine, or an internal medicine subspecialty; and one six-week and one four-week elective rotation that may include other selectives or specialties. All required rotations must be completed in Florida, primarily within 80–100 miles from NSU’s Fort Myers Campus. Each student will complete at least one rotation in a rural or underserved area. This will likely entail traveling beyond the 80–100-mile radius of Fort Myers, Florida. For core rotations assigned by the program outside of the 100-mile radius, student housing will be provided.

Each required rotation has assigned readings and learning objectives. At the end of each rotation, a written comprehensive examination is administered and must be passed. During rotations, students will be supervised by licensed practitioners and will actively participate in patient assessments, perform common laboratory procedures, interpret common diagnostic examinations, and help manage common medical problems. The work hours during clinical rotations are set by the preceptor and can include evening and weekend hours. Students are required to work a minimum of 40 hours per week, although many rotation sites require a greater student participation.

Upon completion of the course of study, students will have earned a master of medical science (M.M.S.) in physician assistant degree. Graduates will be eligible to take the Physician Assistant National Certification Examination (PANCE) administered by the National Commission on Certification of Physician Assistants (NCCPA).

The role of the physician assistant requires a high level of expertise and responsibility. The applicant must possess the ability and desire to complete a rigorous academic and clinical program and make a commitment to continued learning.
## Curriculum Outline for the Master of Medical Science (M.M.S.) in Physician Assistant Program—Fort Myers

**Start Date:** May/June  
**Length:** 27 months  
**Degree:** Master of Medical Science (M.M.S.) in Physician Assistant  
**Didactic:** 14.5 months  
**Clinical:** 12.5 months

### First Semester—Summer (May/June–August)

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<th>Lecture</th>
<th>Laboratory</th>
<th>Credit Hours</th>
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<td>Anatomy</td>
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<tr>
<td>PAN 5100</td>
<td>Physiology</td>
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<td>PAN 5300</td>
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<td>History Taking and Communication Skills</td>
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<td>Fundamentals of Medical Imaging</td>
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<td>Introduction to the PA Profession</td>
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<td>PAN 5409</td>
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**Total Hours:** 212 Lecture, 66 Laboratory, 16 Credit Hours

### Second Semester—Fall (August–December)

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**Total Hours:** 330 Lecture, 30 Laboratory, 23 Credit Hours

### Third Semester—Winter (January–May)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Lecture</th>
<th>Laboratory</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAN 5320</td>
<td>Physical Diagnosis III</td>
<td>24</td>
<td>36</td>
<td>3</td>
</tr>
<tr>
<td>PAN 5510</td>
<td>Clinical Medicine and Surgery II</td>
<td>118</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>PAN 5520</td>
<td>Clinical Medicine and Surgery III</td>
<td>113</td>
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</tr>
<tr>
<td>PAN 5006</td>
<td>Electrocardiography</td>
<td>34</td>
<td>0</td>
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<tr>
<td>PAN 5610</td>
<td>Clinical Laboratory Medicine II</td>
<td>28</td>
<td>0</td>
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<tr>
<td>PAN 5420</td>
<td>Pharmacology II</td>
<td>72</td>
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<tr>
<td>PAN 5423</td>
<td>Interpretation and Evaluation of Medical Literature</td>
<td>45</td>
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**Total Hours:** 434 Lecture, 66 Laboratory, 32 Credit Hours
### Fourth Semester—Summer II Advanced Didactic (May–July/August)

<table>
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<tr>
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<th>Lecture</th>
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<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>PAN 5461</td>
<td>Life Support Procedures and Skills</td>
<td>24</td>
<td>20</td>
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<tr>
<td>PAN 5560</td>
<td>Clinical Procedures and Surgical Skills</td>
<td>30</td>
<td>36</td>
<td>3</td>
</tr>
<tr>
<td>PAN 5008</td>
<td>Health Promotion and Disease Prevention</td>
<td>26</td>
<td>0</td>
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<tr>
<td>PAN 5009</td>
<td>PA and Health Care Dynamics</td>
<td>16</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>PAN 5411</td>
<td>Complementary Medicine and Nutrition</td>
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<tr>
<td>PAN 5419</td>
<td>Clinical Pharmacology</td>
<td>46</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>PAN 5403</td>
<td>Legal and Ethical Issues in Health Care</td>
<td>48</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>PAN 5540</td>
<td>Clinical Behavioral Medicine</td>
<td>50</td>
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</table>

**Total Hours:** 250 98 18

### Clinical Curriculum—Second Year (August–August)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Weeks</th>
<th>Contact Hours</th>
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<tbody>
<tr>
<td>PAN 6310</td>
<td>Emergency Medicine</td>
<td>6</td>
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</tr>
<tr>
<td>PAN 6320</td>
<td>Family Medicine</td>
<td>6</td>
<td>250</td>
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</tr>
<tr>
<td>PAN 6330</td>
<td>Internal Medicine</td>
<td>6</td>
<td>270</td>
<td>6</td>
</tr>
<tr>
<td>PAN 6340</td>
<td>Pediatrics</td>
<td>6</td>
<td>240</td>
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<tr>
<td>PAN 6350</td>
<td>Prenatal Care and Gynecology</td>
<td>6</td>
<td>270</td>
<td>6</td>
</tr>
<tr>
<td>PAN 6360</td>
<td>Surgery</td>
<td>6</td>
<td>300</td>
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</tr>
<tr>
<td>PAN 6371</td>
<td>Selective I (1 of 5*)</td>
<td>6</td>
<td>270</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>• Behavioral Health</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>• Otorhinolaryngology</td>
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<tr>
<td></td>
<td>• Orthopedics</td>
<td></td>
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<tr>
<td></td>
<td>• Rural or Underserved Primary Care Medicine</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>• Internal Medicine Subspecialty</td>
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<tr>
<td>PAN 6376</td>
<td>Clinical Elective I</td>
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<tr>
<td>PAN 6381</td>
<td>Clinical Elective II</td>
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<td>160</td>
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<tr>
<td>PAN 6601</td>
<td>Graduate Project</td>
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</table>

**Total Hours:** 52 2,390 55

Curriculum is subject to change as directed by the department.

*1 of 5 selectives required—may use other selectives as electives*
Note: Listed at the end of each entry are lecture clock hours, laboratory clock hours, and semester hours.

PAN 5000—Anatomy
Gross structures of the human body. Integrates topographic and radiographic anatomy to stress the application and importance of clinical anatomy. Develops the knowledge of the human anatomy necessary for the practice of the profession. (56-38-5)

PAN 5002—Introduction to the Physician Assistant Profession
Introduces key concepts regarding the PA profession: an overview of the profession, the history of the development of the profession, the current status of the profession, physician assistant education, and current and future roles of the physician assistant. (16-0-1)

PAN 5003—Fundamentals of Medical Imaging
Introduces key concepts for the understanding of normal medical diagnostic imaging. Emphasis is placed on images of normal human body structures and organs. (18-0-1)

PAN 5005—Genetics
This course will introduce principles of medical genetics applied to the clinical practice of medicine within the scope of practice of physician assistants. Discussions will include the role of genetics in medicine; the basic structure and behavior of genes; genetic basics of human disease; the human genome; application of genetic science to cancer; and genetics in clinical medicine for diagnosis, treatment, and ethical considerations. (30-4-2)

PAN 5006—Electrocardiography
Provides the basics for learning to interpret normal ECG tracings and applying those principles to interpret the ECG tracings of common cardiac disease. (34-0-2)

PAN 5008—Health Promotion and Disease Prevention
Focus on wellness through preventive interventions and services. Emphasizes responsibility for one’s own health, the community’s efforts to protect against disease, and environmental hazards. Epidemiology, risk factors, screening tests, and community resources are identified with each health issue presented. (26-0-2)

PAN 5009—PA and Health Care Dynamics
This course focuses on the current status and issues regarding the physician assistant profession within the context of the U.S. medical system and today’s health care workforce. It discusses the structures and administrative principles in health care organizations, the role of the practicing PA in unique environments with an emphasis on rural and underserved medicine, reimbursement for services rendered, quality assurance, risk management, patient safety and medical errors, federal health care programs, and other issues involving patient care. (16-0-1)

PAN 5100—Physiology
Clinically relevant physiologic principles of the major organ systems covered in Clinical Anatomy. Pathological changes that occur in human physiology in the disease process. (54-0-4)

PAN 5101—Clinical Pathophysiology
This course introduces the student to pathophysiologic concepts that form the biologic basis of disease. It builds on the knowledge gained in anatomy and physiology courses. However, physiologic concepts will be reviewed and emphasized in order for the student to fully appreciate the progression from the normal physiologic state to the diseased state with its resultant clinical signs and symptoms. (44-0-3)

PAN 5200—Microbiology
Relationship of microbes to human disease and the host-immune response. Characteristics and properties of clinically significant bacteria, viruses, fungi, and selected parasites as well as the prevention, control, and diagnostic laboratory tests of their associated specific infectious diseases. (46-0-3)

PAN 5300—Physical Diagnosis I
Principles and skills required to perform a complete medical history and physical examination. Emphasizes normal physical findings. Prerequisite for PAN 5310 (22-28-2)

PAN 5310—Physical Diagnosis II
Upon successful completion of the prerequisite PAN 5300, the students will build upon skills learned in Physical Diagnosis I. The student will have supervised practice of skills using simulated patient encounters. Integrating previously learned interviewing skills with principles from the clinical sciences, students elicit a comprehensive medical history, perform a complete physical examination, and formulate an initial diagnostic impression and diagnostic plan. Students are expected to continue to progress in recording information in written form and presenting the information orally to colleagues. Prerequisite for PAN 5320 (40-26-4)

PAN 5320—Physical Diagnosis III
Upon successful completion of the prerequisite PAN 5310, the student will continue to systematically learn abnormalities in the physical examination and specialty examination techniques. The student will have supervised practice of skills using simulated patient encounters. Integrating previously learned interviewing skills with principles from the
clinical sciences, students elicit a comprehensive medical history, perform a complete physical examination, and formulate an initial diagnostic impression and diagnostic plan. Students are expected to continue to progress in recording information in written form and presenting the information orally to colleagues. (24-36-3)

PAN 5400—History Taking and Communications Skills
This course prepares the student to perform a complete medical history, identifying appropriate communication skills needed for interaction with patients, families, and colleagues. (16-0-1)

PAN 5403—Legal and Ethical Issues in Health Care
Introduces the role that ethics and the law play in the practice of health care. Principles and concepts in determining correct actions both legally and ethically are reviewed. Topics include solving an ethical dilemma, ethical implications involved in genetic engineering, the impaired clinician, conflicts between providers, conflicts between clinician and patient, euthanasia, risk management, confidentiality, informed consent, patients' directives, and documentation. (48-0-3)

PAN 5409—Cultural Issues in Health Care
Introduction to the skills and insights necessary in promoting health and dealing with illness in diverse populations. Issues discussed include the need for effective communication with an understanding of societal and cultural factors and how they impact on health care efforts and use of the health care system. (30-0-2)

PAN 5410—Pharmacology I
Understanding the basis for pharmacologic intervention in patient care is the foundation for treatment of disease. Course begins an in-depth study of the pharmacodynamics of drugs used in the automatic nervous, renal, and cardiovascular systems. Mechanisms of drug action, clinical uses, side effects, contraindications and drug interactions, pharmacokinetic considerations for special patient populations. (36-0-2)

PAN 5411—Complementary Medicine and Nutrition
Survey of human nutrition in health care, and the principles for maintaining good health through nutrition. Addresses health hazards associated with dietary deficiencies, obesity, fad dieting, food contamination, diet management of selected diseases, and functional roles of vitamins and minerals. Additionally, this course will address introductory concepts, procedures, education, and licensing in alternative and complementary medicine. (18-0-1)

PAN 5419—Clinical Pharmacology
This course will advance the clinical skills of the student as they relate to the pharmacologic treatment of the patient. Specific topics will include the indicated medications in the treatment of common illnesses; their adverse effects; and drug interactions, dosage, and monitoring. (46-0-3)

PAN 5420—Pharmacology II
Mechanisms of action, clinical uses, side effects, contraindications, drug interactions, and pharmacokinetics of drugs utilized in the treatment of diseases of the major organ systems. Treatment of HIV, geriatric and neonatal pharmacology, the pharmacological principles of nutrition, over-the-counter agents, toxicology, drugs of abuse, prescription writing, and evaluation of drug literature. (72-0-5)

PAN 5423—Interpretation and Evaluation of the Medical Literature
This course is designed to introduce the student to the processes of searching, interpreting, and evaluating medical literature for the purposes of application within an evidence-based medicine framework, as well as within a research framework. The essential components of a well-written medical or research paper are presented. The process by which these papers are transformed into publications is described (including the concepts of article preparation and revision and the steps required for submission to a physician assistant or other medical journal). This course is designed to adequately prepare students to complete the Graduate Project (PAN 6601), which results in a written medical or research paper. (45-30-4)

PAN 5461—Life Support Procedures and Skills
Introduction to the principles of advanced life support used in medical and surgical emergencies. Includes a review of the most common emergency situations encountered and provides hands-on practical training that will assist the student in developing the skills required to stabilize patients with life-threatening conditions. Includes certification in basic (BLS) and Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS). (24-20-2)

PAN 5500—Clinical Medicine and Surgery I
Etiology, clinical manifestations, appropriate diagnostic evaluation, and the management of selected disease entities. (100-0-7)

PAN 5510—Clinical Medicine and Surgery II
Continuation of Clinical Medicine and Surgery I. Common disease entities of major organ systems and primary care aspects of disease evaluation and treatment. (118-0-8)

PAN 5520—Clinical Medicine and Surgery III
Continuation of Clinical Medicine and Surgery II. Disease entities of major organ systems. Lectures in primary care aspects of disease evaluation and treatment. (113-0-8)

PAN 5540—Clinical Behavioral Medicine
Common psychosocial problems and disorders encountered by health care professionals. Emphasizes the diagnosis and understanding of development of these behaviors, including the patient-clinician relationship, varieties of psychotherapy, communication skills, and appropriate intervention and treatment regimens. (50-0-3)
PAN 5560—Clinical Procedures and Surgical Skills
Lectures and laboratory practicum introducing the clinical procedures and surgical skills used in the clinical setting: aseptic technique, operating room protocol, injections, knot tying and suturing techniques, venipuncture, arterial puncture, intravenous catheterization, nasogastric intubation, and urinary catheterization. This course is a prerequisite for clinical rotations. (30-36-3)

PAN 5600—Clinical Laboratory Medicine I
Clinical laboratory utilization, rationale for selecting common diagnostic tests, interpretation of results, correlation between results and disease processes, and tests not available in the primary care setting that are necessary for diagnosis, treatment, and patient care. (34-4-2)

PAN 5610—Clinical Laboratory Medicine II
Continuation of Clinical Laboratory Medicine I. Students will learn how to appropriately order and accurately interpret laboratory tests. These skills will help them diagnose common diseases related to major organ systems. (28-0-2)

PAN 6310—Emergency Medicine
Required six-week rotation in hospital emergency department teaches students to recognize, assess, and treat acute and life threatening clinical problems. Emphasizes common primary care emergencies. (270-0-6)

PAN 6320—Family Medicine
Required six-week rotation in outpatient settings. Comprehensive primary care of the individual patient within the family unit. Emphasizes the primary care needs of patients in rural, or inner-city communities. (250-0-6)

PAN 6330—Internal Medicine
Required six-week rotation in outpatient and/or inpatient settings. Diagnosis, treatment, and management of acute and chronic medical problems seen in the internal medicine practice. Emphasizes the adult nonsurgical patient. (270-0-6)

PAN 6340—Pediatrics
Required six-week rotation in outpatient and/or inpatient settings teaches normal and abnormal growth and development, disease prevention, and basic health care in neonates through adolescence. Emphasizes primary care of the pediatric patient. (240-0-6)

PAN 6350—Prenatal Care and Gynecology
Required six-week rotation in outpatient and/or inpatient settings teaches perinatal care and treatment and gynecological diagnosis and management. Emphasizes primary care of the female patient including obstetrics. (270-0-6)

PAN 6360—Surgery
Required six-week rotation in outpatient and inpatient settings. Students learn to diagnose, treat, and manage the surgical patient. Emphasizes surgical entities commonly encountered in the primary care setting. (300-0-6)

PAN 6371—Selective I
In this selective, full-time, clinical rotation, students select one of four areas of medicine. The rotation provides an opportunity to investigate a behavioral health, otorhinolaryngology, orthopedics, rural or underserved primary care medicine, or internal medicine subspecialty. (270-0-6)

PAN 6376—Elective I
Elective, full-time, clinical rotation that provides an opportunity to investigate a clinical, medical, or surgical subspecialty area or gain more experience in primary care. Elective rotations provide opportunities to investigate a clinical subspecialty area or gain more experience in a required discipline. (270-0-6)

PAN 6381—Elective II
This is a four-week elective course rotation that will be completed at the end of the clinical year. Elective rotations provide opportunities to investigate a clinical subspecialty area or gain more experience in a required discipline. (160-0-4)

PAN 6601—Graduate Project
With the guidance of a faculty adviser, students will use the skills acquired in Interpretation and Evaluation of Medical Literature (PAN 5423) to create a graduate project. The project features topics in clinical or administrative medicine and consists of a comprehensive literature review and evaluation and completion of a publishable review paper. The project allows the student to demonstrate his or her ability to research and compile information and to present that information in a clear, written form. (0-90-3)
Physician Assistant Program—Orlando

Physician assistants (PAs) serve as an essential component of a medical system that continues to strive to provide quality, affordable health care for all individuals. Their roles in the system will continue to grow as changes in health care indicate. Today, more than 100,000 individuals are in practice as PAs in the United States. PAs provide care that would otherwise be provided by physicians. PAs take medical histories, perform physical examinations, order and interpret tests, diagnose and treat illnesses, perform medical/surgical procedures, assist in surgery, and can write prescriptions in all states. PAs work in most medical specialties and in all types of communities. Many practice in primary care settings, and more than one-third are in towns with fewer than 50,000 residents. The PA profession is one of the fastest growing health care professions. According to the Bureau of Labor statistics (BLS) U.S. Department of Labor, as published in the 2016–2017 Occupational Outlook Handbook, employment of PAs is expected to grow 30 percent from 2014 to 2024.

It is the obligation of each physician/PA team to ensure that the PA's scope of practice is identified; that delegation of medical tasks is appropriate to the PA's level of competence; that the relationship of, and access to, the supervisory physician is defined; and that a process of performance evaluation is established. Adequate responsible supervision of the PA contributes to both high-quality patient care and professional growth.

The Department of Physician Assistant—Orlando offers a modern program that lasts 27 months. Upon successful completion of study, the student is awarded a Master of Medical Science degree in Physician Assistant. The curriculum includes rigorous instructions in basic science subjects, followed by clinical medicine, physical diagnosis, clinical laboratory medicine, clinical pathophysiology, clinical procedures, surgical skills, electrocardiography, radiology, and psychiatry. The student also takes courses in the Master of Medical Science program including health care law and ethics, epidemiology and biostatistics, research methodology, cultural issues in health care, publication skills, and medical research, as well as a graduate project.

During the clinical year of study, the student participates in clinical rotations predominantly in Central Florida. Required six-week rotations include family medicine, internal medicine, behavioral health, pediatrics, gynecology and prenatal care, emergency medicine, general surgery, and one selective of six weeks from one of the following areas: dermatology, geriatrics, otorhinolaryngology, cardiology, neurology, or orthopedics. The clinical year contains one four-week elective rotation. With a sound foundation in medical training, NSU graduates are prepared to work in many clinical areas, both in primary care and specialty medicine.

Accreditation

The Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) has granted Accreditation—Continued status to the Nova Southeastern University—Orlando Physician Assistant Program sponsored by Nova Southeastern University—Orlando. Accreditation—Continued is an accreditation status granted when a currently accredited program is in compliance with the ARC-PA Standards.

Accreditation remains in effect until the program closes or withdraws from the accreditation process or until accreditation is withdrawn for failure to comply with the Standards. The approximate date for the next validation review of the program by the ARC-PA will be March 2024. The review date is contingent upon continued compliance with the Accreditation Standards and ARC-PA policy.

Mission Statement

• to provide a high-quality training program designed for, and dedicated to producing, culturally competent physician assistants who will provide quality health care in rural, urban, underserved, and culturally diverse communities
• to provide an exemplary educational experience, which emphasizes primary medical care, yet will enable graduates to manifest competency and skill in a variety of clinical environments
• to inspire graduates to pursue lifelong learning
• to foster leadership qualities, which will enable graduates to improve access to quality, affordable health care
• to heighten the stature of the physician assistant profession by training quality graduates

Program Goals

• Produce competent graduates to provide primary health care.
• Increase accessibility of quality health care in the primary care setting.
• Develop student skills necessary for lifelong learning and leadership roles and promotion of the physician assistant profession.

Admissions Requirements

Prospective students are selected by the Committee on Admissions (COA), which considers the overall qualities of the applicant. Areas of consideration include interpersonal skills, personal motivation, knowledge and understanding of the PA profession, academic performance and level of
achievement, life experiences, quality and length of prior health care experience, and recommendations/evaluations. Personal interviews are offered to the most qualified applicants to assess interpersonal and communication skills, maturity, altruistic attitude, and commitment to a PA career.

1. Prior to matriculation, applicants must have completed a bachelor’s degree of their choice from a regionally accredited college or university in the United States. Applicants must have a minimum cumulative GPA of 3.0 and a minimum science GPA of 3.0 on a 4.0 grading scale at the time of application and continuing through matriculation.

2. The college requires applicants to earn a grade of C (2.0) or better in each of the following required courses (science prerequisites must be completed by the end of the fall semester prior to matriculation):
   - college math (3 semester hours)
   - English, including 3 semester hours of English composition (6 semester hours)
   - humanities/arts (3 semester hours)
   - social sciences (9 semester hours)
   - general inorganic chemistry (1 and II) including lab (8 semester hours)
   - microbiology including lab (4 semester hours)
   - general biology (or zoology) including lab (4 semester hours)
   - human anatomy and human physiology (6 semester hours)
   - biochemistry (3 semester hours)
   - human genetics (3 semester hours)
   - Medical Terminology (1 semester hour)

   The required science courses must be specifically for science majors. Introductory and survey courses are not accepted. Applicants are encouraged to complete their elective coursework in the areas of behavioral, physical, and social sciences or the humanities. Upon review of an applicant’s record, the Committee on Admissions may require additional coursework and testing as a condition of acceptance.

   The following courses are recommended:
   - biochemistry or organic chemistry laboratory (1 semester hour)
   - anatomy laboratory (1 semester hour)
   - physiology laboratory (1 semester hour)
   - Introduction to Statistics (3 semester hours)

3. Graduates of foreign institutions where English is not the primary language of instruction must present transcripts showing at least 18 semester hours (or equivalent quarter hours) of study from a regionally accredited college or university in the United States. Of these 18 semester hours,
   - 3 semester hours must be in English composition (courses do not include ESOL)
   - 3 semester hours must be in English literature (courses do not include ESOL)
   - 3 semester hours must be in public speaking (courses do not include ESOL)

   The remaining 9 semester hours can be any missing prerequisites or upper-level science courses for science majors of the applicant’s choosing, excluding physical education.

4. All applicants are required to have official scores from the Graduate Record Examination (GRE) general test submitted directly to the Centralized Application Service for Physician Assistants (CASPA). The test must have been taken within the past five years and must be taken early enough for official scores to be received in the admissions office by the supplemental application due date of January 15. If multiple exams have been taken, only the most recent scores will be considered. Applications will not be considered complete without GRE scores. Testing information for the GRE may be obtained from gre.org or by telephone at (609) 921-9000. NSU’s PA Orlando Program school code is 0964.

Prior health care experience is highly recommended and is considered for admission. Those applicants who have prior health care experience must submit verifiable information about their experience through CASPA.

**Application Procedures**

1. **Apply to CASPA**
   The Physician Assistant Program participates in the Centralized Application Service for Physician Assistants (CASPA) for the receipt and processing of all applications. CASPA takes no part in the selection of students. CASPA applications are available online at caspa.liaisoncas.com.

   Questions regarding completion of the online application may be directed to CASPA’s email address, apply@caspaonline.org, or by telephone to (617) 612-2080.

   The CASPA application may be submitted as early as April of the year prior to matriculation. The CASPA application deadline is December 1 to be considered for admission in May.

2. **Send transcripts and letters of recommendation/evaluation to CASPA**
   All official college transcripts from all undergraduate, graduate, and professional institutions attended must be sent directly from the institutions to CASPA.

   Two letters of recommendation/evaluation must be sent to CASPA or the application will not be considered. Two letters
of recommendation/evaluation must be from health care professionals (neither of which can be a practicing relative or friend), one of which must be from a physician assistant.

3. Report GRE scores directly to CASPA
Official Graduate Record Exam (GRE) scores must be admitted directly to CASPA as part of the CASPA application. The school code number for NSU’s PA—Orlando program is 0964. The GRE must have been taken in the last five years and must be taken early enough for official scores to be available by the supplemental application deadline of January 15.

4. Complete Supplemental Application
Once the CASPA application has been received by Nova Southeastern University, a supplemental application will be available online.

The applicant will not be considered for a possible interview until the application from CASPA, the supplemental application, the $50 supplemental application fee, and the Graduate Record Evaluation (GRE) test scores are received by the Nova Southeastern University Physician Assistant Office of Admissions.

Personal Interviews
Once your application is complete, the Committee on Admissions (COA) will decide whether your application is strong enough to warrant an invitation for a personal interview. Interviews are conducted at Nova Southeastern University’s Orlando Campus, and are by invitation only. An invitation is not a guarantee of admission. Notice of acceptance or action by the COA will be on a “rolling” or periodic schedule; therefore, early completion of the application is in the best interest of the applicant.

Current College Coursework
All prerequisite coursework must be completed by the end of May in order to be considered for the June entering class. If, at the time of application, some coursework is in progress or anticipated, please identify the courses on the supplemental application.

Transcripts
All applicants who are accepted must submit official transcripts of all coursework to the NSU EPS Physician Assistant Admissions Office prior to matriculation. It is the responsibility of the applicant to ensure that arrangements are made for these transcripts to be sent.

Tuition and Fees
- Tuition for 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (healthsciences.nova.edu/pa/orlando/faq.html). A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.
- A clinical support charge of $400 will be assessed in each of the three semesters of clinical training.
- Acceptance fee is $500. This fee is required to reserve the accepted applicant’s place in the entering first-year class, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance.
- Deposit is $500. This is due February 15, or within two weeks of an applicant’s acceptance, whichever is the latest, under the same terms as the Acceptance Fee.

The first semester’s tuition and fees, less the $1,000 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met. The financial ability of applicants to complete their training at the college is important because of the limited number of positions available in each class.

Applicants should have specific plans for financing 27 months of professional education. This should include tuition, living expenses, books, equipment, and miscellaneous expenses. Each student is required to carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

Due to the demands of the PA curriculum, the program discourages any outside employment. The program does not allow working for NSU or any of the associated clinical training sites.

Requirements for Graduation
In order to be eligible to graduate from the Physician Assistant Program, students must
- successfully complete all academic and clinical courses and degree requirements
- have satisfactorily met all financial and library obligations
- attend, in person, the commencement program, at which time the degree is conferred

Academic Dismissal in the Physician Assistant Program
See the suspension/dismissal section of the student handbooks.

Remediation Policy
The Nova Southeastern University Physician Assistant Program—Orlando is an intense academic experience. Students will encounter both written and performance-based examinations. In specific courses, (Physical Exam/diagnosis, Clinical Medicine, and Surgery, etc.) all blocks of instruction must be successfully passed by the student in order to pass the entire course.
All students are aware of their performance at the end of every test. If a student fails to demonstrate the required competencies for a specific exam or block of instruction, he or she will be notified and certain actions shall be taken. Students will receive email notification of failed grades from the academic coordinator. The student will meet with his or her academic adviser and/or the course director/instructor in order to discuss the academic situation and develop a plan of action for improving his or her academic deficiencies. The student will review the plan of action for improvement and grade sheets and sign them. Students will coordinate a retesting date with the course director and that will be within seven calendar days of the test failure or a mutually agreed upon date. The student must be proactive in coordinating additional study/tutoring time before the retest.

If the student successfully passes the retest, the student will receive a maximum score of 75 percent.

If the student fails to demonstrate mastery of the course objectives by failing the retest, the student’s case will be forwarded to the Committee on Student Progress for further review and possible academic and administrative action. Recommendations will be referred to the department chair for final disposition.

Course of Study

The Physician Assistant Program curriculum is completed following an acceptable bachelor's degree. The comprehensive PA curriculum, completed in a consecutive manner, is oriented to primary care and prepares the student to practice in a wide variety of clinical settings. The first 15 months of study consist of basic sciences and clinically related didactic courses. All courses are required and must be successfully completed before advancing to the next semester or the clinical year. During this time frame, students may be in class from Monday through Friday, 8:00 a.m. to 8:00 p.m., additionally, there may be occasional weekend hours. Because of its highly integrated and compact curriculum, the PA department requires matriculants to complete the entire curriculum at NSU. Therefore, no requests for advanced placement, transfer of credit, and credit for experiential learning will be considered.

The clinical year is devoted to 12 months of clinical training with required six-week clinical rotations in family medicine, internal medicine, emergency medicine, behavioral health, pediatrics, prenatal care/gynecology, general surgery, as well as a selective rotation in orthopedics, dermatology, geriatrics, cardiology, neurology, or otorhinolaryngology and a four-week elective. The rotations are as follows:

- Emergency Medicine (six weeks)
- Family Medicine (six weeks)
- Internal Medicine (six weeks)
- Pediatrics (six weeks)
- Prenatal Care and Gynecology (six weeks)
- General Surgery (six weeks)
- Selective (six weeks in one of the following courses)
  - Geriatrics
  - Orthopedics
  - Dermatology
  - Otorhinolaryngology
  - Cardiology
  - Neurology
  - Gastroenterology
  - Endocrinology
  - Pulmonology
- Behavioral Health (six weeks)
- Elective (four weeks)
- Graduate Project (each semester)

Each required rotation has assigned readings and learning objectives. At the end of each required rotation, a written, comprehensive subject examination is administered and must be passed. The six-week selective rotation requires the submission of documents as defined in the Orlando Clinical Handbook and rotation syllabi as related to the rotation. A comprehensive, written, summative examination is administered as a component of the four-week elective and must be passed. During rotations, students will be supervised by licensed practitioners and will actively participate in patient assessments, perform common laboratory procedures, interpret common diagnostic examinations, and help manage common medical problems as required by the program and the ARC-PA standards. Testing will occur on scheduled end-of-rotation days (EORs). OSCE, PACKRAT, and other testing may occur as scheduled during EORs. Comprehensive, computerized patient logs are to be completed and submitted as directed prior to EORs. Weekly Exam Master tests must be submitted to advisers at the scheduled times. The work hours during clinical rotations are set by the preceptor and can include evening and weekend hours. Students are required to work a minimum of 32 hours per week, however, many rotation sites require a greater student participation.

Upon completion of the course of study, students will have earned a Master of Medical Science (M.M.S.) in Physician Assistant degree. Graduates will be eligible to take the Physician Assistant National Certification Examination (PANCE) administered by the National Commission on Certification of Physician Assistants.

The role of the physician assistant requires a high level of expertise and responsibility. The applicant must possess the ability and desire to complete a rigorous academic and clinical program and make a commitment to lifelong learning and becoming a professional.
# Curriculum Outline for the Master of Medical Science (M.M.S.) in Physician Assistant Program—Orlando

**Start Date:** June  
**Length:** 27 months  
**Degree:** Master of Medical Science (M.M.S.) in Physician Assistant  
**Didactic:** 15 months  
**Clinical:** 12 months

<table>
<thead>
<tr>
<th>First Semester—Summer I (June–August)</th>
<th>Lecture</th>
<th>Lab</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>PAO 5000 Anatomy</td>
<td>48</td>
<td>32</td>
<td>4</td>
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<tr>
<td>PAO 5001 Pharmacodynamics</td>
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<tr>
<td>PAO 5002 Introduction to the PA Profession</td>
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<tr>
<td>PAO 5100 Physiology</td>
<td>48</td>
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<td>3</td>
</tr>
<tr>
<td>PAO 5300 Physical Diagnosis I</td>
<td>22</td>
<td>44</td>
<td>3</td>
</tr>
<tr>
<td>PAO 5400 History Taking and Communication Skills</td>
<td>20</td>
<td>4</td>
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<tr>
<td>PAO 5406 Cultural Issues in Health Care</td>
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<tr>
<td>PAO 5605 Clinical Laboratory Medicine</td>
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<td><strong>Total Hours:</strong></td>
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<thead>
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<th>Second Semester—Fall (September–December)</th>
<th>Lecture</th>
<th>Lab</th>
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<tr>
<td>PAO 5003 Fundamentals of Medical Imaging</td>
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<tr>
<td>PAO 5006 Electrocardiography</td>
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<tr>
<td>PAO 5104 Clinical Pathophysiology</td>
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<tr>
<td>PAO 5200 Microbiology</td>
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<td>3</td>
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<tr>
<td>PAO 5310 Physical Diagnosis II</td>
<td>18</td>
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<tr>
<td>PAO 5404 Legal and Ethical Issues in Health Care</td>
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<tr>
<td>PAO 5410 Pharmacology I</td>
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<tr>
<td>PAO 5421 Epidemiology and Biostatistics in Health Care</td>
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<tr>
<td>PAO 5500 Clinical Medicine and Surgery I</td>
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<td><strong>Total Hours:</strong></td>
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<th>Third Semester—Winter (January–May)</th>
<th>Lecture</th>
<th>Lab</th>
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<tr>
<td>PAO 5320 Physical Diagnosis III</td>
<td>34</td>
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<td>PAO 5420 Pharmacology II</td>
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<td>PAO 5510 Clinical Medicine and Surgery II</td>
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<td>PAO 5520 Clinical Medicine and Surgery III</td>
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Dr. Pallavi Patel College of Health Care Sciences—Department of Physician Assistant
PAO 5540 Clinical Behavioral Medicine 44 0 3

**Total Hours:** 458 42 32

**Fourth Semester—Summer II Advanced Didactic (June–July)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Lecture</th>
<th>Lab</th>
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<td>PAO 5005 Genetics</td>
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<tr>
<td>PAO 5008 Health Promotion and Clinical Correlations</td>
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<tr>
<td>PAO 5009 PA and Health Care Dynamics</td>
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<tr>
<td>PAO 5407 Clinical Pharmacology</td>
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<tr>
<td>PAO 5408 Complementary Medicine and Nutrition</td>
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<tr>
<td>PAO 5412 Publication Skills and Medical Research</td>
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<tr>
<td>PAO 5460 Life Support Procedures and Skills</td>
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<tr>
<td>PAO 5560 Clinical Procedures and Surgical Skills</td>
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**Total Hours:** 168 146 15

**Clinical Curriculum—Second Year (August–August)**

<table>
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<tr>
<th>Course</th>
<th>Weeks</th>
<th>Contact</th>
<th>Credit Hours</th>
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<td>PAO 6401 Clinical Elective I</td>
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<td>PAO 6410 Behavioral Health</td>
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<td>PAO 6498 Graduate Project I</td>
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<td>PAO 6499 Graduate Project II</td>
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<tr>
<td>PAO 6500 Graduate Project III</td>
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<tr>
<td>PAO 6310 Emergency Medicine</td>
<td>6</td>
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<tr>
<td>PAO 6320 Family Medicine</td>
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<tr>
<td>PAO 6330 Internal Medicine</td>
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<tr>
<td>PAO 6340 Pediatrics</td>
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<td>240</td>
<td>6</td>
</tr>
<tr>
<td>PAO 6350 Prenatal Care and Gynecology</td>
<td>6</td>
<td>240</td>
<td>6</td>
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<tr>
<td>PAO 6360 General Surgery</td>
<td>6</td>
<td>240</td>
<td>6</td>
</tr>
<tr>
<td>PAO 6406 Selective (choose one of nine*)</td>
<td>6</td>
<td>240</td>
<td>6</td>
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</tbody>
</table>
  * Geriatrics
  * Orthopedics
  * Dermatology
  * Otorhinolaryngology
  * Cardiology
  * Neurology
  * Gastroenterology
  * Pulmonology
  * Endocrinology

**Total Weeks/Hours/Credits (second year)** 52 2,070 55

Curriculum is subject to change as directed by the department.

*one of nine selectives required, may use other selectives as electives
Physician Assistant—Orlando Course Descriptions

Note: Listed at the end of each entry are lecture clock hours, laboratory clock hours, and semester hours.

PAO 5000—Anatomy
Gross structures of the human body. Integrates topographic and radiographic anatomy to stress the application and importance of clinical anatomy. Develops the knowledge of the human anatomy necessary for the practice of the profession. (48-32-4)

PAO 5001—Pharmacodynamics
This course will provide the student with a thorough understanding of the basic pharmacodynamic and pharmacokinetic principles. Emphasis will be on basic terminology, receptor theory, pathways, absorption, distribution, elimination, and pharmacological effects. (16-0-1)

PAO 5002—Introduction to the Physician Assistant Profession
Introduces key concepts regarding the PA profession including an overview of the profession, the history of the development of the profession, the current status of the profession, physician assistant education, and current and future roles of the physician assistant. (16-0-1)

PAO 5003—Fundamentals of Medical Imaging
Introduces key concepts for the understanding of normal medical diagnostic imaging. Emphasis is placed on images of normal human body structures and organs. (28-0-2)

PAO 5004—Genetics
This course will introduce principles of medical genetics applied to the clinical practice of medicine within the scope of practice of Physician Assistants. Discussions will include the role of genetics in medicine, the basic structure and behavior of genes, genetic basics of human disease, the human genome, and application of genetic science to cancer, genetics in clinical medicine for diagnosis, treatment, and ethical considerations. (20-30-2)

PAO 5005—Electrocardiography
Provides the basics for learning to interpret normal ECG tracings and applying those principles to interpret the ECG tracings of common cardiac disease. (30-0-2)

PAO 5006—Health Promotion and Clinical Correlations
Focus on wellness through preventive interventions and services. Emphasizes responsibility for one’s own health, the community’s efforts to protect against disease, and environmental hazards. Epidemiology, risk factors, screening tests, and community resources are identified with each health issue presented. The clinical correlation of these topics, in addition to the knowledge and clinical skills taught during the academic year, will be reiterated and re-enforced. (8-20-1)

PAO 5009—PA and Health Care Dynamics
This course focuses on the current status and issues regarding the physician assistant profession within the context of the U.S. medical system and today’s health care workforce. The course discusses the structures and administrative principles in health care organizations; the role of the practicing PA in unique environments, with an emphasis on rural and underserved medicine; reimbursement for services rendered; quality assurance; federal health care programs; and other issues involving patient care. (20-0-1)

PAO 5100—Physiology
Clinically relevant physiologic principles of the major organ systems covered in Clinical Anatomy. Normal physiologic processes of all major organ systems are emphasized in this course. (48-0-3)

PAO 5104—Clinical Pathophysiology
This course introduces the student to pathophysiologic concepts that form the biologic basis of disease. It builds on the knowledge gained in human anatomy and physiology courses. However, physiologic concepts will be reviewed and emphasized in order for the student to fully appreciate the progression from the normal physiologic state to the acute and chronic diseased state with its resultant clinical signs and symptoms. (46-0-3)

PAO 5200—Microbiology
Relationship of microbes to human disease and the host-immune response. Characteristics and properties of clinically significant bacteria, viruses, fungi, and selected parasites as well as the prevention, control, and diagnostic laboratory tests of their associated specific infectious diseases. (42-0-3)

PAO 5300—Physical Diagnosis I
Principles and skills required to perform a complete medical history and physical examination. Emphasizes normal physical findings. (22-44-3)

PAO 5310—Physical Diagnosis II
Students will build upon skills learned in Physical Diagnosis I. The student will have supervised practice of skills using simulated patient encounters. Integrating previously learned interviewing skills with principles from the clinical sciences, students elicit a comprehensive medical history, perform a complete physical examination, and formulate an initial
diagnostic impression and diagnostic plan. Students are expected to continue to progress in recording information in written form and presenting the information orally to colleagues. (18-36-2)

**PAO 5320—Physical Diagnosis III**
Students will continue to systematically learn abnormalities in the physical examination and specialty examination techniques. The student will have supervised practice of skills using simulated patient encounters. Integrating previously learned interviewing skills with principles from the clinical sciences, students elicit a comprehensive medical history, perform a complete physical examination, and formulate an initial diagnostic impression and diagnostic plan. Students are expected to continue to progress in recording information in written form and presenting the information orally to colleagues. (34-42-4)

**PAO 5400—History Taking and Communications Skills**
This course prepares the student to perform a complete medical history, identifying appropriate communication skills needed for interaction with patients, families, and colleagues. (20-20-2)

**PAO 5404—Legal and Ethical Issues in Health Care**
Introduces the role that ethics and the law play in the practice of health care. Principles and concepts in determining correct actions, both legally and ethically, are reviewed. Topics include solving an ethical dilemma, ethical implications involved in genetic engineering, the impaired clinician, conflicts between providers, conflicts between clinician and patient, euthanasia, risk management, confidentiality, informed consent, patients’ directives, and documentation. (30-0-2)

**PAO 5406—Cultural Issues in Health Care**
Introduction to the skills and insights necessary in promoting health and dealing with illness in diverse populations. Issues discussed include the need for effective communication with an understanding of societal and cultural factors and how they impact on health care efforts and use of the health care system. (20-0-1)

**PAO 5407—Clinical Pharmacology**
This course will advance the clinical skills of the student as they relate to the pharmacologic treatment of the patient. Specific topics will include the indicated medications in the treatment of common illnesses; their adverse effects; and drug interactions, dosage, and monitoring. (30-0-2)

**PAO 5408—Complementary Medicine and Nutrition**
Survey of human nutrition in health care and the principles for maintaining good health through nutrition. Addresses health hazards associated with dietary deficiencies, obesity, fad dieting, food contamination, diet management of selected diseases, and the functional roles of vitamins and minerals. Additionally, this course will address introductory concepts, procedures, education, and licensing in alternative and complementary medicine. (28-0-2)

**PAO 5410—Pharmacology I**
Understanding the basis for pharmacologic intervention in patient care is the foundation for treatment of disease. This course is an in-depth study of the pharmacodynamics of drugs used in the autonomic nervous, renal, and cardiovascular systems. Mechanisms of drug action, clinical uses, side effects, contraindications and drug interactions, and pharmacokinetic considerations for special patient populations will also be discussed. (32-0-2)

**PAO 5412—Publication Skills and Medical Research**
This course deals with the emphasis and overview of the importance of data collection, research methods, and application of scientific thought to research findings. It is designed to enable participants to develop skill in reading and critically evaluating medical literature and research. The advantages and disadvantages of quantitative and qualitative research methods are compared and contrasted.

The essential components of a well-written medical or research paper are presented. The process by which these papers are transformed into publications is described, including the concepts of article preparation and revision and the steps required for submission to a physician assistant medical journal. This course is designed to adequately prepare students to complete the Graduate Project (PAO 6500), which results in a written medical or research paper. (22-28-2)

**PAO 5420—Pharmacology II**
Mechanisms of action, clinical uses, side effects, contraindications, drug interactions, and pharmacokinetics of drugs used in the treatment of diseases of the major organ systems. Treatment of HIV, geriatric and neonatal pharmacology, the pharmacological principles of nutrition, over-the-counter agents, toxicology, drugs of abuse, prescription writing, and evaluation of drug literature. (64-0-4)

**PAO 5421—Epidemiology and Biostatistics in Health Care**
Overview of the methods in epidemiology and biostatistics commonly used in clinical research and practice. Addresses the evaluation of diagnostic procedures and the methodology for clinical description and trials and provides basic skills in critical reading of medical literature, based on these concepts. (30-0-2)

**PAO 5460—Life Support Procedures and Skills**
Introduction to the principles of advanced life support used in medical and surgical emergencies. Includes a review of the most common emergency situations encountered and
provides hands-on practical training that will assist the student in developing the skills required to stabilize patients with life-threatening conditions. Includes certification in basic (BLS) and Advanced Cardiac Life Support (ACLS), as well as Pediatric Advanced Life Support (PALS). (24-20-2)

PAO 5500—Clinical Medicine and Surgery I
Etiology, clinical manifestations, appropriate diagnostic evaluation, and the management of disease entities in ophthalmology, otolaryngology, dermatology, cardiology, pulmonology, and hematology/oncology. (126-0-8)

PAO 5510—Clinical Medicine and Surgery II
Etiology, clinical manifestations, appropriate diagnostic evaluation, and the management of common disease entities of major organ systems and primary care aspects of disease evaluation and treatment in gastroenterology, rheumatology, immunology, endocrinology, orthopedics, OB/GYN, geriatrics, and neurology. (156-0-10)

PAO 5520—Clinical Medicine and Surgery III
Etiology, clinical manifestations, appropriate diagnostic evaluation, and the management of disease entities of major organ systems. Lectures in primary care aspects of disease evaluation and treatment in pediatrics, nephrology, emergency medicine, infectious diseases, and general surgery. (148-0-10)

PAO 5540—Clinical Behavioral Medicine
Common psychosocial problems and disorders encountered by health care professionals. Emphasizes the diagnosis and understanding of development of these behaviors, including the patient-clinician relationship, varieties of psychotherapy, communication skills, and appropriate intervention and treatment regimens. (44-0-3)

PAO 5560—Clinical Procedures and Surgical Skills
Lectures and laboratory practicum introducing the clinical procedures and surgical skills used in the clinical setting: aseptic technique, operating room protocol, injections, knot tying and suturing techniques, venipuncture, arterial puncture, intravenous catheterization, nasogastric intubation, and urinary catheterization and point of care ultrasound techniques. This course is a prerequisite for clinical rotations. (20-44-3)

PAO 5605—Clinical Laboratory Medicine
Clinical laboratory use, rationale for selecting common diagnostic tests, interpretation of results, correlation between results and disease processes, and tests not available in the primary care setting that are necessary for diagnosis, treatment, and patient care. Students will learn how to appropriately order and accurately interpret laboratory tests. These skills will help them diagnose common diseases related to major organ systems. (36-0-2)

PAO 6310—Emergency Medicine
Required six-week rotation in hospital emergency department teaches students to recognize, assess, and treat acute and life-threatening clinical problems. Emphasizes common primary care emergencies. (230-0-6)

PAO 6320—Family Medicine
Required six-week rotation in outpatient settings. Comprehensive primary care of the individual patient within the family unit. Emphasizes the primary care needs of patients in rural or inner-city communities. (240-0-6)

PAO 6330—Internal Medicine
Required six-week rotation in outpatient and/or inpatient settings, Diagnosis, treatment, and management of acute and chronic medical problems seen in the internal medicine practice. Emphasizes the adult, nonsurgical patient. (240-0-6)

PAO 6340—Pediatrics
Required six-week rotation in outpatient and/or inpatient settings teaches normal and abnormal growth and development, disease prevention, and basic health care in neonates through adolescence. Emphasizes primary care of the pediatric patient. (240-0-6)

PAO 6350—Prenatal Care and Gynecology
Required six-week rotation in outpatient and/or inpatient settings teaches prenatal care, treatment, gynecological diagnosis, and management. Emphasizes primary care of the female patient including obstetrics. (240-0-6)

PAO 6360—General Surgery
Required six-week rotation in outpatient and inpatient settings. Students learn to diagnose, treat, and manage the surgical patient. Emphasizes surgical entities commonly encountered in the primary care setting. (240-0-6)

PAO 6401—Clinical Elective I
Elective, full-time, clinical rotation that provides an opportunity to investigate a clinical, medical, or surgical subspecialty area or gain more experience in primary care. (160-0-4)

PAO 6410—Behavioral Health
Required six-week rotation in outpatient and/or inpatient settings focusing on behavioral and mental health. Students learn to recognize, manage, and treat behavioral and/or mental disorders including addictions, personality disorders, mood disorders, and psychotic disorders in the primary care setting. (240-60-6)

PAO 6406—Selective
Choose one of the six following medical areas to take a six-week rotation in. (240-0-6)
Orthopedics
The six-week clinical practicum is intentionally flexible to meet the variety of patients that are likely to present during the rotation. Preceptorship is provided by an orthopedist credentialed at the clinical site. Primary emphasis will be on developing skills required to recognize and manage common problems seen in this specialty.

Dermatology
This six-week clinical practicum is intentionally flexible to meet the variety of patients that are likely to present during the rotation. Preceptorship is provided by a dermatologist credentialed at the clinical site. Primary emphasis will be on developing skills required to recognize and manage common problems seen in this specialty.

Otorhinolaryngology
This six-week clinical practicum is intentionally flexible to meet the variety of patients that are likely to present during the rotation. Preceptorship is provided by an otolaryngologist credentialed at the clinical site. Primary emphasis will be on developing skills required to recognize and manage common problems seen in this specialty.

Geriatrics
This six-week clinical practicum is intentionally flexible to meet the variety of patients that are likely to present during the rotation. Preceptorship is provided by a gerontologist credentialed at the clinical site. Primary emphasis will be on developing skills required to recognize and manage common problems seen in this specialty.

Cardiology/Cardiothoracic Surgery
The six-week clinical practicum is intentionally flexible to meet the variety of patients that are likely to present during the rotation. The primary emphasis will be on patients with a cardiac or thoracic disorder that may or may not require surgical intervention. This rotation is highly demanding, with long hours and complex medical conditions. A high level of interest in this area and proven academic and clinical success are required.

Neurology/Neurosurgery
The six-week clinical practicum is intentionally flexible to meet the variety of patients that are likely to present during the rotation. The primary emphasis will be on patients with a neurologic disorder that may or may not require surgical intervention. This rotation is highly demanding, with long hours and complex medical conditions. A high level of interest in this area and proven academic and clinical success are required.

PAO 6498—Graduate Project I: Creation, Plan, and Preliminary Work
With the guidance of a faculty adviser, students will use the skills acquired in Publication Skills and Medical Research (PAO 5412) to create a graduate project. The project features topics in clinical or administrative medicine and consists of a comprehensive literature review and evaluation and completion of a publishable review paper. The project allows the student to demonstrate his or her ability to research and compile information and to present that information in a clear, written form. Fall semester (0-0-1)

PAO 6499—Graduate Project II: Draft of Components
For additional information, please refer to course description for PAO 6498. Winter semester (0-0-1)

PAO 6500—Graduate Project III: Final Paper and Poster Presentation
For additional information, please refer to course description for PAO 6498. Final summer semester (0-0-1)
Physician Assistant Program—Jacksonville

Physician assistants (PAs) serve as essential components of a medical system that continues to struggle to provide quality, affordable health care for all Americans. Their roles in the system will continue to grow as changes in health care indicate. Today, more than 100,000 individuals are in practice as PAs in the United States. PAs provide care that would otherwise be provided by physicians. PAs take medical histories, perform physical examinations, order and interpret tests, diagnose and treat illnesses, perform medical/surgical procedures, assist in surgery, and can write prescriptions in all states. PAs work in most medical specialties and in all types of communities. Many PAs practice family and internal medicine, and more than one-third are in towns with fewer than 50,000 residents. The PA profession is one of the fastest growing health care professions. According to the Bureau of Labor statistics (BLS) U.S. Department of Labor, as published in the 2016–2017 Occupational Outlook Handbook, employment of PAs is expected to grow 30 percent from 2014 to 2024.

It is the obligation of each physician/PA team to ensure that the PA's scope of practice is identified; that delegation of medical tasks is appropriate to the PA's level of competence; that the relationship with, and access to, the supervisory physician is defined; and that a process of performance evaluation is established. Adequate responsible supervision of the PA contributes to both high-quality patient care and professional growth.

The Physician Assistant Program offers an innovative program that lasts 27 months. Upon successful completion of study, students will be awarded the Master of Medical Science Degree in Physician Assistant. The curriculum includes rigorous instruction in basic science subjects, followed by clinical medicine, physical diagnosis, clinical laboratory medicine, clinical pathophysiology, clinical procedures and surgical skills, electrocardiography, pharmacology, radiology, and others. Students also take courses that include health care law and ethics, epidemiology and biostatistics, research methodology, and cultural issues in health care.

During the clinical year of study, the student participates in clinical rotations. These rotations include family medicine, internal medicine, pediatrics, gynecology and prenatal care, emergency medicine, behavioral medicine, and surgery, all complemented by two elective rotations. NSU graduates are prepared to work in many clinical areas, both in primary care and specialty medicine.

Accreditation

At its September 2020 meeting, the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA) placed the Nova Southeastern University—Jacksonville Physician Assistant Program sponsored by Nova Southeastern University on Accreditation—Probation status until its next review in September 2022.

Probation accreditation is a temporary accreditation status initially of not less than two years. However, that period may be extended by the ARC-PA for up to an additional two years if the ARC-PA finds that the program is making substantial progress toward meeting all applicable standards but requires additional time to come into full compliance. Probation accreditation status is granted, at the sole discretion of the ARC-PA, when a program holding an accreditation status of Accreditation—Provisional or Accreditation—Continued does not, in the judgment of the ARC-PA, meet the Standards or when the capability of the program to provide an acceptable educational experience for its students is threatened.

Once placed on probation, a program that fails to comply with accreditation requirements in a timely manner, as specified by the ARC-PA, may be scheduled for a focused site visit and is subject to having its accreditation withdrawn.

Specific questions regarding the program and its plans should be directed to the program director and/or the appropriate institutional official(s).

The program’s accreditation history can be viewed on the ARC-PA website at arc-pa.org/accreditation-history-nova-se-university-jacksonville/.

Vision Statement

Our vision is to be recognized as a preeminent PA education program, which offers student-centered education that produces compassionate and competent health care providers.

Mission Statement

to prepare physician assistant students to provide high-quality, patient-centered care

Core Values: DICE

Diversity
Integrity
Community
Excellence

Admissions Requirements

Prospective students are selected by the Committee on Admissions (COA), which considers the overall qualities of the applicant. Areas of consideration include interpersonal skills, personal motivation, knowledge and understanding of the PA profession, academic performance and level of achievement, life experiences, quality and length of prior health care experience, and recommendations/evaluations. Personal
interviews are offered to the most qualified applicants to assess interpersonal and communication skills, maturity, integrity, altruistic attitude, and commitment to the PA profession.

1. Applicants must have a minimum cumulative and a minimum science GPA of 3.0 on a 4.0 grading scale at the time of application, and must maintain that GPA throughout matriculation to be considered. Successful applicants in the past have, typically, had cumulative GPAs in the range of 3.3–3.5, GRE scores (verbal, quantitative, and analytical) in the 40th percentile or higher in each of the three categories, and letters of recommendation from individuals with whom the applicant has had a professional working relationship in the health care field.

2. Prior to matriculation, applicants must have received a baccalaureate degree from a regionally accredited college or university.

3. The college requires the students to earn a grade of C (2.0) or better in each of the following required courses:
   - college math (3 semester hours)
   - English composition (3 semester hours)
   - English (3 semester hours)
   - humanities/arts (3 semester hours)
   - social sciences (9 semester hours)
   - general biology (or zoology), including laboratory (4 semester hours)
   - microbiology, including laboratory (4 semester hours)
   - general chemistry I and II, including laboratory (8 semester hours)
   - human anatomy and human physiology (6 semester hours)
   - biochemistry (3 semester hours)
   - human genetics (3 semester hours)
   - Medical Terminology (1 semester hour)

Applicants are encouraged to complete their elective coursework in the areas of behavioral, physical, and social sciences or in the humanities. The following courses are recommended:
   - biochemistry laboratory (1 semester hour)
   - organic chemistry and laboratory (4 semester hours)
   - anatomy laboratory (1 semester hour)
   - physiology laboratory (1 semester hour)
   - Introduction to Statistics (3 semester hours)

4. Graduates of foreign institutions where English is not the primary language of instruction must present transcripts showing at least 18 semester hours (or equivalent quarter hours) of study from a regionally accredited college or university in the United States. Of these 18 semester hours,
   - 3 semester hours must be in English composition (courses do not include ESOL)
   - 3 semester hours must be in English literature (courses do not include ESOL)
   - 3 semester hours must be in public speaking (courses do not include ESOL)

The remaining 9 semester hours can be any courses of the applicant’s choosing.

5. All applicants are required to submit official scores from the Graduate Record Examination (GRE) general test to the Office of Admissions. The test must have been taken within the past five years and must be taken early enough for official scores to be received in the admissions office by the supplemental application due date of February 15. Applications will not be considered complete without GRE scores. Testing information for the GRE may be obtained from gre.org or by telephone at (609) 921-9000.

Prior health care experience is highly recommended and is considered for admission. Those applicants who have prior health care experience must submit verifiable information about their experience.

**Computer Requirements**

Upon admission, all students are required to have a laptop computer and printer. The computer must have the following minimum specifications:
   - 1.5 GHz minimum processor
   - 1 GB RAM
   - video and monitor capable of 1024 x 768 resolution or better
   - CD-ROM or DVD drive
   - full duplex sound card and speakers
   - DSL or CABLE modem
   - Internet connection with private Internet service provider (ISP) for access from home to the Internet
   - Windows XP or above or Macintosh with Virtual Machine and Windows
   - Microsoft Office 2003 or newer with PowerPoint, Word, and Excel minimum or compatible office suite
   - Surge suppressor
   - DVD/RW or CD/RW
   - wireless Internet capability and wireless router
Application Procedures

1. Apply to CASPA

The Physician Assistant Program participates in the Centralized Application Service for Physician Assistants (CASPA) for the receipt and processing of all applications. CASPA takes no part in the selection of students. CASPA applications are submitted online at caspa.liaisoncas.com or by writing to

CASPA
P.O. Box 9108
Watertown, MA 02471

The CASPA application deadline is December 1 in order to be considered for admission in May.

2. Send transcripts and letters of recommendation/evaluation to CASPA

All official college transcripts from all undergraduate, graduate, and professional institutions attended must be sent directly from the institutions.

Two letters of recommendation/evaluation must be sent to CASPA. One letter must be from a physician assistant and one must be from another health care professional. Recommendations submitted by relatives, friends, personal health care providers, or personal friends of the family are not acceptable.

3. Report GRE scores directly to CASPA

Official Graduate Record Exam (GRE) scores must be admitted directly to CASPA as part of the CASPA application. The school code number for NSU’s PA—Jacksonville program is 0952. The GRE must have been taken in the last five years and must be taken early enough for official scores to be available by the supplemental application deadline of January 15.

4. Complete Supplemental Application

Once the CASPA application has been received by Nova Southeastern University, a supplemental application will be made available online. Your complete supplemental application must be received no later than January 15 in order to be considered for admission for the June entering class. Once we receive your GRE scores and supplemental application, your file will be reviewed. The applicant will not be considered for a possible interview until all of these requirements have been received by the EPS.

Personal Interviews

Once your application is complete, the Committee on Admissions (COA) will decide whether or not your application is strong enough to warrant an invitation for a personal interview. Interviews for the Jacksonville PA program are conducted at the NSU campus in Jacksonville, Florida, and are by invitation only. An invitation to interview is not a guarantee of admission. Notice of acceptance or action by the COA will be on a “rolling” or periodic schedule; therefore, early completion of the application is in the best interest of the applicant.

Current College Coursework

All science prerequisites must be completed by the end of the fall semester prior to matriculation. If, at the time of application, coursework is in progress or anticipated, please identify these courses on the supplemental application.

Transcripts

All applicants who are accepted must submit official transcripts from all schools attended to the NSU EPS Physician Assistant Admissions Office prior to matriculation. It is the responsibility of the applicant to ensure that arrangements are made for these transcripts to be sent.

Undergraduate/Physician Assistant Dual Admission Program—Jacksonville

Nova Southeastern University’s Dr. Pallavi Patel College of Health Care Sciences has established an articulation agreement with Florida State College of Jacksonville for a select number of highly motivated, qualified students interested in pursuing professional studies in the Physician Assistant Program. Candidates must maintain a 3.0 grade point average during the undergraduate years and achieve acceptable scores on the Graduate Record Examination (GRE).

The students will apply for admission to the PA program via CASPA. The CASPA application, supplemental application, and GRE scores must be received by NSU’s Office of Admissions by the posted deadlines. Personal interviews are offered to the most qualified applicants to assess interpersonal and communication skills, maturity, altruistic attitude, and commitment to the PA profession. There is no guarantee of automatic admission to the PA program.

For more information and requirements, contact

Florida State College of Jacksonville
501 West State Street, Office 401H
Jacksonville, FL 32202
(904) 632-3388

Tuition and Fees

- Tuition for 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (healthsciences.nova.edu/pa/jacksonville/faq.html). A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually
- A clinical support charge of $400 will be assessed in each of the three semesters of clinical training.
• Acceptance fee is $500. This fee is required to reserve the accepted applicant’s place in the entering first-year class. This advance payment will be credited to the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance.

• Deposit is $500. This is due February 15, under the same terms as the Acceptance Fee.

The first semester’s tuition and fees, less the $1,000 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.

Applicants should have specific plans for financing 27 months of professional education. This should include tuition, living expenses, books, equipment, and miscellaneous expenses. Each student is required to carry adequate health insurance. Students may avail themselves of the insurance plan obtainable through the university.

Due to the demands of the PA curriculum, the program discourages any outside employment.

Requirements for Graduation
In order to be eligible to graduate from the Physician Assistant Program, students shall

• successfully complete all academic and clinical courses and degree requirements
• have satisfactorily met all financial and library obligations
• attend, in person, the commencement program, at which time the degree is conferred

Academic Dismissal in the Physician Assistant Program
See the suspension/dismissal section of the student handbooks.

Readmission Policy in the Physician Assistant Program
In selected cases, and only with the approval of the department chair and college dean, a student may be allowed to be noncompetitively matriculated with the next first-year class. It is emphasized that this only refers to those few students with special academic or personal issues.

Course of Study
The Physician Assistant Program curriculum is completed following a baccalaureate degree from a regionally accredited college or university in the United States. The comprehensive curriculum, completed in a consecutive manner, is oriented to primary care and prepares the student to practice in a wide variety of clinical settings. The first 15 months of study consist of basic sciences and clinically related didactic courses. All courses are required and must be successfully completed before advancing to the clinical year. During this time frame, students are generally in class from Monday through Friday, 8:00 a.m. to 5:00 p.m., although there are occasional evening and/or weekend hours. Because of its highly integrated and compact curriculum, the PA program requires matriculants to complete the entire curriculum at this campus. No advanced placement, transfer of credit, or credit for experiential learning will be granted.

The clinical year is devoted to 12 months of clinical training with required clinical rotations in family medicine, emergency medicine, pediatrics, prenatal care/gynecology, surgery, behavioral health, and internal medicine. Students must also complete two elective rotations, for a total of nine clinical rotations. The required rotations and one of the elective rotations are six weeks in length. The remaining elective rotation is four weeks in length.

Each required rotation has assigned readings and learning objectives. At the end of each required rotation, a written, comprehensive subject examination is administered and must be passed. During rotations, students will be supervised by licensed practitioners and will actively participate in patient assessments, perform common laboratory procedures, interpret common diagnostic examinations, and help manage common medical problems. The work hours during clinical rotations are set by the preceptor and can include evening and weekend hours. Students are required to work a minimum of 40 hours per week, however, many rotation sites require students to work substantially more hours per week.

Upon completion of the course of study, students will be awarded the Master of Medical Science degree in Physician Assistant. Graduates will be eligible to take the Physician Assistant National Certification Examination (PANCE) administered by the National Commission on Certification of Physician Assistants.

The role of the physician assistant requires a high-level of expertise and responsibility. The applicant must possess the ability and desire to complete a rigorous academic and clinical program and make a commitment to continued learning.
## Curriculum Outline for the Master of Medical Science (M.M.S.) in Physician Assistant Program—Jacksonville

Start Date: May  
Length: 27 months  
Degree: Master of Medical Science (M.M.S) in Physician Assistant  
Didactic: 15 months  
Clinical: 12 months

### First Semester—Summer I (May–August)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Lecture</th>
<th>Lab</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAJ 5506</td>
<td>Cultural Issues in Health Care</td>
<td>14</td>
<td>0</td>
<td>1</td>
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<tr>
<td>PAJ 5000</td>
<td>Anatomy</td>
<td>46</td>
<td>38</td>
<td>4</td>
</tr>
<tr>
<td>PAJ 5001</td>
<td>Pharmacodynamics</td>
<td>14</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>PAJ 5002</td>
<td>Introduction to the PA Profession</td>
<td>14</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>PAJ 5003</td>
<td>Medical Imaging with Applied Anatomy</td>
<td>14</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>PAJ 5100</td>
<td>Physiology</td>
<td>44</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>PAJ 5300</td>
<td>Physical Diagnosis I</td>
<td>42</td>
<td>26</td>
<td>4</td>
</tr>
<tr>
<td>PAJ 5401</td>
<td>Medical Terminology</td>
<td>0</td>
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**Total Hours** 188  114  17

### Second Semester—Fall (August–December)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Lecture</th>
<th>Lab</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>PAJ 5512</td>
<td>Interpretation of the Medical Literature</td>
<td>38</td>
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<td>3</td>
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<tr>
<td>PAJ 5006</td>
<td>Electrocardiography</td>
<td>16</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>PAJ 5101</td>
<td>Clinical Pathophysiology I</td>
<td>18</td>
<td>0</td>
<td>1</td>
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<tr>
<td>PAJ 5200</td>
<td>Microbiology</td>
<td>45</td>
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<tr>
<td>PAJ 5310</td>
<td>Physical Diagnosis II</td>
<td>26</td>
<td>22</td>
<td>3</td>
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<tr>
<td>PAJ 5410</td>
<td>Pharmacology I</td>
<td>26</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>PAJ 5500</td>
<td>Clinical Medicine and Surgery I</td>
<td>112</td>
<td>0</td>
<td>8</td>
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<tr>
<td>PAJ 5600</td>
<td>Clinical Laboratory Medicine I</td>
<td>16</td>
<td>0</td>
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</table>

**Total Hours** 297  24  22

### Third Semester—Winter (January–May)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Lecture</th>
<th>Lab</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAJ 5102</td>
<td>Clinical Pathophysiology II</td>
<td>26</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>PAJ 5320</td>
<td>Physical Diagnosis III</td>
<td>40</td>
<td>25</td>
<td>4</td>
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<tr>
<td>PAJ 5420</td>
<td>Pharmacology II</td>
<td>54</td>
<td>0</td>
<td>4</td>
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<tr>
<td>PAJ 5510</td>
<td>Clinical Medicine and Surgery II</td>
<td>112</td>
<td>0</td>
<td>8</td>
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Dr. Pallavi Patel College of Health Care Sciences—Department of Physician Assistant
### Fourth Semester—Summer II Advanced Didactic (May–August)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Lecture</th>
<th>Lab</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAJ 5005</td>
<td>Clinical Genetics</td>
<td>22</td>
<td>0</td>
<td>2</td>
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<tr>
<td>PAJ 5507</td>
<td>Clinical Pharmacology</td>
<td>40</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>PAJ 5508</td>
<td>Complementary Medicine and Nutrition</td>
<td>28</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>PAJ 5540</td>
<td>Clinical Behavior Medicine</td>
<td>42</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>PAJ 5504</td>
<td>Legal and Ethical Issues in Health Care</td>
<td>27</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>PAJ 5560</td>
<td>Life Support Procedures and Skills</td>
<td>24</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>PAJ 5008</td>
<td>Health Promotion and Disease Prevention</td>
<td>30</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>PAJ 5009</td>
<td>PA and Health Care Dynamics</td>
<td>26</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>PAJ 5570</td>
<td>Clinical Procedures and Surgical Skills</td>
<td>48</td>
<td>30</td>
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<tr>
<td><strong>Total Hours</strong></td>
<td></td>
<td><strong>287</strong></td>
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<td><strong>22</strong></td>
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### Clinical Curriculum: Second Year (August–August)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Weeks</th>
<th>Contact Hours</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAJ 6310</td>
<td>Emergency Medicine</td>
<td>6</td>
<td>240</td>
<td>6</td>
</tr>
<tr>
<td>PAJ 6320</td>
<td>Family Medicine</td>
<td>6</td>
<td>240</td>
<td>6</td>
</tr>
<tr>
<td>PAJ 6330</td>
<td>Internal Medicine</td>
<td>6</td>
<td>240</td>
<td>6</td>
</tr>
<tr>
<td>PAJ 6340</td>
<td>Pediatrics</td>
<td>6</td>
<td>240</td>
<td>6</td>
</tr>
<tr>
<td>PAJ 6350</td>
<td>Prenatal Care and Gynecology</td>
<td>6</td>
<td>240</td>
<td>6</td>
</tr>
<tr>
<td>PAJ 6360</td>
<td>General Surgery</td>
<td>6</td>
<td>240</td>
<td>6</td>
</tr>
<tr>
<td>PAJ 6375</td>
<td>Behavioral Medicine</td>
<td>6</td>
<td>240</td>
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</tr>
<tr>
<td>PAJ 6380</td>
<td>Clinical Elective II</td>
<td>6</td>
<td>240</td>
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<td>PAJ 6390</td>
<td>Clinical Elective III</td>
<td>4</td>
<td>160</td>
<td>4</td>
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<tr>
<td>PAJ 6600</td>
<td>Graduate Project</td>
<td>0</td>
<td>45</td>
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<tr>
<td><strong>Total Hours</strong></td>
<td></td>
<td><strong>52</strong></td>
<td><strong>2,125</strong></td>
<td><strong>55</strong></td>
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Curriculum is subject to change as directed by the program.
PAJ 5000—Anatomy
This course covers the gross structures of the human body. It integrates topographic and radiographic anatomy to stress the application and importance of clinical anatomy. Student will develop the knowledge of human anatomy necessary for the practice of the profession. (46-38-4)

PAJ 5001—Pharmacodynamics
This course will provide the student with a thorough understanding of the basic pharmacodynamic and pharmacokinetic principles. Emphasis will be on basic terminology, receptor theory, pathways, absorption, distribution, elimination, and pharmacological effects. Prerequisite for PAJ 5410, 5420, and 5507 (14-0-1)

PAJ 5002—Introduction to the Physician Assistant Profession
This course introduces key concepts regarding the PA profession, including an overview of the profession and its organizations, the history of the profession, the current status of the profession, physician assistant education, and current and future roles of the physician assistant. (14-0-1)

PAJ 5003—Medical Imaging with Applied Anatomy
This course introduces key concepts for the understanding of normal medical diagnostic imaging. Emphasis is placed on images of normal human body structures and organs. (14-0-1)

PAJ 5005—Clinical Genetics
This course provides an up-to-date, clinically relevant genetics course to prepare PA students for medical practice in the age of genomics. Areas of focus include molecular and developmental genetics; family history with pedigree risk analysis; inheritance patterns; genetic testing and screening; cancer genetics; complex diseases; pharmacogenetics; gene therapy; genetic ethical, legal, and social issues (ELSI) impact on primary care; and a current review of the Human Genome Project (HGP) and its affect on medicine. (22-0-2)

PAJ 5006—Electrocardiography
This course provides the basics for learning to interpret 12-lead ECG tracings and applying those principles to interpret the ECG tracings of common cardiac disease. (16-2-1)

PAJ 5008—Health Promotion and Disease Prevention
This course focuses on wellness through preventative interventions and services. Epidemiology, risk factors, health screening, and community resources for a variety of health issues are presented. Emphasis is placed on the community and health care practitioner’s efforts to protect against disease and environmental hazards, as well as individual responsibility for one’s health. (30-0-2)

PAJ 5009—PA and Health Care Dynamics
This course focuses on the current status and issues regarding the physician assistant profession within the context of the United States medical system and today’s health care workforce. The course discusses the structures and administrative principles in health care organizations, the role of the practicing PA in unique environments such as rural and underserved medicine, reimbursement for services rendered, quality assurance, federal health care programs, reduction of medical errors, and other issues involving patient care. (26-0-2)

PAJ 5100—Physiology
Clinically relevant physiologic principles of the major organ systems covered in Clinical Anatomy. It will include the pathological changes that occur in human physiology in the disease process. Prerequisite for PAJ 5101, 5102, 5500, 5510, 5520, 5600, and 5610 (44-0-3)

PAJ 5101—Clinical Pathophysiology
This course covers pathological changes seen in disease states. It uses a major body system/organ approach. The etiology and progression from the normal physiological state to the diseased state with resultant clinical signs and symptoms is taught. (18-0-1)

PAJ 5102—Clinical Pathophysiology II
This course introduces the student to pathophysiolgic concepts that form the biologic basis of disease. It builds on the knowledge gained in human anatomy and physiology courses. Physiological concepts will be reviewed and emphasized in order for the student to fully appreciate the progression from normal physiologic state to acute and chronic diseased state with its reluctant clinical signs and symptoms. This course builds on PAJ 5101. (26-0-2)

PAJ 5200—Microbiology
The course emphasizes the relationship of microbes to human disease and the host-immune response. Characteristics and properties of clinically significant bacteria, viruses, fungi, and selected parasites, as well as their associated specific infectious diseases, will be discussed. (45-0-3)
PAJ 5300—Physical Diagnosis I
The Physical Diagnosis I course is an introduction to clinical medicine. Students will acquire the knowledge and skills essential to perform a complete, head-to-toe physical examination. Emphasis is placed on normal physical findings. A combination of lectures, discussions, case studies, and performance skill labs will be used to present and practice the necessary concepts and skills. Lab sessions are used to optimize teaching of concepts. The student will be required to demonstrate competency-based learning during the performance of the required procedures and skills. This course prepares the student to perform a complete medical history, identifying appropriate communication skills needed for interactions with patients, families, and colleagues. Prerequisite for PAJ 5310 and 5320 (42-26-4)

PAJ 5310—Physical Diagnosis II
This course is a continuation of PAJ 5300. The skills for performing both a complete and focused medical interview and physical examination will be enhanced. The student will accurately integrate and record historical and physical findings in the correct written format. Through case presentations and medical simulations, students will use knowledge acquired from previous and concurrent didactic courses to develop their problem-solving skills. Prerequisite for PAJ 5320 (26-22-3)

PAJ 5320—Physical Diagnosis III
This course is a continuation of PAJ 5310 and will refine the medical history concepts and physical examination skills acquired in Physical Diagnosis I and II. Instructional methods— including supervised clinical experience, small groups, and patient simulations—will facilitate the students’ integration of historical and physical examination information in order to diagnose disease. The course will expand on the skills essential for medical documentation. Emphasis is on the correlation of historical information, physical findings, and pertinent laboratory results to formulate diagnoses. (40-25-4)

PAJ 5410—Pharmacology I
This course covers the pharmacodynamics, pharmacokinetics, mechanisms of action, clinical applications, adverse/side effects, and contraindications of drugs used in the treatment of conditions and disease states. Prerequisite for PAJ 5507 (26-0-2)

PAJ 5420—Pharmacology II
This course continues a study of the pharmacodynamics, pharmacokinetics, mechanisms of action, clinical applications, adverse/side effects, and contraindications for the use of medications in the treatment of disease. Prerequisite for PAJ 5507 (54-0-4)

PAJ 5500—Clinical Medicine and Surgery I
This course encompasses etiology, risk factors, clinical manifestations, appropriate diagnostic evaluation, disposition, and management of select diseases. (112-0-8)

PAJ 5504—Legal and Ethical Issues in Health Care
This course introduces the role that ethics and the law play in the practice of health care. Principles and concepts in determining correct actions both legally and ethically are reviewed. Topics include solving an ethical dilemma, ethical implications involved in genetic engineering, the impaired clinician, conflicts between providers, conflicts between clinician and patient, euthanasia, risk management, confidentiality, informed consent, patients’ directives, documentation, and domestic violence. (27-0-2)

PAJ 5506—Cultural Issues in Health Care
This course offers an introduction to the skills and insights necessary in promoting health and dealing with illness in diverse populations. Issues discussed include the need for effective communication—with an understanding of societal and cultural factors and how they impact on health care efforts—and use of the health care system. (14-0-1)

PAJ 5507—Clinical Pharmacology
At the completion of this course, students will be able to appropriately prescribe medications in various clinical settings. Preparation for appropriate prescribing and administration of medicines is accomplished by studying drug classifications, pharmacodynamic actions, and the rationale for therapeutic use of prescription and nonprescription medications. In addition, students will be able to describe the potential advantages and disadvantages of specific therapeutic medications, universal indications and contraindications for usage, dosing schedules, and the relative cost of commonly prescribed medications. Students will administer a variety of medications using patient simulators and will observe the clinical response. Common errors involving prescription writing will be discussed and practical exercises will require students to accurately write prescriptions and treatment orders. (40-0-3)

PAJ 5508—Complementary Medicine and Nutrition
This course is a survey of human nutrition in health care and the principles for maintaining good health through nutrition. It addresses health hazards associated with dietary deficiencies, obesity, fad dieting, food contamination, diet management of selected diseases, and functional roles of vitamins and minerals. Additionally, this course will address introductory concepts, procedures, education, and licensing in alternative and complementary medicine. (28-0-2)

PAJ 5510—Clinical Medicine and Surgery II
This course is a continuation of Clinical Medicine and Surgery I. Common disease entities of major organ systems and primary care aspects of disease evaluation and treatment are discussed. (112-0-8)
PAJ 5512—Interpretation and Evaluation of Medical Literature
This course is designed to introduce the student to the process of interpretation and critical evaluation of medical literature and research. The components of published medical papers and physician assistant-authored research papers are evaluated. The course will have a hybrid delivery consisting of online and face-to-face interactions. (38-0-3)

PAJ 5520—Clinical Medicine and Surgery III
This course is a continuation of Clinical Medicine and Surgery I and II. Students will apply information from the Clinical Medicine Surgery courses to a variety of patient populations and treatment environments. (112-0-8)

PAJ 5540—Clinical Behavioral Medicine
Common psychosocial problems and disorders encountered by health care professionals are discussed. The course material emphasizes the diagnosis and understanding of the development of these behaviors, including the patient-clinician relationship, varieties of psychotherapy, communication skills, and appropriate intervention and treatment regimens. (42-0-3)

PAJ 5560—Life Support Procedures and Skills
Introduction to the principles of advanced life support used in medical and surgical emergencies. Includes a review of the most common emergency situations encountered and provides hands-on practical training that will assist the student in developing the skills required to stabilize patients with life-threatening conditions. Includes certification in basic (BLS) and Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS). (24-20-2)

PAJ 5570—Clinical Procedures and Surgical Skills
Lectures and laboratory practicum introducing the clinical procedures and surgical skills used in the clinical setting: aseptic technique, operating room protocol, injections, knot tying, and suturing techniques, venipuncture, arterial puncture, intravenous catheterization, nasogastric intubation, and urinary catheterization. (48-30-4)

PAJ 5600—Clinical Laboratory Medicine I
Clinical laboratory utilization; rationale for selecting common diagnostic tests; interpretation of results; correlation between results and disease processes; and tests not available in the primary care setting that are necessary for diagnosis, treatment, and patient care are discussed. (16-0-1)

PAJ 5610—Clinical Laboratory Medicine II
This course is a continuation of Clinical Laboratory Medicine I. Students will learn how to appropriately order and accurately interpret laboratory tests. These skills will help them diagnose common diseases related to major organ systems. (28-0-2)

PAJ 6310—Emergency Medicine
Required six-week rotation in hospital emergency department teaches students to recognize, assess, and treat acute and life-threatening clinical problems. Emphasizes common primary-care emergencies. (240-0-6)

PAJ 6320—Family Practice
Required six-week rotation in outpatient settings. The rotation focuses on comprehensive primary care of the individual patient within the family unit. Emphasizes the primary-care needs of the patients in rural and inner-city communities. (6-240-6)

PAJ 6330—Internal Medicine
Required six-week rotation in outpatient and/or inpatient settings. The rotation focuses on the diagnosis, treatment, and management of acute and chronic medical problems seen in the internal medicine practice. The emphasis is on the adult nonsurgical patient. (6-240-6)

PAJ 6340—Pediatrics
Required six-week rotation in outpatient/inpatient settings. The rotation focuses on the normal and abnormal growth and development, disease prevention, and health care of the child from neonate through adolescence. It emphasizes the primary care of the pediatric patient. (6-240-6)

PAJ 6350—Prenatal Care and Gynecology
Required six-week rotation in outpatient and/or inpatient settings that teaches prenatal care and treatment and gynecological diagnosis and management. It emphasizes the primary care of the female patient and includes obstetrics. (6-240-6)

PAJ 6360—General Surgery
Required six-week rotation in outpatient and/or inpatient settings. The students will learn to diagnose, treat, and manage the surgical patient. It emphasizes the surgical conditions commonly encountered in the primary-care setting. (6-240-6)

PAJ 6375—Behavioral Medicine
This required, six-week rotation in outpatient and/or inpatient settings focuses on behavioral and mental health. Students learn to recognize, manage, and treat behavioral and/or mental disorders including addictions, personality disorders, mood disorders, and psychotic disorders in the primary care setting. (6-240-6)

PAJ 6380—Clinical Elective II
Six-week elective, full-time clinical rotation that provides an opportunity to investigate a medical or surgical subspecialty area or gain more experience in primary care. Each elective may be taken sequentially or separately, but not at the same clinical site. (6-240-6)
PAJ 6390—Clinical Elective III
This four-week elective rotation will be completed at the end of the clinical year. Elective rotations provide an opportunity to investigate a medical or surgical subspecialty area or gain more experience in a required discipline. (4-160-4)

PAJ 6600—Graduate Project
This course is the capstone requirement for the Master of Medical Science degree. With the guidance of a faculty adviser, students will use the skills acquired in all didactic courses to create a publishable graduate project. The project will feature topics in clinical medicine or surgery. (0-45-3)

Sources of Additional Information
Disclaimer: Links to non-NSU Internet sites are provided for your convenience and do not constitute an endorsement.

- For information on a career as a physician assistant, contact
  American Academy of Physician Assistants
  2318 Mills Road, Suite 1300
  Alexandria, VA 22314
  aapa.org
- For a list of accredited programs and a catalog of individual physician assistant training programs, contact
  Physician Assistant Education Association
  300 North Washington Street
  Suite 710
  Alexandria, VA 22314-2544
  (703) 548-5538 • paeonline.org
- For eligibility requirements and a description of the Physician Assistant National Certifying Examination, contact
  National Commission on Certification of Physician Assistants, Inc.
  1200 Findley Road, Suite 100
  Johns Creek, GA 30097
  (678) 417-8100 • nccpa.net
- For information on employment, employment projections, and compensation statistics, contact
  U.S. Bureau of Labor Statistics
  Postal Square Building
  2 Massachusetts Avenue, NE
  Washington, DC 20212-0001
  bls.gov
The Master of Science in Speech-Language Pathology (M.S.) Program focuses on training speech-language pathologists to provide a full range of services to clients with communication and swallowing/feeding disorders in a variety of settings. The program provides scientifically based academic and clinical curricula to foster critical thinking and application of best practices. Course content is research based and prepares the student to meet the requirements for the Certificate of Clinical Competence awarded by the American Speech-Language-Hearing Association (ASHA).

**Accreditation**
This program is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) of ASHA.

**Admissions Requirements**
Prior to matriculation, applicants must have received a minimum of a baccalaureate degree from a regionally accredited college or university and a minimum cumulative GPA of 3.0 on a 4.0 grading scale.

All qualifying applicants will have an application interview. Once admitted, all students must successfully complete a mandatory orientation.

Prior to matriculation, applicants must also have successfully completed (meaning, earned grades of B- or better) all of the following Communication Sciences and Disorders prerequisite courses:

- An introductory course in the field of communication sciences and disorders (3 credits)
  
  This requirement is waived if the applicant has a baccalaureate degree in CSD.

- Anatomy and Physiology of the Speech and Hearing Mechanism (3 credits)

- Phonetics (3 credits)

- Neuroanatomy and Physiology (3 credits)

- Speech and Language Development (3 credits)

- Audiology and Aural Rehabilitation (3 credits)

**International Students**
International students living in the United States must present verification of student visa or residency status. Due to the limited availability of ASHA-certified supervisors in other countries, students who live outside of the United States will not be eligible for admission to the M.S. program. Furthermore, students accepted to the program may not relocate outside of the United States before the completion of the degree.

**Application Procedures**
All prospective students must complete an application through the Communication Sciences and Disorders Application Services (CSDCAS) (csdcas.liaisoncas.com) and submit a completed supplemental application with a $50, nonrefundable fee (required for each application submitted to Nova Southeastern University).

Admissions decisions are based on degrees earned at regionally accredited institutions or an officially approved equivalent, such as an evaluation by one of the National Association of Credential Evaluation Services (NACES) approved agencies. The evaluation must include a course-by-course analysis and list all course subjects with United States semester credits and a GPA on a 4.0 scale.

Applicants may be provisionally admitted based on a preliminary review of unofficial transcripts and/or program-specific admissions requirements. This admission, however, includes a condition that final and official transcripts, documents, and all other requirements for full admission must be received within 90 calendar days from the official start date of the term. If these final and official transcripts, documents, and/or requirements are not received by that time, the student can no longer continue to attend class. The student will be withdrawn, registration will be prohibited, and other services may be suspended.

**California State Disclosures**
Nova Southeastern University is approved to operate an instructional site in the state of California by the Bureau for Private Postsecondary Education. The following information is provided in accordance with the regulations governing schools that operate in that state.

**School Performance Fact Sheets**
Nova Southeastern University’s Dr. Pallavi Patel College of Health Care Sciences provides School Performance Fact Sheets to prospective students at the El Segundo instructional site for the Master of Science in Speech-Language Pathology Program in accordance with regulations established by the California Bureau for Private Postsecondary Education. Current and prospective students can access the Fact Sheet below at any time to see the most up-to-date information.
These fact sheets provide specific information for the Master of Science in Speech Language-Pathology program offered at its instructional site in California. This information includes the number of students enrolled, number of degree completions, students’ performance with respect to relevant professional licensing examinations, job placements within the career fields for which the program was designed, and wage and salary information that has been provided by local graduates.

Washington State Disclosures
Nova Southeastern University is authorized by the Washington Student Achievement Council (WSAC) and meets the requirements and minimum educational standards established for degree-granting institutions under the Degree-Granting Institutions Act. This authorization is subject to periodic review and authorizes Nova Southeastern University to offer specific degree programs. The WSAC may be contacted for a list of currently authorized programs. Authorization by the WSAC does not carry with it an endorsement by the board of the institution or its programs. Any person desiring information about the requirements of the act or the applicability of those requirements to the institution may contact the WSAC at P.O. Box 43430, Olympia, WA 98504-3430.

The transferability of credits earned at Nova Southeastern University is at the discretion of the receiving college, university, or other educational institution. Students considering transferring to any institution should not assume that credits earned in any program of study at Nova Southeastern University will be accepted by the receiving institution. Similarly, the ability of a degree, certificate, diploma, or other academic credential earned at Nova Southeastern University to satisfy an admission requirement of another institution is at the discretion of the receiving institution. Accreditation does not guarantee credentials or credits earned at Nova Southeastern University will be accepted by or transferred to another institution. To minimize the risk of having to repeat coursework, students should contact the receiving institution in advance for evaluation and determination of transferability of credits and/or acceptability of degrees, diplomas, or certificates earned.

For information and resources about student loan repayment, or to submit a complaint relating to your student loans or student loan servicer, please visit wsac.wa.gov/loan-advocacy or contact the Student Loan Advocate at loanadvocate@wsac.wa.gov.

Requirements for Graduation
To be eligible for graduation, all students must

- successfully complete (with grades of B- or better) all required courses
- successfully complete the required clinical experiences totaling a minimum of 400 accrued hours, including 25 hours of guided clinical observation
- successfully complete the required capstone course
- successfully complete the required student portfolio
- maintain a cumulative grade point average (CGPA) of 3.0 or higher
- successfully demonstrate the 2020 Standards and Implementation Procedures for the Certificate of Clinical Competence in Speech-Language Pathology as defined by The Council for Clinical Certification in Audiology and Speech-Language Pathology (CFCC), the accrediting body of ASHA.
- complete the Praxis II Exam adopted by ASHA for the purposes of certification in speech-language pathology
- complete the application for degree and satisfy all Dr. Pallavi Patel College of Health Care Sciences and Nova Southeastern University financial obligations

Background Checks
Level I and Level II background checks are required for clinical practicum and externship placements. Some citations contained in the background checks may prevent a student from being assigned or may result in a student being denied placement at clinical sites. A student who cannot be placed at required clinical sites due to information of concern on the student’s background check may not be able to complete the program.

Computer Requirements
Throughout the program, students will conduct online library research, communicate via NSU email, and use word-processing programs to complete papers and clinical reports. Students are required to own a computer and obtain an Internet service provider (ISP) account.

Tuition and Fees
Master of Speech-Language Pathology tuition for 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (healthsciences.nova.edu/slp/master-speech-language-pathology.html). An NSU Student Services Fee of $500 is required per semester, not to exceed $1,500 annually.
# Master of Science in Speech-Language Pathology Curriculum Outline

<table>
<thead>
<tr>
<th>Core Courses (42 credits)</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SLP 6000 Diagnosis of Language and Speech Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6011 Language and Learning Disabilities in School-Age Children and Adolescents</td>
<td>3</td>
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<tr>
<td>SLP 6012 Communication Disorders in Infancy Through Preschool</td>
<td>3</td>
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<tr>
<td>SLP 6015 Clinical Processes</td>
<td>3</td>
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<tr>
<td>SLP 6020 Language Disorders in Adults</td>
<td>3</td>
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<tr>
<td>SLP 6025 Augmentative and Alternative Communication</td>
<td>3</td>
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<tr>
<td>SLP 6030 Voice Disorders</td>
<td>3</td>
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<tr>
<td>SLP 6040 Fluency Disorders</td>
<td>2</td>
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<tr>
<td>SLP 6052 Motor Speech Disorders in Adults</td>
<td>2</td>
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<tr>
<td>SLP 6053 Pediatric Feeding and Motor Speech Disorders</td>
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<tr>
<td>SLP 6055 Dysphagia</td>
<td>3</td>
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<tr>
<td>SLP 6060 Articulation and Phonological Disorders</td>
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<td>SLP 6070 Research Methods</td>
<td>3</td>
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<td>SLP 6075 Seminar in Professional Issues in Speech-Language Pathology</td>
<td>3</td>
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<tr>
<td>SLP 6091 Multicultural and Counseling Issues</td>
<td>3</td>
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<tr>
<td>SLP 6200 Capstone</td>
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</tbody>
</table>

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<tr>
<th>Electives (6 credits)</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SLP 6013 Autism Assessment: A Communication-Based Perspective</td>
<td>3</td>
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<tr>
<td>SLP 6014 Autism Spectrum Disorders</td>
<td>3</td>
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<tr>
<td>SLP 6021 Cognitive Communication Disorders</td>
<td>3</td>
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<tr>
<td>SLP 6037 Craniofacial Anomalies</td>
<td>3</td>
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<tr>
<td>SLP 6045 Augmentative and Alternative Communication in Educational Settings</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6057 Medical Aspects of Communication Disorders</td>
<td>3</td>
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<tr>
<td>SLP 6080 Directed Research</td>
<td>1–6</td>
</tr>
<tr>
<td>SLP 6201/6202 Special Topics</td>
<td>1–3</td>
</tr>
<tr>
<td>SLP 6203 Organization and Management of School-Based Speech-Language Pathology Programs</td>
<td>3</td>
</tr>
</tbody>
</table>
Master of Science in Speech-Language Pathology Course Descriptions

Core Courses

**SLP 6000—Diagnosis of Language and Speech Disorders**
The course will provide procedures and techniques to assess speech and language status. The overall aim of the course is to build on the student’s understanding of the assessment process in communication disorders. Students are to develop the ability to interpret assessment information and to formulate appropriate diagnosis of the patients/clients we serve. A noncredit lab is included. *(3 credits)*

**SLP 6011—Language and Learning Disorders in School-Age Children and Adolescents**
This course addresses the etiology, diagnosis, and treatment of language-learning delay/disorders, including developmental and acquired disorders, affecting school-age children through adolescence. Emphasis will be placed on a communication process model of evaluation and intervention with the implication of this integrated approach to facilitate reading, writing, speaking, listening, and thinking. The importance of the functional interrelationships among linguistic, cognitive, and affective functions and the social contexts within which they occur will be stressed. A variety of assessment and treatment procedures for use with this diverse clinical population will be discussed. Presentation of the paradigm shift from a traditional deficit model to an emergent literacy model with collaborative strategies to design and conduct curriculum-based assessment and interventions will be covered. **Prerequisite:** SLP 6012 *(3 credits)*

**SLP 6012—Communication Disorders: Infancy Through Preschool**
This course covers identification, assessment, and intervention principles and procedures for young children who display or are at-risk for socio-communicative linguistic deficits. Emphasis is placed on family-centered, early-intervention, service delivery and the integrated intervention model for facilitation of communication and language skills. Discussion will include collaborative strategies and multidisciplinary teaming models for facilitating effective parent-professional partnerships. *(3 credits)*

**SLP 6015—Clinical Processes**
This course will provide a base of knowledge and fundamental skills needed for beginning supervised clinical practice. It will review the basic aspects of delivery of treatment services for communication and swallowing/feeding disorders, including communication skills, interpersonal skills, behavioral management skills, intervention strategies and processes, data management, and clinical writing skills. Emphasis will be placed on basic clinical intervention processes common to a variety of disorder areas. **Prerequisites:** SLP 6011, SLP 6020, SLP 6060, and documentation of 25 hours of **guided** clinical observation by ASHA-certified speech-language pathologists *(3 credits)*

**SLP 6020—Language Disorders in Adults**
This course provides a knowledge base for evaluation and treatment of disorders of language in adults, including aphasia, closed-head injury, right hemisphere damage, and dementia. **Prerequisite:** SLP 6070 *(3 credits)*

Clinical Practicums, Labs, and Externships *(5 credits)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SLP 6005</td>
<td>Diagnostics II Practicum</td>
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<tr>
<td>SLP 6101</td>
<td>Clinic Lab I Practicum</td>
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<tr>
<td>SLP 6102</td>
<td>Clinic Lab II Practicum</td>
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<tr>
<td>SLP 6110</td>
<td>Externship: Adult</td>
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<tr>
<td>SLP 6120</td>
<td>Externship: Pediatric School</td>
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<tr>
<td>SLP 6130</td>
<td>Externship: Pediatric Non-School</td>
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</table>

Total Credits for Degree Completion: 53
SLP 6025—Augmentative and Alternative Communication
This course will review the basic aspects of the field of augmentative communication, including aided and unaided symbols, strategies, and techniques. An overview of augmentative communication assessment and intervention principles and procedures will be presented. This course will address the needs of individuals with little or no functional speech across the life span, including etiologies such as severe aphasia, autism, cerebral palsy, dual sensory impairment, intellectual disability, progressive neurological diseases, and traumatic brain injury. Prerequisites: SLP 6012 and SLP 6020 (3 credits)

SLP 6030—Voice Disorders
This course reviews etiology and pathophysiology; case history; perceptual, acoustic, endoscopic, and aerodynamic diagnostic procedures; intervention approaches; and therapy techniques for individuals with functional, neurogenic, psychogenic and organic voice disorders and resonance disorders. Prerequisite: SLP 6070 (3 credits)

SLP 6040—Fluency Disorders
This course covers the etiology, diagnosis, and management of children and adults with disorders of fluency. Developmental stuttering, neurologically based stuttering, cluttering, and other nonfluent speech conditions will be studied. (2 credits)

SLP 6052—Motor Speech Disorders in Adults
This course provides education and training in the assessment and management of motor speech disorders in adults. It includes discussion of the nature, etiology, diagnosis, and management of motor speech disorders with emphasis on differential diagnosis and treatment. Prerequisites: SLP 6053, SLP 6060, and SLP 6070 (2 credits)

SLP 6053—Pediatric Feeding and Motor Speech Disorders
This course provides education and training in the assessment and management of feeding and motor speech disorders from infancy to adolescence. This course includes discussion of the nature, etiology, differential diagnosis, and management using evidence-based practices of feeding and motor speech disorders in a variety of clinical environments. Prerequisites: SLP 6060 and SLP 6070 (2 credits)

SLP 6055—Dysphagia
This course provides information about normal anatomy and physiology of the swallow. Using an evidence-based model, information about the evaluation and treatment of swallowing disorders is provided. Common etiologies for dysphagia (e.g., neurogenic and head and neck cancer) are addressed for the adult population. An overview of pediatric dysphagia is provided. Current issues and controversial topics are discussed in a framework of questions students should consider. Examples of ethical questions in the management of dysphagia are presented. Students are afforded the opportunity to view fiberoptic endoscopic evaluation of swallowing (FEES). Video views of normal and abnormal swallows through video fluoroscopic evaluation are provided through a noncredit required lab. Prerequisites: SLP 6052, SLP 6053, SLP 6060, and SLP 6070 (3 credits)

SLP 6060—Articulation and Phonological Disorders
This course provides a knowledge base for normal and disordered speech sound development. Theories of assessment and intervention are discussed and application, analysis, and comparison is stressed for all theories and approaches presented. A variety of procedures for identification and remediation of articulatory and phonologic disorders are presented. Traditional therapeutic techniques and current diagnostic and intervention strategies are highlighted. (3 credits)

SLP 6070—Research Methods
To become a critical consumer of current literature, students will be exposed to analysis of the field’s literature with respect to research design, evidence-based practice, and statistical application. Research ethics, to include informed consent and vulnerable populations, will be discussed. Analysis of the scholarly literature will culminate in a graduate-level paper. (3 credits)

SLP 6075—Seminar in Professional Issues in Speech-Language Pathology
The purpose of this course is to increase students’ awareness and understanding of current professional issues pertaining to such matters as standards of ethics, scope of practice, legislative mandates affecting the professions, professional service delivery systems, health care reimbursement issues, state licensure, national certification, state teacher certification requirements, state—accomplished practices for educators, state education standards, job opportunities and interview strategies, participation in professional organizations, professional advocacy, and HIV/AIDS awareness. Prerequisite: SLP 6101 (3 credits)

SLP 6091—Multicultural and Counseling Issues
This course will provide a forum for discussion regarding issues in the provision of services to multicultural populations. Counseling approaches for use with clients and/or families affected by communication problems will be explored through effective interpretation, information dissemination, and discussion. Prerequisite: SLP 6015 (3 credits)

SLP 6200—Capstone
Capstone is an online course designed to assist students in reviewing major content areas in the field of speech-language pathology in preparation for the national examination adopted by the American Speech-Language-Hearing Association
ASHA) for purposes of certification in speech-language pathology. It addresses approximately 18 major topic areas covering normal and disordered processes, professional issues, research methodologies and other content important to the profession. Students progress through the course at their own pace, reviewing online course materials, participating in discussion boards, and contributing to synchronous chats. **Students must take this class with their first externship experience. Prerequisites:** SLP 6005, SLP 6025, SLP 6030, SLP 6040, SLP 6055, SLP 6091, and SLP 6102 (0 credit)

**Clinic Courses**

**SLP 6005—Diagnostics II Practicum**
Emphasis in this course is on analysis and interpretation of data and the impact on differential diagnosis. Lab class meetings are required. **Prerequisites:** SLP 6000, SLP 6011, SLP 6020, and SLP 6060 (1 credit)

**SLP 6101—Clinical Lab I Practicum**
This course has dual components. Students will provide treatment to assigned patients as well as attend weekly class meetings. Participation in a practicum involving direct patient contact will occur with supervised clinical practice performed in the treatment of speech, language, and hearing disorders. Development and application of appropriate treatment plans, collaborative supervisory meetings, self-analysis skills, research, and completion of written documentation is expected. Discussions on professional topics such as prevention, portfolio development, child/elder abuse and neglect, and case studies will be covered. **Prerequisite:** SLP 6015 (1 credit)

**SLP 6102—Clinic II Practicum**
In this practicum experience, students will move along the supervisory continuum working toward increased independence. Self-analysis of clinical skills and enhancement of acquired skills will be emphasized. Lab class meetings are required. **Prerequisite:** SLP 6015 (1 credit)

**SLP 6110—Externship: Adult**
The adult externship requires a full-time placement (based on a minimum of 32 hours/week for an entire semester) in an adult facility. The student will participate in all activities associated with an SLP position, including assessment and treatment of adults. Students will be supervised by an SLP who is ASHA certified and state licensed. **Prerequisites:** SLP 6005 and SLP 6102 (1 credit)

(All students choose ONE from the following pediatric externships.)

**SLP 6120—Externship: Pediatric School**
The school externship requires a full-time placement (based on a minimum of 32 hours/week for an entire semester) in a school setting. Students will participate in all activities associated with a school-based SLP position, including assessment and treatment of students in a pre-K–grade 12 school setting. Students will be supervised by an ASHA-certified, state-licensed, school-based SLP. **Prerequisites:** SLP 6005 and SLP 6102 (1 credit)

**SLP 6130—Externship: Pediatric Non-School**
The pediatric externship requires a full-time placement (based on a minimum of 32 hours/week for an entire semester) in a pediatric facility. The student will participate in all activities associated with an SLP position, including assessment and treatment of children. Students will be supervised by an SLP who is ASHA certified and state licensed. **Prerequisites:** SLP 6005 and SLP 6102 (1 credit)

**Electives**
(All students choose TWO of the following.)

**SLP 6013—Autism Assessment: A Communication-Based Perspective**
This course will provide information about critical issues in assessing communication and language in children and adults with autism spectrum disorders (ASD). This course will focus on implementing effective evidence-based assessment strategies in order to develop appropriate communication goals and strategies for individuals with ASD. Lectures, case reports, videotaped demonstrations, and hands-on learning activities will be completed. **Prerequisites:** SLP 6000 and SLP 6011 (3 credits)

**SLP 6014—Autism Spectrum Disorders**
This course will provide information and discussions about critical issues in teaching communication and language to children and adults with autism spectrum disorders (ASD). It will focus on implementing effective assessment and intervention strategies as well as developing appropriate communication programs for individuals with ASD. Lectures, case reports, videotaped demonstrations, and hands-on learning activities will be completed. **Prerequisites:** SLP 6011, SLP 6025, and SLP 6070 (3 credits)
SLP 6021—Cognitive Communication Disorders
This course provides a knowledge base for adult and pediatric, acquired and developmental, cognitive communication disorders. Topics include attention, memory, reasoning/problem solving, executive function, learning, processing, and language. The diagnosis and treatment of these deficits in patients at many levels of recovery will be discussed. **Prerequisites:** SLP 6011 and SLP 6020 (3 credits)

SLP 6037—Craniofacial Anomalies
This course provides a study of etiology, assessment, and remediation of communicative impairments in children and adults with craniofacial anomalies. Specific emphasis is placed on articulatory and resonance disorders resulting from cleft lip and palate and velopharyngeal insufficiency and incompetence. **Prerequisite:** SLP 6030 (3 credits)

SLP 6045—Augmentative and Alternative Communication in Educational Settings
This course focuses on the implementation of augmentative and alternative communication (AAC) in educational settings. Learners will gain an understanding of the legal foundations of providing AAC devices and services in school settings. The course addresses strategies for AAC services that can be used to provide access to the general education curriculum for students with significant communication challenges. Language assessment and intervention strategies for AAC communicators are discussed. Issues and strategies to teach reading and writing skills are presented along with strategies for facilitating the development of social skills and friendships. **Prerequisite:** SLP 6025 (3 credits)

SLP 6057—Medical Aspects of Communication Disorders
The emphasis of this course will be to enhance the student’s understanding of the relationships between speech-language pathologists, medical disciplines, and allied health disciplines. Understanding medical terminology, governing bodies of health care organizations, medical ethical dilemmas, and report writing for the medical model of treatment will be significant focuses of this course. **Prerequisite:** SLP 6015 (3 credits)

SLP 6080—Directed Research
This course provides students with an opportunity to develop clinically relevant research skills and gain hands-on experiences with research practices. Students work collaboratively with selected faculty members to plan and conduct their research projects. The scope and depth of the project varies according to the number of credits for which the course is taken. Students must secure faculty permission in advance of registering for this course. **Prerequisite:** SLP 6070 (1–6 credits)

SLP 6201 and SLP 6202—Special Topics
These courses offer advanced study of selected theoretical, clinical, or professional issues in speech pathology and audiology. (Elective—may be taken for credit, CEU, or recertification.) **Prerequisites:** To be determined on a course-by-course basis and enumerated in the course syllabus. (1–3 credits)

SLP 6203—Organization and Management of School-Based Speech-Language Pathology Programs
This course will address the challenges facing school-based speech-language pathologists. Topics will include legislative mandates, current issues in education and the impact of these issues on the traditional roles of school-based speech-language pathologists, organization and management of school speech-language pathology programs, active participation on the educational team, service delivery models for diverse populations, use of technology in schools, treatment outcomes and accountability measures, marking services in the schools and the community, and creative program ideas. **Prerequisites:** SLP 6000, SLP 6011, and SLP 6060 (3 credits)
Doctor of Speech-Language Pathology (SLP.D.) Program

The Department of Speech-Language Pathology offers the Doctor of Speech-Language Pathology (SLP.D.) degree program. The post-master’s SLP.D. degree program is a rigorous and scientifically based, 53-credit, academic curriculum that is designed to enhance the continued academic education of speech-language pathologists pursuing an advanced doctoral degree.

Within the curriculum, the faculty incorporates current research, ethical decision-making, and models of best practice to foster knowledge, leadership, problem-solving skills, and research. Doctoral students are encouraged to analyze, synthesize, and apply research-based theory to their current work environment and through the development of the applied dissertation.

The program fulfills a commitment to the field of speech-language pathology by providing practicing clinicians with a variety of forums to expand their breadth of knowledge and clinical skills. It does this by allowing a flexible schedule for obtaining doctoral education and providing an environment that nurtures the development of current practitioners and future leaders.

Program Outcomes
The SLP.D. graduate will be able to do the following: 1. Demonstrate knowledge learned in the program by applying it to real settings. 2. Conduct an independent research investigation that contributes to the general body of knowledge in a specific field or profession. 3. Solve diverse problems using information and skills acquired in the program to create solutions. 4. Make informed decisions based on ethical and legal principles. 5. Formulate scholarly arguments supported by academic resources. 6. Engage in lifelong learning and self-assessment.

Admissions Requirements
Prospective students are selected by the Committee on Admissions, which considers the overall qualities of applicants and their suitability for this course of study. Areas of consideration include application content, academic record, ASHA certification and state licensure, letters of recommendation, and a personal interview. A personal interview is required with a member of the Committee on Admissions.

The Department of Speech-Language Pathology has the following requirements for applicants.

- Prior to matriculation, applicants must have completed a master’s degree in Speech-Language Pathology from a regionally accredited college or university and a CAA accredited program.
- Applicants must obtain a cumulative master’s degree GPA at or above a 3.2 on a 4.0 scale to be eligible for admission.

The university reserves the right to modify any requirements on an individual basis as deemed necessary by the dean of the Dr. Pallavi Patel College of Health Care Sciences. The college reserves the right, and the student, by his or her act of matriculation, concedes to the college the right to require his or her withdrawal any time the college deems it necessary to safeguard its standards of scholarship, conduct, and compliance with regulations or for such other reasons as are deemed appropriate. The dean and the chair of the speech-language pathology department reserve the right to require the student’s withdrawal at any time for the above-mentioned reasons.

Application Procedures
All applicants must submit or be responsible for the submission of

1. a completed admission application packet, including a $50, nonrefundable application fee made payable to Nova Southeastern University

2. official transcripts sent directly from all previously attended undergraduate, professional, and graduate institutions to

Nova Southeastern University
Enrollment Processing Services
Dr. Pallavi Patel College of Health Care Sciences
Doctor of Speech-Language Pathology (SLP.D.) Program
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-2282

3. an evaluation for U.S. institutional equivalence for all coursework from international institution(s), if applicant attended or is a graduate of any international institution(s)

4. Coursework taken at foreign institutions must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.

- World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org
It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to NSU’s Enrollment Processing Services.

5. a complete résumé or CV

6. two professional letters of recommendation by two different individuals who can attest to the applicant’s ability to succeed in a doctoral program

7. valid documentation of the Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP) and a copy of his or her current state SLP licensure

8. written responses to questions/essays provided in the application

9. a test score report showing that the applicant received a scaled score 391–396 on the Miller Analogies Test (MAT) or GRE scores of 300 (combined Verbal and Quantitative scales only)

The test must have been taken within the past five years.

10. All applicants must have a personal interview and must show evidence of computer skills through coursework or self-study prior to the end of the first term. Students may obtain instruction through the NSU Student Microcomputer Laboratory or other training facilities.

**Tuition and Fees**

Doctor of Speech-Language Pathology tuition for 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (healthsciences.nova.edu/slp/doctor-speech-language-pathology.html). An NSU Student Services Fee of $1,500 is required annually.

Acceptance and Preregistration Deposit—$500. This deposit is required to reserve the accepted applicant’s place in the entering, first-year class. This deposit will be deducted from the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is due within three weeks of an applicant’s acceptance.

**Additional Program Expenses**

Doctoral candidates will be responsible for the purchase of textbooks and for the cost of travel to classes during the summer residency, as well as for other needs typically associated with advanced study. Material fees may be charged as necessary. If a student relocates, it is the student’s financial responsibility to reestablish Integrated Service Digital Network (ISDN) lines.

**Computer Requirements**

In order to access the university’s computing resources, all Nova Southeastern University students must provide their own Internet access service through a suitable Internet service provider (ISP). Tablets and smartphones, while very useful, may not be sufficient for all program uses. Additional minimum computer requirements can be found at https://www.nova.edu/portal/oit/policies/secure/forms/equipment-standards.pdf. It is highly recommended that students have access to a desktop or laptop consistent with the following:

- a recent generation of operating systems of Windows: Windows 7, SP1, or higher or Macintosh: Mac OS X 10.6 or MAC OS X 10.7
- Microsoft Office 2013 or more recent version of the Microsoft Office software to include Word, PowerPoint, and Excel
- Internet broadband access
- a browser, such as Internet Explorer 11.0 or a more recent version, Firefox 44 or a more recent version, or Chrome 48 or a more recent version
- headphones, a microphone, a camera, and videoconferencing capabilities

**Requirements for Graduation**

To complete the Doctorate in Speech-Language Pathology program a student must

- attend the mandatory summer residency
- complete all required coursework
- attain an overall 3.0 GPA
- complete an applied dissertation
- submit a degree application form and payment of diploma fee
- fulfill all financial obligations to the university

All students must submit a degree application to nova.edu/registrar/instructions.
**Doctor of Speech-Language Pathology (SLP.D.) Curriculum Outline (53 credits minimum)**

<table>
<thead>
<tr>
<th>Core Courses (26 credits)</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>SLPD 7000 Technology and Instrumentation in Communication Sciences</td>
<td>1</td>
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<tr>
<td>SLPD 7030 Gerontology</td>
<td>2</td>
</tr>
<tr>
<td>SLPD 7040 Supervision</td>
<td>3</td>
</tr>
<tr>
<td>SLPD 7060 Genetics</td>
<td>2</td>
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<tr>
<td>SLPD 7070 Pharmacology</td>
<td>2</td>
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<tr>
<td>SLPD 7075 Counseling</td>
<td>2</td>
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<tr>
<td>SLPD 7080 Business Management and Leadership</td>
<td>2</td>
</tr>
<tr>
<td>SLPD 7200 Neuroscience/Neuropsychology and Communication Sciences</td>
<td>3</td>
</tr>
<tr>
<td>SLPD 7210 Advanced Seminar in Pediatric Development</td>
<td>3</td>
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<tr>
<td>SLPD 7220 Advanced Seminar in Voice and Swallowing</td>
<td>3</td>
</tr>
<tr>
<td>SLPD 7250 Advanced Seminar in Augmentative and Alternative Communication (AAC)</td>
<td>3</td>
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<tr>
<th>Research Courses (12 credits)</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HPH 7300 Biostatistics I</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7400 Quantitative Research Design</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7410 Qualitative Research Design</td>
<td>3</td>
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</tbody>
</table>

*Choose one of the following*

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<tr>
<th>Credit</th>
<th>Courses</th>
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<tbody>
<tr>
<td>3</td>
<td>HPH 7310* Biostatistics II</td>
</tr>
<tr>
<td>3</td>
<td>HPH 7700 Test and Measurements</td>
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<tr>
<td>3</td>
<td>HSP 9002 Survey Methodology</td>
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</tbody>
</table>

*Replaces ARC 8913 Research Elective.*
**Applied Dissertation (12 credits)**

The applied dissertation is a detailed, accurate, and cohesive account of a scholarly investigation designed to answer a research question directed toward the improvement of practice in the field of speech-language pathology. Research is distinguished by a theory-to-practice model encompassing a diversity of disciplines. Each student is assigned a faculty committee to facilitate and supervise the process.

There are three benchmarks in the completion of the applied dissertation: (1) the concept paper, (2) the dissertation proposal and Institutional Review Board (IRB) approval, and (3) the final report.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLPD 8966</td>
<td>Applied Dissertation I—Concept Paper</td>
<td>2</td>
</tr>
<tr>
<td>SLPD 8967</td>
<td>Applied Dissertation II—Proposal</td>
<td>5</td>
</tr>
</tbody>
</table>

**Continuing Dissertation Services**

If the program is not completed within 24 months, continuing dissertation services will begin on the 25th month. Students must enroll in SLPD 8090 each semester between the 25th and 36th months of their program. In addition, students must enroll themselves in SLPD 8091 each semester beginning the 37th month of their program in order to receive dissertation services from their committee chair and committee member until the completion of their applied dissertation.

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SLPD 8090</td>
<td>Applied Dissertation Services I</td>
<td>1</td>
</tr>
<tr>
<td>SLPD 8091</td>
<td>Applied Dissertation Services II</td>
<td>1</td>
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</tbody>
</table>

**Doctor of Speech-Language Pathology (SLP.D.) Course Descriptions**

**Year One**

**Fall Semester (5 credit hours)**

**SLPD 7000—Technology and Instrumentation in Communication Sciences**

This course provides candidates with the SLP.D. program’s orientation. This orientation includes an overview of the distinct areas related to doctoral studies: applied research, distance library, student services, and technology. In addition, this course presents advanced applications in the use of computer hardware and software in communication sciences and disorders. Doctoral candidates will receive hands-on experience in the use, application, and configuration of software for distance-learning technologies for management of clients and for business issues. *(1 credit)*

**SLPD 7030—Gerontology**

This course will provide students with an overview of gerontology. The older adult population often present with complex, interacting issues. Thus, a holistic approach to patient care will be considered, encompassing biological, social, psychological, and cultural aspects related to aging. Analysis of day-to-day functioning of the aging patient will be covered. An emphasis will be placed on differentiation between normal aging processes and pathological changes related to speech pathology and communication disorders. Learning will take place via class lectures and discussions, experimental exercises, written case studies, student presentations, and panel discussions. Discussion of ethical issues related to aging will augment the learning process. *(2 credits)*
SLPD 7075—Counseling
The emphasis of this course is on counseling approaches for use with clients with communication disorders and/or their families. Doctoral candidates will explore theories of counseling with an emphasis on management of individuals with communication disorders and their families. Doctoral candidates will experiment with different approaches to interacting with clients and their families individually and in groups. The cultural impact on the counseling process will be addressed. Doctoral candidates will participate in role-play situations for use with clients demonstrating a variety of audiologic and/or speech-language problems. (2 credits)

Winter Semester (5 credit hours)
SLPD 7080—Business Management and Leadership
Doctoral candidates will learn business management principles as they relate to the conduct of speech-language or related professional practice in a variety of settings. Legal and ethical issues in practice management will be covered. Doctoral candidates preparing for personal and professional development will assess the skills and behaviors of the leader of change agent in terms of their own potential for growth and future leadership positions. (2 credits)

SLPD 7220—Advanced Seminar in Voice and Swallowing
This course is a doctoral-level course exploring best practices in voice and swallowing disorders. It is not designed to develop voice and swallowing clinicians, nor is it designed to impart the full breadth of information available in the areas of voice and swallowing disorders. Rather, this course is designed to enhance the students’ comprehension of the specialty areas of voice and swallowing disorders that were taught to them at the master’s degree level, expand their knowledge base of best practices in voice and swallowing disorders, and develop a working sense of the scope of practice in voice and swallowing. (3 credits)

Summer Semester (8 credit hours)
HPH 7400—Quantitative Research Design
This course will provide students with a simple understanding of basic methods and approaches used in health care research. A major emphasis of the course will be on the conceptualization and design of research studies. The course will cover ethics, formulation of research questions, study design, reliability, validity, sampling, measurement, and interpretation of research findings. It will prepare students to critically evaluate published literature, and to design sound research studies. The course will be both theoretical and applied. Students will be challenged to apply the theoretical concepts presented in the classroom and in the readings to design a study to address a health-related issue of their choice. (3 credits)

HPH 7410—Qualitative Research Design
This course will focus primarily on the knowledge and skill competencies needed to conduct qualitative research successfully. In this pursuit, students will immerse themselves in the epistemological, theoretical, ethical, methodological, and procedural understanding of qualitative research. They will apply this knowledge to the conceptualization and conduct of qualitative research, report the findings of the research in the form of a research article, and appraise the quality of such qualitative research products. Upon completion of the course, students will demonstrate that they have mastered the competencies needed to create, plan, and complete a qualitative research dissertation. (3 credits)

SLPD 8966—Applied Dissertation I—Concept Paper
The content of Applied Dissertation Service I—Concept Paper focuses on developing a preliminary literature review and formulating research questions. The committee chair and committee member roles are discussed. This service will culminate in the completion of the first corresponding benchmark: the concept paper. Credit for this seminar will be assigned following approval of the concept paper. (2 credits)

Year Two
Fall Semester (8 credit hours)
SLPD 7060—Genetics
This course will provide students with an overview of genetics. Doctoral candidates will be exposed to a general overview of genetics and investigate the spectrum of genetic syndromes common to clients with communication disorders. Doctoral candidates will study the embryologic development with an emphasis on normal and abnormal or interrupted development at various stages and outcomes. (2 credits)

SLPD 7200—Neuroscience/Neuropsychology and Communication Sciences
Neurological foundations of speech-language and cognitive disorders will be presented. The emphasis will be a study of neuropathological conditions and the speech-language disorders that result from these conditions. (3 credits)

HPH 7300—Biostatistics I
The application of quantitative techniques has expanded rapidly in medical decision-making. The emphasis on evidence-based health care means that health care workers must be able to evaluate the results from published health care research studies. This course is the first of two courses designed to provide students with knowledge of quantitative techniques. The course will cover descriptive statistics; parametric, group-comparison statistics; and basic, nonparametric statistics. It will also provide an introduction to linear modeling. (3 credits)
Winter Semester (7 credit hours)

SLPD 7070—Pharmacology

The goal of this course is to introduce the doctoral candidates to the advanced science and clinical pharmacology that impacts the practice of speech-language pathology. The clinical use and understanding of the pharmacodynamics, pharmacokinetics, and the potential positive and negative outcomes of medications will be emphasized. Lectures, videos, and hands-on learning activities will be explored during the course. Doctoral candidates will learn the general principles of drug action, particularly as related to communicative function. The classes of drugs used in clinical practice will be examined with emphasis on activity, mode of action, side effects, toxicity, and drug interactions. Case studies in the fields of speech-language pathology and audiology will be presented. (2 credits)

Research Elective

Students have the opportunity to select one of the three courses listed below, related to the research area of their dissertation topic. (3 credits)

HPH 7310—Biostatistics II

The aim of this course is to enable students to appreciate the richness of statistical science and to invite them to the concept of probabilistic thinking. Statistics is the science of the future. Any technique that they are going to learn will help them to understand the unknown better, and in turn, will increase their success in other courses and in future professional careers. Principles of statistical inference build upon the course of Biostatistics I. As such, a prerequisite for enrolling in this course is satisfactory completion of Biostatistics I. The goals of this course are threefold: (1) introduce the basic concepts of probability and methods for calculating the probability of an event; (2) assist students in developing an understanding of probability theory and sampling distributions; and (3) familiarize students about inferences involving one or two populations ANOVA, regression analysis, and chi-square tests. Prerequisite: HPH 7300 Biostatistics I (3 credits)

HPH 7700—Test and Measurement

This course provides a foundation in the basic principles of measurement with a focus on how to assess and control for error through research design methods and statistical analysis. Students will explore test construction and methods and parsimonious data analysis methods to develop an understanding for designing instruments and assessment tools. A focus on issues specific to measurement error in the medical sciences will also be examined throughout the course. (3 credits)

HSP 9002—Survey Methodology

This course introduces students to a set of principles of survey methodology that are the basis of standard practices in the field. It provides guidelines for developing survey objectives, designing survey studies, sampling respondents, and administering surveys. Emphasis is on the skills and resources needed to design and conduct a survey. (3 credits)

Summer Semester (8 credit hours)

SLPD 7210—Advanced Seminar in Pediatric Development

Theories and application of cognitive, social, psychological, and cultural development of children and adolescents will be examined. Current thinking will augment classical theory. Application of current thinking as well as therapeutic, teaching, and care-giving practices stemming from these ideas will be stressed. (3 credits)

SLPD 8967—Applied Dissertation II—Proposal

The content of Applied Dissertation Service II—Dissertation Proposal emphasizes the formulation and writing of the dissertation proposal and the process for Institutional Review Board (IRB) approval. Methodology and content for each of the proposal chapters are defined, including a thorough discussion of the role of the literature review to support or refute the dissertation topic. This service, focusing on scientific inquiry, will culminate in the completion of the second corresponding benchmark: the applied dissertation proposal. Credit for this seminar will be assigned following approval of the proposal. Prerequisite: SLPD 8966 (5 credits)

Year Three

Fall Semester (7 credit hours)

SLPD 7250—Advanced Seminar in Augmentative and Alternative Communication (AAC)

This study area provides a discussion of the critical issues in augmentative and alternative communication and assistive technology, with a focus on self-determination, family-centered practices, and AAC outcomes. Students will gain experience with non-electronic communication displays, various input devices, and low-tech communication devices, as well as high-technology voice output communication aids. Current issues in ethics, funding, and the impact of culture on AAC are presented. A discussion of recent trends and future needs, as well as strategies for keeping up with new technology and a rapidly expanding knowledge base will be included. (3 credits)
SLPD 7040—Supervision
The identification and analysis of the processes of supervision along the continuum of supervision from support personnel to peer will be examined. Topics will include planning and executing the supervisory conference, data collection procedures, and evaluation. The research in the field of supervision will be examined with an emphasis on practical application. The impact of cultural diversity on supervision will be addressed. (3 credits)

SLPD 8090—Applied Dissertation Services I
The applied dissertation is a detailed, accurate, and cohesive account of a scholarly investigation designed to answer a research question directed toward the improvement of practice in the field of speech-language pathology. Research is distinguished by a theory-to-practice model encompassing a diversity of disciplines. Each student is assigned a faculty committee to facilitate and supervise the process. (1 credit)

Winter Semester (5 credit hours)

SLPD 8968—Applied Dissertation—Final Report
Applied Dissertation Service III involves data collection and implementation, the applied dissertation (i.e., final report), and the final approval process. Content and format issues, as well as recommendations for further research, are highlighted. Dissemination of the dissertation and possible outlets for publication are covered. This service will culminate in the completion of the third corresponding benchmark: the applied dissertation. Credits for this service will be assigned following approval of the applied dissertation. Prerequisite: SLPD 8967 (5 credits)

SLPD 8091—Applied Dissertation Services II
This course provides dissertation services for continuing doctoral students previously enrolled in SLPD 8090 who did not complete the applied dissertation. SLPD 8091 is also for currently enrolled students who are entering the 37th month of the doctoral program. Students are responsible for registering for SLPD 8091. Service fees will apply. (1 credit)
College of Dental Medicine
College of Dental Medicine

Mission Statement
To educate future dentists and to improve oral health through patient-centered care, academic excellence, research, leadership, and commitment to the communities we serve, particularly the special needs and underserved populations.

Administration
Steven I. Kaltman, D.M.D., M.D., FACS
Dean

Hal Lippman, D.D.S.
Executive Associate Dean of Operations

Rafael Castellon, D.D.S.
Associate Dean of Clinical Services

Steven M. Kelner, D.M.D., M.S.
Associate Dean of Institutional Affairs

Jodi Kodish-Stav, D.D.S.
Associate Dean of Clinical Informatics

William B. Parker, D.D.S.
Associate Dean of Advanced Education

Sibel Antonson, D.D.S., Ph.D.
Assistant Dean of Research

Audrey L. Galka, D.D.S.
Assistant Dean of Admissions and Student Services

Maria A. Hernandez, D.D.S.
Assistant Dean of Academic Affairs

Michael Siegel, D.D.S., M.S.
Assistant Dean of Faculties

Dental Medicine
If you are considering a career in dentistry, your education will focus on becoming a competent, confident, and mature professional. Your education will focus on your ability to function as a highly qualified primary care practitioner capable of delivering comprehensive dental care to patients of all ages.

For the highly trained and skilled dentist, career opportunities are numerous. NSU graduates are working in various locations and settings throughout North America. The skilled dentist may choose to practice individually in urban, suburban, or rural environments; join a large, established group practice; or may choose public service in governmental agencies or the military. The skilled dentist may opt to specialize with additional advanced education in such fields as endodontics, oral pathology, oral surgery, orthodontics, pediatric dentistry, periodontology, prosthodontics, public health dentistry, or oral radiology.

For rewards so great, the education is rigorous. The nationally recognized faculty of Nova Southeastern University’s College of Dental Medicine (NSU-CDM) will prepare you to take your place as a leader among oral health care providers. A dynamic career awaits a committed individual.

Accreditation
Our predoctoral programs in dentistry and postdoctoral programs in advanced education in general dentistry, endodontics, orthodontics, oral and maxillofacial surgery, periodontology, pediatric dentistry, and prosthodontics are accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611.

Facilities
The College of Dental Medicine uses the facilities of a $75 million physical plant of the university’s Health Professions Division. A separate building consisting of 70,500 square feet of space is for the sole use of the College of Dental Medicine and houses a clinic providing comprehensive dental care; a postgraduate student dental clinic; a faculty intramural practice; a clinical simulation laboratory; laboratory facilities to support the clinics; seminar rooms; research laboratories; and offices for faculty and staff members.
Core Performance Standards for Admissions and Progress for all College of Dental Medicine Students and Residents

The Nova Southeastern University Health Professions Division and the NSU College of Dental Medicine are pledged to the admission and matriculation of qualified students and wish to acknowledge awareness of laws that prohibit discrimination against anyone on the basis of race, color, religion or creed, sex, pregnancy status, national or ethnic origin, nondisqualifying disability, age, ancestry, marital status, sexual orientation, gender, gender identity, military service, veteran status, or political beliefs or affiliations. Regarding those students with verifiable disabilities, the university will not discriminate against such individuals who are otherwise qualified, but will expect applicants and students to meet certain minimal technical standards (core performance standards) as set forth herein, with or without reasonable accommodation.

In adopting these standards, the university believes it must keep in mind the ultimate safety of the patients whom its graduates will eventually serve, as well as the efficacy and safety in the learning environment. The standards reflect what the university believes are reasonable expectations required of health professions students and personnel in performing common functions. Any exceptions to such standards must be approved by the dean of the student’s particular college, based upon appropriate circumstances.

The holders of health care degrees must have the knowledge and skills to function in a broad variety of clinical situations and to render a wide spectrum of patient care. In order to carry out the activities described below, candidates for Health Professions Division degrees must be able to integrate consistently, quickly, and accurately all information received, and they must have the ability to learn, integrate, analyze, and synthesize data. Honor and integrity of the health professions student and health care professional are essential and dependent upon the exemplary behavior of the individual health care provider in his or her relations with patients, faculty and staff members, and colleagues. This includes accountability to oneself and to relationships with fellow students, future colleagues, staff and faculty members, members of the general public, and patients who come under the student’s care or contribute to his or her training and growth. This applies to personal conduct that reflects on the student’s honesty and integrity in both academic and nonacademic settings, whether or not involving an NSU-sponsored activity. All students must have the capacity to manage their lives and anticipate their own needs. Upon accepting admission to NSU, each student subscribes to, and pledges complete observance to, NSU’s Student Code of Conduct Policies. A violation of these standards is an abuse of the trust placed in every student and could lead to suspension or dismissal. Candidates for degrees offered by the Health Professions Division must have, with or without reasonable accommodation, multiple abilities and skills including intellectual, conceptual, integrative, and quantitative abilities; interpersonal communication; mobility and strength; motor skills; and hearing, visual, tactile, behavioral, and social attributes. Candidates for admission and progression must be able to perform these abilities and skills in a reasonably independent manner.

Intellectual, Conceptual, Integrative, and Qualitative Abilities

These abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem solving—a critical skill—requires all of these intellectual abilities. Candidates and students must have critical thinking ability sufficient for good clinical judgment. This is necessary to identify cause/effect relationships in clinical situations and to develop plans of care. In addition, candidates and students should be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures. An individual is expected to be able to perform multiple tasks in a diverse, dynamic, highly competitive, and challenging learning environment. Examples include, but are not limited to, identification of cause/effect relationships in clinical situations, development of treatment plans, transferring knowledge from one situation to another, evaluating outcomes, problem solving, prioritizing, and using short- and long-term memory. They must be able to think quickly and accurately in an organized manner, despite environmental distractions. All individuals are expected to meet their program requirements on a satisfactory level as determined by HPD administration or the applicable college/program administration.

Visual

Candidates and students must have visual ability sufficient for observation, assessment, and rendering of treatment necessary in patient care. It must be consistent in many cases with being able to assess asymmetry, range of motion, and tissue texture changes. Dental medicine students must have sufficient visual ability to use dental instruments. It is necessary to have adequate visual capabilities for proper evaluation and treatment integration. Candidates and students must be able to observe the patient and the patient’s responses, including body language and features of the examination and treatment. Students must be able to read and write prescriptions, consultation letters, patient information, and dental product information. Dental medicine students must be able to observe a patient accurately, at a distance and close up, interpreting nonverbal communications, while performing dental procedures or administering medications. A student must be able to perform dental examinations and treatments that require the use of sight and touch. The student must be able to see fine detail, focus at a variety of distances, and discern differences and variations in color, shape, and texture that are necessary to differentiate normal and abnormal soft
and hard tissues. A student must also possess the visual acuity to read charts, records, radiographs, diagnostic images, small print, and handwritten notation.

**Tactile**
Candidates and students must have sufficient tactile ability for physical assessment. Dental medicine students must be able to deliver appropriate treatment using high technology equipment, such as dental drills and surgical instruments. The student must be able to use tactile senses to diagnose directly by palpation and indirectly by sensations transmitted through instruments. Examples include, but are not limited to, detection of dental hard and soft tissue conditions, use of hand instruments, and performance of palpation for purposes of intra and extra oral exam.

**Sensory**
Dental medicine students must be able to acquire information through demonstrations and experiences in basic science and dental science courses. This information includes, but is not limited to, information conveyed through a variety of mechanisms, such as microscopic images of microorganisms and tissues in normal and pathologic states, demonstration and skill exercises of techniques using dental models, etc. A student must be able to acquire information from written documents and to evaluate information presented as images from digital platforms, paper, films, slides, or video. A student must be able to benefit from electronic and other instrumentation that enhances visual, auditory, and somatic sensations needed for examination or treatment.

**Behavioral and Social Attributes**
Candidates and students must possess the emotional health required for full use of their intellectual abilities; the exercise of good judgment; the ability to take responsibility for their own actions—with respect to policies, protocols, and process—with students, faculty and staff members, patients, patient surrogates, and administration during the student’s educational program; the prompt completion of all responsibilities attendant to the diagnosis, care, and treatment of patients; and the development of mature, sensitive, and effective relationships with the patients. Candidates and students must be able to physically tolerate taxing workloads, to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in the clinical problems of many patients. Compassion, diversity, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities that will be assessed during the admissions and during the students’ education process.

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**Predoctoral Program**

**Admissions Requirements**
The College of Dental Medicine selects students based on preprofessional academic performance, Dental College Admission Test (DAT) scores, personal interview, written application, and letters of evaluation.

1. Prior to matriculation, applicants must have completed a minimum of 90 semester hours of coursework at a regionally accredited college or university. Not more than 60 semester hours from community or junior college will be applied to the 90-semester hour minimum.

2. Students should have a cumulative grade point average (GPA) of 3.25 or higher on a 4.0 scale. In addition, students should have a science grade point average of 3.25 or higher on a 4.0 scale. Students must have earned a grade of 2.0 or better in each of the following required courses:
   - Biology with lab (8 semester hours)
   - Chemistry with lab (8 semester hours)
   - Organic chemistry with lab (8 semester hours)
   - Physics with lab (8 semester hours)
   - Biochemistry (3 semester hours)
   - Microbiology (3 semester hours)
   - English (6 semester hours)

**Suggested Additional Preparation**
Courses should be selected to give students as broad and liberal an education as possible. However, applicants are encouraged to take these specific upper division courses in advanced sciences: anatomy, physiology, cell biology, molecular biology, histology, genetics, and immunology.

Courses in social sciences, principles of management, accounting, communication, foreign languages, art, and sculpture may contribute to a broad educational background.
Upon review of a student’s individual record, the Committee on Admissions may require additional coursework and testing as a condition of acceptance. The dean may evaluate an applicant’s qualifications and modify requirements in unusual circumstances. Inquiries should be directed to

Nova Southeastern University
Health Professions Division
Dental Admissions
3200 South University Drive
Fort Lauderdale, FL 33328-2018
(954) 262-1101 • 877-640-0218

Transfer of Credit Policy
Circumstances may warrant that a student enrolled in one dental school seeks to transfer to another institution. Credits may only be transferred from a dental school accredited by the Commission on Dental Accreditation. The Office of the Assistant Dean for Academic Affairs will evaluate a prospective transfer student’s coursework, which must be comparable to that of Nova Southeastern University College of Dental Medicine (NSU-CDM).

• Transfer students from another dental school will be required to complete, at minimum, their last two years of instruction at the college granting the dental degree (i.e., NSU-CDM).

Transfer credits will be given consideration based upon the student’s academic standing, as well as documentation from the dean or dean’s designee of previous dental school(s).

• Credit is only given for completed courses with a grade of 70 percent (C) or better from the applicant’s previous dental school(s).

Any dental student wishing to apply for transfer to Nova Southeastern University College of Dental Medicine must

1. make a formal application to Nova Southeastern University College of Dental Medicine

2. meet all the predoctoral admission requirements, which include submitting official transcripts of all college work (including dental school transcripts); DAT scores; National Board scores, if taken; and two letters of evaluation (No transfer student will be accepted without an interview.)

3. be in good standing at the student’s current institution, as documented by a letter from the dean of that institution

4. supply a letter of recommendation from a faculty member of the transferring dental school

5. supply a written statement outlining the reasons for the request for transfer

Transfer applicants can refer to the NSU website for the Transfer Credit for Graduate and Professional Programs Policy. Decisions on transfers are made by the dean’s office. The decision will be based on factors which include, but are not limited to, academic record, circumstances leading to the transfer request, available space, and compliance with admissions standards.

Application Procedures
1. Nova Southeastern University College of Dental Medicine uses the American Association of Dental Schools Application Service (AADSAS). AADSAS takes no part in the selection of students. The application deadline for the AADSAS application is November 15 for the class entering in August.

Applications are available from

American Association of Dental Schools
Application Service (AADSAS)
1625 Massachusetts Ave., NW
Suite 600
Washington, DC 20036-2212
(202) 667-1886 • 800-353-2237

Applicants may also obtain their application through adea.org. Candidates may choose to either fill out an electronic application or download a paper application.

Materials to be mailed to AADSAS include the following:

• AADSAS application

• an official transcript from the registrar of each college or university in which the student was enrolled (mailed directly by the college to AADSAS)

• Dental College Admission Test (DAT) scores

• an evaluation by a preprofessional health adviser or committee from the applicant’s undergraduate institution. If this evaluation cannot be provided, three individual letters of evaluation are required from undergraduate instructors, two from science instructors, and one from a liberal arts instructor. If possible, these letters should be from faculty members who know the applicant’s scholastic abilities and personal character. Otherwise, they should be from people (nonrelatives) who can provide an evaluation to the Committee on Admissions.

• a letter of evaluation from a dentist is highly recommended but not required.

2. The applicant will be required to provide the following materials to the Office of Admissions by December 15:

• the supplemental application (electronically submitted to the College of Dental Medicine)

• a nonrefundable application fee of $50

Upon receipt of the completed application and the required credentials, the Committee on Admissions will select applicants for interview. Those selected will be notified in writing of
the time and place. All applicants who are admitted by the
college must be interviewed, but an invitation to appear for an
interview should not be construed as evidence of acceptance.
Notice of acceptance or other action by the Committee
on Admissions will be on a “rolling” or periodic schedule;
therefore, early completion of the application is in the best
interest of the student.

Final official transcripts, covering all of the applicant’s
work, must be forwarded to Nova Southeastern University,
Enrollment Processing Services, College of Dental Medicine
Admissions, 3301 College Avenue, P.O. Box 299000, Fort
Lauderdale, FL 33329-9905.

Incomplete applications will not be considered. If your file
will not be complete prior to the deadline, please attach a
statement to the NSU-CDM Supplemental Application for
Admission explaining what documents will be submitted
after the deadline and the reason for their delay. Decisions to
review late applications are at the discretion of the Committee
on Admissions.

**Tuition and Fees**

- Tuition for 2020–2021 (subject to change by the board
  of trustees without notice) will be posted on our website
  (dental.nova.edu). A Health Professions Division General
  Access Fee of $145 is required each year. An NSU Student
  Services Fee of $1,500 is also required annually. Eligible
  students must request in-state tuition on application.
  For tuition purposes, a student’s Florida residency status
  (in-state or out-of-state) will be determined at initial
  matriculation and will remain the same throughout the
  entire enrollment of the student at NSU. Accordingly, tuition
  will not be adjusted as a result of any change in residency
  status after initial enrollment registration.

- Acceptance fee is $1,000. This fee is required to reserve the
  accepted applicant’s place in the entering first-year class.
  This advance payment will be deducted from the tuition
  payment due on registration day, but is not refundable
  in the event of a withdrawal. Candidates accepted on or
  after December 1 have 30 days to pay their acceptance fee.
  Candidates accepted on or after January 1 have 30 days to
  pay their acceptance fee. Applicants accepted on or after
  February 1 are required to submit their acceptance fee within
  15 days. Applicants accepted after March 15 must pay their
  acceptance fee immediately.

- Preregistration fee is $1,000 and is due March 15, under the
  same terms as the acceptance fee.

The first semester’s tuition and fees, less the $2,000 previously
paid, are due on or before registration day. Tuition for each
subsequent semester is due on or before the appropriate
registration day. Students will not be admitted until their
financial obligations have been met.

**Expenses and Financial Aid for Four-Year Predoctoral Programs**

Students should anticipate the following approximate expenses
for books and learning materials:

- first year—$2,000
- second year—$1,800
- third year—$1,700
- fourth year—$1,600

Students should anticipate the following approximate expenses
for instruments and equipment and supplies:

- first year—$13,500
- second year—$6,500
- third year—$3,000
- fourth year—$3,000

It is extremely important that applicants be committed to
meeting their financial responsibilities during their four years
of training. This should include tuition, living expenses, books,
equipment, and miscellaneous expenses.

It is mandated that each student carry adequate personal
medical and hospital insurance. Students may avail themselves
of the medical and hospital insurance plans obtainable through
the university.

Students will need to access an electronic device to meet
program requirements. The university has computer labs.
However, it is required for new, incoming students to have an
iPad 2018 or newer (iPad, iPad pro, or iPadmini).
International Dental Graduate Program

The College of Dental Medicine has a limited number of openings for graduates of non-U.S. dental schools who wish to earn a U.S. dental degree in order to qualify for licensure in the United States.

**Admissions Requirements**

The College of Dental Medicine selects students based on academic records; letters of evaluation; a computer-generated minimum score of 80 in the Test of English as a Foreign Language (TOEFL), a score of 6.0 on the International English Language Testing System (IELTS), or a score of 54 on the Pearson Test of English—Academic; a pass score on Part I of the National Board Dental Examination; a translated GPA of the American equivalent of a 3.0; a personal interview; and a psychomotor bench test. The psychomotor bench test may include the following: Canadian wax carving examination, typodont tooth preparation and restoration in amalgam, and typodont tooth preparation for a full metal crown. Procedures in the bench test are subject to change.

In order to participate in the bench test, a qualifying score on the TOEFL, IELTS, or Pearson Test of English—Academic exam and the National Board of Dental Examination, Part I, must be received by the Office of Admissions prior to the date of the bench test examination.

All materials needed for the above will be provided by NSU-CDM. The fee for this psychomotor bench test will be $2,500. This fee is in addition to the tuition for the IDG program, should the applicant be selected for admission.

In order to qualify, the applicant must have received, prior to matriculation in this International Dental Graduate Program, a D.M.D., D.D.S., or their equivalent, from a non-U.S. dental school.

**Application Procedures**

1. The applicant should mail the following materials to Enrollment Processing Services (EPS) by January 1.
   - the completed College of Dental Medicine application form for the International Dental Graduate Program
   - a nonrefundable application fee of $50
   - applicant’s official score from the Test of English as a Foreign Language (TOEFL), if applicable
   - applicant’s official score from the International English Language Testing System (IELTS), if applicable
   - applicant’s official score from the Pearson Test of English—Academic, if applicable

2. The applicant must arrange for one official transcript to be sent directly to the EPS by January 1 ONLY if coursework was taken at a U.S. institution.

Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.

- World Education Services, Inc.
  Attn: Documentation Center
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org

- Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org

- Educational Credential Evaluators, Inc.
  101 West Pleasant Street, Suite 200
  Milwaukee, WI 53212-3963
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University, Enrollment Processing Services, College of Dental Medicine Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, FL 33329-9905.

3. Please request that the secretary of the National Board of Dental Examiners forward your scores for Part I and Part II (if taken) of the examination to the Office of Admissions. The National Board of Dental Examiners is located at 211 East Chicago Avenue, Chicago, IL 60611.

4. Three letters of evaluation are required. They must be completed by dental school faculty members who are well acquainted with the applicant’s abilities or by individuals who can provide information relevant to the applicant’s potential.

All materials should be sent to

Nova Southeastern University
Enrollment Processing Services
College of Dental Medicine, Office of Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905
Tuition and Fees

• Tuition for 2020–2021, 39-month, IDG program (subject to change by the board of trustees without notice) will be posted on our website (dental.nova.edu).

• A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.

• Acceptance/Preregistration fee is $2,000. This fee is required to reserve the accepted applicant’s place in the entering, first-year, international, dental graduate class. This advance payment will be deducted from the tuition payment due upon registration, but it is not refundable in the event of withdrawal.

The first semester’s tuition and fees, less the $2,000 previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.

Expenses and Financial Aid for Three-Year Predoctoral Programs

Students should anticipate the following approximate expenses for books and learning materials:

• first year—$1,800
• second year—$1,700
• third year—$1,600

Students should anticipate the following approximate expenses for instruments and equipment and supplies:

• first year—$11,500
• second year—$3,000
• third year—$3,000

Students will need to access an electronic device to meet program requirements. The university has computer labs; however, it is recommended that students have an electronic device of their choice.

It is extremely important that applicants be committed to meeting their financial responsibilities during their three years of training. This should include tuition, living expenses, books, equipment, and miscellaneous expenses.

It is mandated that each student carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

For all predoctoral students, the purpose of the Student Financial Assistance Program at Nova Southeastern University is to help as many qualified students as possible to complete their health professions education. Various loans, scholarships, and grants are available to qualified students to help ease the high cost of a health professions education. These financial assistance programs are described in a variety of separate university publications.

Opportunities for a limited number of part-time work assignments may be available. However, the demands of a program of professional study limit the number of hours a student can work.

Policies Related to Academic and Student Affairs

The policies regarding suspension, dismissal, readmission and other academic and student policy issues are described in the College of Dental Medicine Predoctoral Student Handbook, which is revised, updated, and distributed annually to all predoctoral dental medicine students.

Graduation Requirements

To receive a D.M.D. degree from the College of Dental Medicine, every student must fulfill the following requirements:

• be of good moral character
• have demonstrated the ethical, personal, behavioral, and professional attributes deemed necessary for the successful and continued study and practice of dental medicine including sound judgment and decision making
• have satisfactorily passed all required didactic and clinical courses and clinical rotations in the CDM curriculum
• have demonstrated ongoing and full-time learning of continued and comprehensive patient care, and attended all classes through the last day of his or her predoctoral program
• have satisfactorily completed all clinical requirements, experiences, and competency examinations
• have completed all coursework in the College of Dental Medicine within four years from the date of matriculation (exclusive of any approved leave of absence in good standing)
• have successfully completed all assigned curriculum requirements for the D.M.D. degree with a numerical average of 70 percent or higher for students graded on a numerical grade system, and a GPA of C (2.0) or higher for students graded on the alpha letter system
• have passed the National Board Dental Examination (NBDE) Part I or CDM-designated comprehensive exam
• have satisfactorily met all financial and library obligations
• have attended, in person, the commencement program at which the D.M.D. degree is awarded
• have complied with any other university or Health Professions Division graduation requirements

Degrees are not awarded solely upon the completion of any prescribed number of courses or upon passing a prescribed number of examinations but, in addition, when the faculty believes that the student has attained sufficient maturity of thought and proficiency. Matriculation and enrollment do not guarantee the issuance of a degree without satisfactorily meeting the aforementioned curriculum and degree requirements.

2020–2021 Curriculum Outline
Calculations based on an 18-week semester (subject to change)

<table>
<thead>
<tr>
<th>Fall 2020—D1, Class of 2024</th>
<th>Contact</th>
<th>Laboratory</th>
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Course of Study
The College of Dental Medicine embodies a comprehensive didactic and group practice clinic model curriculum designed to graduate competent and compassionate clinicians devoted to comprehensive primary care of each patient.

The college is closely allied with Nova Southeastern University’s College of Osteopathic Medicine and the other health professions colleges of the NSU Health Professions Division, in proximity as well as in academic collaboration.

Early introduction into clinical settings under the preceptorship of faculty members will enable the student to achieve a better understanding of the dynamics of the patient/dentist relationship. It also will reinforce classroom instruction in basic and behavioral sciences to allow for management and delivery of quality dental health care as a component of total body health.

Students will be taught the importance of teamwork in an efficient, modern health care delivery system.
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470 College of Dental Medicine
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College of Dental Medicine Course Descriptions

Interdisciplinary Biomedical Sciences


**CDM 1000—Anatomy Lecture/Laboratory**
This course includes a general study of anatomical and functional features of the major systems of the human body with a more detailed study of the anatomy and function of the head and neck regions. Radiographic anatomy is presented in detail throughout the entire course. Laboratory sessions include the study of prosected human cadavers.

**CDM 1030—Histology and Embryology Lecture/Laboratory**
In this course, the microscopic anatomy of cells, tissues, and organs of the body is presented and correlated with their functions. Basic physiological concepts and relevant areas in pathology are presented. This course includes an introduction to human embryology, with an emphasis on weeks one through eight.

**CDM 1130—Neuroanatomy Lecture/Laboratory**
This course will introduce students to structural, functional, and developmental features of the human nervous system with an emphasis on clinical concepts. It serves as an introduction to neurology. Laboratory sessions include the study of human brain and spinal cord specimens and brain scans.

**Biochemistry**—Chair and Professor: R. E. Block | Professors: E. E. Groseclose, K. V. Venkatachalam | Assistant Professor: K. Carnevale

**CDM 1025—Dental Biochemistry and Nutrition**
This course includes concepts and principles of biochemistry of normal and pathologic human life processes. In addition, the principles of nutrition, biochemical roles of dietary constituents, digestion, and absorption are discussed.

**Microbiology**—Chair and Professor: K. Davis | Assistant Professors: J. Costin, M. Demory Beckler, S. Prasad, A. Wrench

**CDM 1110—Microbiology**
This course presents basic medical aspects of bacteriology, virology, and mycology, and includes taxonomy, morphology, epidemiology, growth cycles, pathogenesis, and treatment. Emphasizes oral microbial ecosystems and biofilms.

**CDM 1111—Immunology**
This course presents basic knowledge of the cellular, molecular, and biochemical aspects of the immune system and immune responses, including how the various components integrate and work together to control infectious organisms. It includes how disturbances in the immune system can lead to disease, and how the system can be controlled therapeutically.

**Pathology**—Chair and Assistant Professor: D. Bonfil | Professors: B. Jones, A. B. Trif | Associate Professor: A. Vila

**CDM 1125 and 2125—Pathology I and II**
Covers the basic pathologic processes of human disease, with a scientific foundation in etiology, pathogenesis, morphologic alterations, and effects of diseases of the organ systems. Emphasizes bone pathology and relevant disease states that affect the orofacial region.

**Pharmacology**—Chair and Professor: M. Parker | Professors: T. Panaveli, C. Powell | Associate Professors: A. Levy, P. Rose, M. Zhao

**CDM 2010—Pharmacology I**
This course will first introduce the student to basic concepts in pharmacology, such as pharmacokinetics, pharmacodynamics, distribution, and elimination. Then it will provide the student with a thorough understanding of the classes of drugs commonly used in clinical practice. Emphasis will be on the mechanism of action, clinical indications, side effects, important drug interactions, and the basic pharmacokinetics of each drug class.

**CDM 2130—Pharmacology II**
This course will provide an understanding of the classes of drugs commonly used in clinical practice that were not covered in the first semester. Emphasis will be on the mechanism of action, clinical indications, side effects, important drug interactions, and the basic pharmacokinetics of each drug class.

Since much of the pharmacology in these two courses deals with the basic pharmacology of the major drug classes, Pharmacology II seeks to integrate dental therapeutics with this basic pharmacology. Team-taught lectures provide this integration. Clinical faculty members from the colleges of Dental Medicine and Pharmacy teach concepts relevant to the dental practitioner in a case-based approach. By integrating the clinical therapeutics and the basic pharmacology, the students learn to apply the pharmacology knowledge they have acquired to clinical practice.
Physiology—Chair and Professor: W. Schreier | Professors: H. Mayrovitz, Y. Zagvazdin | Associate Professor: L. Lyons, A. Mashukova | Assistant Professor: C. O’Malley

CDM 1120—Physiology
This course reviews the physiological functions and regulation of the major human organ systems. Topics covered include basic cellular physiology, skeletal muscle, the cardiovascular system, the nervous system, the renal system, the respiratory system, the gastrointestinal system, and the endocrine system. Topics with direct relevance to dentistry, oral health, and disease are integrated into the content of the course. Specific examples include structural changes of the cell membranes in pemphigus vulgaris, the effect of local anesthetics on ionic currents, and the effects of metabolic imbalances on oral health. The mechanisms of relevant physiological and pathological processes in a variety of clinical conditions are discussed.

Behavioral Science—College of Psychology faculty member: K. Lit

CDM 3080—Behavioral Science
This course provides dental students with interviewing strategies, communication skills, and an introduction to the theories and research pertaining to anxiety with specific interventions geared to reduce tension and fear. Students will be exposed to various interviewing and communication techniques as well as theories regarding the etiology of anxiety. Students will gain familiarity with psychological and physiological indices of arousal. It is the goal of this course to acquaint dental students with well established interventions including progressive muscle relaxation, systematic desensitization, biofeedback, hypnosis, and the relationship of anxiety/stress to pain syndromes.

Department of Cariology and Restorative Dentistry—

CDM 1015—Clinical Experience Rotation I
This clinical rotation in the D1 fall semester provides the student with early exposure and experience in the professional clinical dental environment, including observation of diagnostic methods, dental procedures, and patient-student-faculty interaction. D1 students are instructed in basic dental assisting skills and infection control principles, and may have the opportunity to implement these skills while assisting D3 and D4 students in the CDM predoctoral clinics. The content and experience in this course will be integrated with the content in the following courses: Ethics and Professionalism and Multidisciplinary Introduction to Record Keeping.

CDM 1016—Clinical Experience Rotation II
This clinical rotation in the D1 winter and D2 summer semesters gives the student continued and expanded exposure to the clinical dental environment in the CDM clinics. During this rotation, the D1 student’s knowledge of biomedical science, dental procedures, instrumentation, and record keeping is further integrated with the clinical setting. The content and experience in this course will be integrated with the content in the following courses: Ethics and Professionalism and Multidisciplinary Introduction to Record Keeping.

CDM 1135—Introduction to Dental Record Keeping (EHR I)
This course gives first-year dental students hands-on experience in completing electronic dental treatment records. Students receive one lecture presentation on the importance and techniques of proper record keeping and one lecture on normal anatomic oral structures. One computer lab session is provided where students will learn components of the axilum electronic health record, including recording of odontologic findings, clinical findings, codes, notes, and use of the personal planner. In the clinical setting, students create and complete a treatment record, including medical history, hard and soft tissue examination, and a treatment note, while working in pairs with classmates. The class is divided into three groups for ease of management in the clinic. Group assignments will be posted on Canvas. Students will be assigned to Group A, B, or C. They will attend the rotations as indicated in the course schedule.

CDM 1203—Evidence-Based Dentistry I
Students will be introduced to the fundamentals of evidence-based dentistry (EBD) and study design. This will include introductory information on EBD and online computer searches for scientific information. Students will learn how to use the main EBD websites and critical search strategies on PubMed. Online databases and search strategies will be presented. Clinical research designs such as case-control, case series, case report, cohort studies, and randomized controlled trial will be introduced. Concepts of study design, research methods, and literature review will be emphasized and critically compared.

CDM 1155—Integrated Restorative Dental Sciences I Lecture
The IRDS I lecture course is an integrated program that includes objectives from the following disciplines: dental anatomy, fundamentals of occlusion, biomaterials, cariology, and
operative dentistry. This course presents the anatomical and functional differences of teeth, how they relate to each other, and the application of this knowledge to various phases of dentistry. It presents the characteristics differentiating each tooth and the variations that can occur from one patient to the next. The course will introduce concepts of anatomy and normal function of the stomatognathic system. While learning about the medical model of caries management, students will be introduced to dental caries: disease, diagnosis, preventive and remineralization treatments, prognosis, and outcomes. Understanding the role of caries risk assessment in restorative decisions, students will apply principles of minimally invasive dentistry. Students will learn about dental biomaterials, material selection, preparation design, and restoration. The IRDS course integrates the principles from these disciplines in order to prepare students for a comprehensive-care, competency-based, clinical curriculum.

CDM 1156—Integrated Restorative Dental Sciences I Laboratory
The IRDS I laboratory course is an integrated, hands-on program that runs concurrently with the lecture component and includes objectives from the following disciplines: dental anatomy, fundamentals of occlusion, dental biomaterials, cariology, and operative dentistry. This course presents the anatomical and functional differences of teeth, how they relate to each other, and the application of this knowledge to various phases of dentistry. It presents the characteristics differentiating each tooth and the variations that can occur from one patient to the next. The course will introduce concepts of anatomy and normal function of the stomatognathic system. Utilization of wax carving and add-on techniques are introduced. With an understanding of the role of caries risk assessment in restorative decisions and knowledge of the mechanical and physical properties of the dental materials, students will learn principles of cavity preparation; material selection; and proper use of amalgam, alginate, and gypsum. The IRDS I laboratory course integrates the principles from these disciplines in order to prepare students for a comprehensive-care, competency-based, clinical curriculum. Emphasis will be placed on teaching students how to develop the fine psychomotor skills that are necessary to practice dentistry.

CDM 1255—Integrated Restorative Dental Sciences II Lecture
The IRDS II course is an integrated program that includes objectives from the following disciplines: dental anatomy, fundamentals of occlusion, operative dentistry, dental biomaterials, cariology, and fixed prosthodontics. The course will continue building on concepts of anatomy and normal function of the stomatognathic system. While applying cariology principles, students learn about dental biomaterials; material selection; preparation; design; and proper use of amalgam, composite resin, glass ionomers, and casting metals (gold, etc.). This course will introduce the theory and principles of fixed prosthodontics, and its role in the overall treatment of the patient. The IRDS course integrates the principles from these disciplines in order to prepare students for a comprehensive-care, competency-based, clinical curriculum.

CDM 1266—Integrated Restorative Dental Sciences II Laboratory
The IRDS II laboratory course is an integrated, hands-on, simulation program and a continuation of the IRDS I laboratory course. It runs concurrently with the lecture component and includes objectives from the following disciplines: dental anatomy, fundamentals of occlusion, operative dentistry, dental biomaterials, cariology, and fixed prosthodontics. The IRDS course integrates the principles from these disciplines in order to prepare students for a comprehensive-care, competency-based, clinical curriculum.

CDM 1357—Case-Based Integrated Restorative Sciences III Lecture and Laboratory
The IRDS III course is a continuation of the fall and winter IRDS courses. Course content from dental anatomy, fundamentals of occlusion, operative dentistry, dental biomaterials, cariology, prosthodontics, and record keeping are integrated into a case-based format utilizing knowledge and critical thinking skills obtained in the fall and winter semesters.

CDM 2025—IDG Integrated Restorative Dentistry Lecture and Laboratory
The lecture course presents the topic of diagnosis and treatment of carious lesions and other hard-tissue defects, principles of direct restorative dentistry, and fundamental concepts in the practice of restorative dentistry. The lecture component, in conjunction with the laboratory component, provides the foundation for the student to utilize the same knowledge and techniques that will be used in clinical application.

CDM 2135—Essentials of the EHR (EHR II)
The second first-year course is designed to build on Introduction to Dental Record Keeping (CDM1135) by providing four hands-on computer lab sessions with a final examination. The student will practice using components of the electronic health record comprising recording of odontologic and clinical findings, entering procedure codes, completing patient record forms, writing chart notes, and using the personal planner.

CDM 2175—QA/Recare Clinical Rotation I
The D2 student will work together with the Quality Assurance Dental Faculty to perform the treatment completion exams and the annual examination and assessment of recare patients in the Davie Predoctoral Clinic. The student will be required to review the patient chart prior to the appointment and perform a systematic chart review. The student will have the opportunity to observe, record, and evaluate restorations and pathology
with faculty member assistance. This clinical experience will allow the student to practice the skills that he or she has learned in the DI Multidisciplinary Record Keeping course and to continue to observe dentist-patient communication and time management prior to participating in comprehensive patient care clinic.

CDM 2241—Introduction to Comprehensive Treatment Planning
This course is designed to introduce sophomore students to the didactic basis of dental treatment planning while combining and integrating the course didactics with computer training using the electronic health record software system. The course will begin with the patient’s screening admission process and will continue with the patient’s data collection, including medical and dental histories, the extraoral and intraoral physical examination, and the evaluation of dental radiographs. Ultimately, students will gain a framework of reference from which to build a structured and systematic patient dental treatment plan that will ensure optimal patient care.

CDM 2242—Axium EHR Treatment Planning Module
This sophomore-year course is designed to instruct students in using the knowledge from various dental disciplines to develop treatment plans for patient presentation using the electronic record software system that is currently used at NSU CDM. The hands-on, five-session, computer-based course guides the student to develop optimal, alternative, revised, and limited-care treatment plans based on information gathered from clinical findings. The plans are phased and sequenced according to patient needs with appropriate risks and benefits. A final examination using the electronic record software is used to assess student knowledge of developing optimal and alternative treatment plans.

CDM 2999—Clinic Prerequisite Orientation
This course will provide the student with clinic operations information, policies, protocols applicable to comprehensive-care clinics, and clinic rotations. Students will be oriented to the expectations of all clinical disciplines as they apply to comprehensive patient care and competency assessment and experiences. Students will also be oriented to the expectations of the Applied Patient Care Foundations courses and will be introduced to practice team leaders and patient care coordinators. Additionally, they will be required to complete recertification of BLS, Infection Control/Exposure Protocol, and technology updates; have passed NBDE Part I; and be responsible for any other clinic-related information, as needed.

CDM 3090—Introduction to the Dental Profession
Practice management and organizational theory, economic theory, and practical aspects of managing a dental practice.

CDM 3175 and CDM 4175—QA/Recare Clinical Rotation II and III
D3 and D4 students will perform periodic patient exams, including annual periodontal charting, medical/dental history review and update, caries risk assessment, and necessary radiographs for dental hygiene recare patients at the Davie clinic, and at off-site Comprehensive Care clinics. Students will review charts prior to clinic sessions in order to familiarize themselves with patients’ previous care. Preventive treatment protocols will be reviewed and assessed for patient compliance, and restorative treatment outcomes will be observed and reviewed with faculty members. This will provide students with opportunities to duplicate the periodic dental hygiene treatment/dental exam experience of that in private practice.

CDM 3241—Comprehensive Treatment Planning
This course is designed to continue with the didactics of comprehensive dental treatment planning while integrating computer training using the electronic health record software system. The course will begin reviewing the patient’s screening admission and data collection process and will continue with all the phases and sequencing of dental treatment planning. Practice management and ethical issues in treatment planning will also be discussed during the course. Students will have the opportunity to interact with faculty members and other classmates during patient case-based group discussions and seminars.

CDM 3500—Clinical Restorative Dentistry I
Under direct supervision of faculty members, the student will incorporate the knowledge gained from didactic courses to provide comprehensive patient care. Following the medical model of caries management and principles of minimally invasive dentistry, the student will provide clinical services and dental restorations for patients using caries risk assessment, diagnosis, prevention, oral hygiene instruction, fluoride, sealants, laser diagnosis, remineralization techniques, tooth whitening procedures amalgam, resin composites, and glass ionomers. In addition to developing the student’s skills in performing evidence-based restorative procedures, the overlying objectives of this course are restoration to health of the dental patient and the prevention of future dental caries for the patient.

CDM 3000—Applied Patient Care Foundations I
This course is designed to evaluate and assess the student’s ability to provide comprehensive patient care in a professional and ethical manner utilizing sound clinical judgment. Proper patient management skills, including organization, preparedness, and the ability to work independently, will also be assessed. Record keeping and the ability to follow instructions are integral skills evaluated in this course as well.
CDM 4002—Applied Patient Care Foundations II
This course is designed to evaluate and assess the student’s ability to provide comprehensive patient care in a professional and ethical manner utilizing sound clinical judgment. Proper patient management skills, including organization, preparedness, and the ability to work independently, will also be assessed. Record keeping and the ability to follow instructions are integral skills evaluated in this course as well.

CDM 4060—Practice Management
This course is a continuum of information supporting the understanding of the dental profession, with an emphasis on the business of dentistry, practice management, and medical/legal issues. Discussions about various practice models, business entities, taxation, accounting, and insurance options will be presented.

CDM 4120—Regional Board Preparation Course
This course consists of a lecture and laboratory series that presents an overview of useful clinical techniques for students who will be taking various regional board dental examinations. The course presents didactic material as well as hands-on clinical simulation of examination parameters for procedures included in various regional board exams. Successful completion of this course should assist students taking regional board exams, but does not guarantee a passing grade on any regional board examination taken by a student.

CDM 4240—Advanced Comprehensive Treatment Planning
This course applies the principles and guidelines for comprehensive dental treatment planning for multidisciplinary complex cases. Senior students are expected to recognize these advanced cases and understand treatment planning sequences utilizing skills and methodology previously developed in the D2 and D3 treatment planning courses. The course will be composed of interactive lectures and small-group discussions.

CDM 4500—Clinical Restorative Dentistry II
Under direct supervision of faculty members, in a team leader model, the student will gain more experience in providing comprehensive patient care. Following the medical model of caries management and principles of minimally invasive dentistry, the student will provide clinical services and dental restorations for patients using caries risk assessment, diagnosis, prevention, oral hygiene instruction, fluoride, sealants, laser diagnosis, remineralization techniques, tooth whitening procedures amalgam, resin composites, and glass ionomers. In addition to developing the student’s skills in performing evidence-based restorative procedures, the underlying objectives of this course are restoration to health of the dental patient and the prevention of future dental caries for the patient.

CDM 4555—Dental Auxiliary Utilization
The Dental Auxiliary Utilization (DAU) rotation course is designed to train dental students in the application of the concepts of four-handed dentistry, dental team, and ergonomics learned starting from the D1 year in the effective delivery of dental services in a comfortable and minimum-stress environment. Application of these concepts can later be applied to private practice. The student should become familiar with what is expected and required of the assistant, as well as the requirements for the operator and the assistant to work efficiently and effectively in completing all procedures.

Department of Community and Public Health Sciences—Chair and Professor: D. Ede-Nichols | Postgraduate Program Director and Assistant Professor: C. Robinson | Professor: A. Mascarenhas | Assistant Professors: A. Bezerra, R. Block | Adjunct Faculty Members: M. Ben Shalom, D. Bronstein, N. Browner, A. Burch, R. Jabbarry, E. Klein, H. Panahi, E. Suzuki

The community dentistry curriculum serves to introduce the pre- and postdoctoral student to the underserved population within our community—including patients with developmental, acquired, medical, and mental disabilities and the frail elderly. It also includes ethics, behavioral science, issues related to the dental profession, and practice management. The curriculum integrates the didactic and clinical education by incorporating extramural rotations, externships, community health fairs, and residency programs. In addition, NSU-CDM has created the Henry Schein Special Needs Clinical Suite, whose state-of-the-art clinic is located on NSU’s North Miami Beach Campus. This clinic allows for the enhancement of clinical training of students while providing much-needed dental care to these underserved populations.

CDM 1050 and CDM 1051—Ethics and Professionalism I and II
These courses will provide the student with an awareness of the ethical issues in the dental profession and expected behavior at the College of Dental Medicine. In addition, students will develop an understanding of the impact of various ethical issues and communication skills in dental education and clinical practice. The content in these courses will be integrated with the content in the following courses: Clinic Experience I and II and Multidisciplinary Introduction to Record Keeping.

CDM 1205—Primary Care and Public Health I
This course will introduce students to fundamentals of public health and its relevance in dentistry. Health care delivery systems, as well as oral health status and disparities across the population, will be discussed. Students will be instructed on legal and ethical principles applied to public health. In addition, students will be given the opportunity to develop their own strategic plan involving a dental health initiative.
CDM 2085—Introduction to Special Needs Dentistry
Introduction to Special Needs Dentistry is a didactic course that will define special needs patients, focus on their oral health needs, and present methodology for overcoming the lack of care in this patient population.

CDM 3140—Special Needs Dentistry
CDM 3140 is a semester-long didactic course that presents a curriculum that introduces the predoctoral student to the pathophysiology of disabilities. The course will also demonstrate the management tools and techniques necessary for the provision of dental care to this underserved population in both the academic arena and the private practice setting.

CDM 4611—Community Dentistry Rotation
The community dentistry rotation is designed to complement the didactic course CDM 3140, presented in the winter semester of the D3 year. D4 students will use the didactic information to evaluate, assess, and provide treatment for individuals with developmental and acquired disabilities, medically and psychologically compromised patients, and the frail elderly. The D4 students will become familiar with the medical chart, responding to requests for dental consult, and the behavioral management issues of treating those with special needs.

CDM 4700—Extramural Primary Care Rotation
This course is intended to provide D-4-year students the opportunity to receive instruction in providing patient-centered primary oral health care for underserved populations, including medically compromised patients and those with limited access to oral health services. This presents an opportunity for the students at NSU-CDM to broaden their exposure to providing culturally competent oral health care in an extramural clinic environment. Students will also better understand the public health context in an interprofessional environment for the care they will be providing. Students will complete a reflective observation activity at the end of their rotation, which may consist of reflective journaling, focus groups (face to face or electronic), a presentation, or case writing. This activity is intended to serve as a bridge between experiential and didactic learning and to demonstrate critical thinking skills, allowing students to prepare for and learn from service experiences. In addition, students will participate in lunch time interprofessional educational conferences. Select Cypress Creek students may have the opportunity to participate in an interprofessional dental/pharmacy practice experience.

CDM 416H—Honors in Special Needs Dentistry
Working alongside postgraduate residents, this elective honors program serves to train interested students in the provision of quality dental care for people with medical, psychological, and physical disabilities utilizing current accepted modalities such as behavior management, conscious sedation procedures and protocols, and operating room exposure.

Department of Diagnostic Sciences—Chair and Professor: M. A. Siegel | Vice Chair and Professor: P. Bradley | Director and Associate Professor: M. Hogge | Professor: L. Solomon | Associate Professor: L. Mejia | Assistant Professors: E. Choi, J. Ison, S. Kuriakose | Adjunct Faculty Members: J. Arenas, V. De Weijer, L. Haller, S. Mescher, A. Orozco, P. Paez, D. Stern

CDM 1160—Oral Histology
This course is designed to provide broad exposure to the basic embryologic development and histology of anatomic structures that form the maxillofacial complex. Lecture and electronic images of the soft and calcified tissues that comprise the oral cavity will be used to illustrate these principles. Clinical procedures that depend on the understanding of these structures will be introduced.

CDM 2110—Radiology I
Lecture course with a preclinical laboratory exercise, in order to prepare the student for the performance of clinical oral and maxillofacial radiology technique. Infection control and safety for operator and patient is stressed.

CDM 2120—Oral and Maxillofacial Diagnosis I
Lecture and demonstration course covers extraoral techniques with special emphasis on digital imaging. Lectures cover radiographic interpretation of developmental anomalies, caries, periodontal disease, periapical disturbances, and other anomalies.

CDM 2140—Introduction to Oral Medicine
This course is the start of the didactic series of courses dealing with the topic of oral medicine. It presents lectures to develop the skills of interpreting a medical history, assessing risk in the dental management of the medically complex patient, conducting a thorough head and neck exam, performing a head and neck cancer-screening exam, and risk assessment. The course will discuss the relevant basic medical sciences (Anatomy, Physiology, and Pharmacology), apply them to clinically relevant medical and dental conditions, and demonstrate how to provide safe and effective oral health care for patients with severe and life-threatening medical disorders.

CDM 2280—Internal Medicine for Dentists
This lecture course will expose D2 students to the applied principles of diagnosis of the medically complex patient and the translation of these principles into clinical practice. Students will be exposed to lectures given in a review of systems format. All lectures will present a specific system/disease with emphasis on definition, epidemiology, pathophysiology and complications, clinical presentation, medical management, and dental management. Concepts of antibiotic premedication and medical consultation will be introduced. Each lecture will reinforce previously encountered concepts of pathology and physiology, translate these concepts into a clinical venue, and
then apply dental management techniques that are necessary to safely manage patients in a clinical practice.

CDM 3010—Oral and Maxillofacial Diagnosis II
Didactic course focuses on the etiology, clinical, histologic, and radiographic appearance and treatment of specific disease entities involving the head and neck. Differential diagnosis is emphasized, giving clinical relevance to the discipline.

CDM 3011—Oral and Maxillofacial Diagnosis III
Continuance of CDM 3010, Oral Pathology I, didactic course focuses on the etiology, clinical, and histologic appearance and treatment of specific disease entities involving the head and neck. Differential diagnosis is emphasized, giving clinical relevance to the discipline.

CDM 3020—Oral Medicine
Didactic course continues and builds on the knowledge base gained in the basic medical sciences and Introduction to Oral Medicine. A comprehensive study of both hard and soft tissue lesions manifesting in the oral cavity and related head and neck structures is presented.

CDM 3021—Common Oral Conditions
A continuation of Introduction to Oral Medicine and Oral Medicine. The lectures are presented to develop the skills of interpreting a medical history through head and neck examinations and the dental management of the medically complex patient. The course will discuss the diagnosis and management of common oral and orofacial conditions as well as how to provide safe and effective oral health care for patients with life threatening medical disorders.

CDM 3650 and CDM 4650—Clinical Radiology I and II
Students perform radiographic techniques and interpretations in a clinical setting.

CDM 4020—Clinical Oral Medicine Case Presentations
Clinical manifestations of common systemic disorders are discussed to help students in making a tentative presumption diagnosis and developing a differential diagnosis. Each student will prepare a PowerPoint presentation on a patient with an oral soft tissue lesion for presentation to his or her class. Self assessment will be done at that time.

CDM 4170—Oral Manifestations of Disease
A case-based presentation of common conditions and diseases that patients will bring to the general practitioner. The goal is to review the physiology, clinical signs and symptoms, and the modifications to dental treatment that may be necessary. Also to be included are pharmacotherapeutics of common oral conditions, tobacco cessation, and recommendation for referrals to dental specialists.

CDM 404H—Oral Medicine Honors
This honors course will allow students with a special interest in the discipline of oral medicine to increase their exposure to patient cases involving advanced decision-making and clinical management skills beyond the scope of the predoctoral curriculum.

CDM 425E—Forensic Odontology Elective
Forensic Odontology is an elective course offered to a limited number of D4 students. The course format is didactic and includes a lab component at the Medical Examiner's Office. Topics covered may include human identification, bite marks, mass disasters, and professional training, as well as other subjects.

CDM 426E—Cone Beam CT Elective
The basic concepts of cone beam CT (CBCT) are presented, including navigation through iCATVision software and clinical applications. Diagnosis of radiological findings is reviewed.

CDM 4222—Laser Dentistry (Elective)
The curriculum for this basic-level course includes education in the fundamental principles of laser use in dentistry, the use of lasers in multiple dental disciplines, and safety aspects of laser use.
CDM 3621—Clinical Endodontics I
Junior dental students are taught clinical endodontic treatment of single-rooted and multirooted teeth (premolars and molars). This includes diagnosing a tooth with pulpal problems as well as sequencing of endodontic treatment in the treatment plan. Proper documentation in the treatment record, anesthesia techniques, patient management, and root canal therapy are also discussed.

CDM 4621—Clinical Endodontics II
Senior dental students display proficiency and knowledge of anesthetic techniques, patient management, and endodontic treatment of single-rooted and multirooted teeth (premolars and molars). They also manage endodontic emergencies. The completion of competency requirements demonstrates that students have reached the level of “safe starter” to treat basic endodontic cases in the practice of general dentistry.

CDM 400H—Honors Endodontics
The honors program offers students who are beginning their fourth year of dental school the opportunity to apply for honors courses in one of eight different specialties. Candidate selection will be based on the approval of the associate dean of academic affairs and the director of clinics, as well as criteria established by each participating department chair. Students who are selected will take part in postdoctoral-level seminars, case presentations, and research. Additionally, honors students will assist in the diagnosis, treatment planning, and care of complex patients. The specific format of each honors program course will be provided to students at the time their applications are submitted.

CDM 403E—Endodontics Elective
This course provides an opportunity for fourth-year students to continue their endodontic experience at a more advanced level. Students will participate in seminars that stress clinical situations and may also attend graduate seminars. Advanced elective students are encouraged to prepare and present a PowerPoint presentation as well. Students who have demonstrated superior clinical skills may be eligible to treat more challenging clinical cases.

Department of Oral and Maxillofacial Surgery—Chair, Postgraduate Program Director, and Associate Professor: S. McClure | Predoctoral Director and Associate Professor: A. Osina | Assistant Professor: A. Quimby | Associate Professor: H. Lehrer | Adjunct Faculty Members: O. Borges, M. Harris, J. Kaltman, K. Kaner, R. Katz, A. Kleiman, T. Koyama, M. Krohn, E. Lopez, M. Pikos, M. Ragan, P. Richman, C. Schalit, A. Sclar, T. Splaver, T. Tejera

CDM 2040—Pharmacology, Analgesia, and Local Anesthesia I
In this didactic, lecture-oriented course, students will be presented with information concerning the delivery of local anesthesia, including the application of pertinent anatomy, physiology, and pharmacology. The content in this preclinic/didactic course is applicable to direct patient care for local anesthesia, patient evaluation, and surgical procedures.

CDM 2150—Oral and Maxillofacial Surgery I
This didactic, lecture-oriented course with formal presentations will be integrated logically in sequence, incorporating a pertinent review of medical emergencies and concepts of internal medicine as relates to the medical history of the patient. Students will be provided with information about oral surgery procedures—including surgical extractions, pre-prosthetic surgery, complications, and biopsy—concerning the management of the oral and maxillofacial surgical patient.

CDM 2170—Pharmacology, Analgesia, and Local Anesthesia II
This didactic, lecture-oriented course reinforces information presented concerning the delivery of local anesthesia—including the application of pertinent anatomy, physiology, and pharmacology—presented in CDM 2040. Students also will receive basic information about alternative techniques of pain and anxiety control, such as oral sedation, nitrous oxide, IV sedation, general anesthesia, and acupuncture, as well as prescription writing, including consideration of the impact of prescribing practices and substance use disorders. Additionally, students will participate in a local anesthesia techniques lab seminar that will prepare them to successfully administer local anesthetics in a live-patient format. In a small group design, students will alternate being the operator, the patient, and the observer assistant. Each student will demonstrate competency in technical aspects of local anesthetic administration and in applying pharmacological principles to the selection of local anesthetics and pain management.

CDM 3040—Oral and Maxillofacial Surgery II
This didactic, lecture-oriented course expands upon the background begun in the second semester of the second year. Formal presentations to review major trauma, craniofacial conditions, TMJ disorders, head and neck pathology such as oral cancer treatment and reconstruction, systemic conditions that affect head and neck, and complications will be incorporated logically. Students will be provided with information concerning the management of the oral and maxillofacial surgical patient. The content in this preclinic/didactic course is applicable to direct patient care and patient evaluation and appropriate referrals.
CDM 3507—Clinical OMFS Rotation I
This course introduces the student to clinical oral and maxillofacial surgery, which includes patient evaluation, diagnosis, treatment planning, and routine oral surgery procedures commonly employed in general dental practice. Didactic content learned in CDM 2040, 2150, 2170, and 3040 related to patient assessment, need for anesthesia, pain control, minor oral surgery, and other topics are applied in the provision of direct patient care. Students are assigned to clinical rotation to assist residents and classmates, to observe, and to provide surgical treatment for patients requiring dentoalveolar surgery and management of odontogenic infections. Proficiency in patient evaluation and surgical techniques is stressed.

CDM 4505—Clinical Dental Urgent Care Rotation
The third- and fourth-year student will develop a systematic approach for evaluating a patient who presents with urgent dental or oral health concerns, acute pain, trauma, bleeding, infection, or swelling of the orofacial region. The student will complete a work-up of the patient’s chief complaint; establish a diagnosis; present an emergency treatment plan and options; and, with patient-informed-consent, provide the treatment or an appropriate referral. Students on rotation will participate in a grand-rounds summary at the close of each session to review specific patients and techniques.

CDM 4507—Clinical OMFS Rotation II
Fourth-year students are assigned to clinical rotations to observe and to provide surgical treatment for patients requiring dentoalveolar surgery and the management of odontogenic infections. Proficiency in patient evaluation and surgical techniques is stressed. The student will be required to demonstrate competency in routine tooth extraction, flap elevation for more difficult extractions, and other minor oral surgical procedures.

CDM 4999—Advanced Techniques in Pain and Anxiety Control
This didactic, lecture-oriented course, introduces and familiarizes students with alternative methods of pain and anxiety control, particularly as they relate to clinical dentistry. The objective is to discuss the different concepts of anxiolysis and analgesia. The goals of this course are to provide current pharmacologic management in anxiety and pain control for dentistry. The focus of material is directed to what the general practice dentist should provide in the office setting. The methods of anxiety reduction and sedation that are selected are done so on the basis of efficacy and safety. Orally administered agents (benzodiazepines) and inhalation sedation (nitrous oxide) techniques are covered in depth. Other advanced techniques, such as intravenous conscious sedation and general anesthesia, are introduced and demonstrated to acquaint students with and stimulate interest in these techniques. This course will provide students with the requisite didactic and clinical hours (hands-on) and experience to qualify for a nitrous oxide permit in their respective states of practice upon graduation. It will include a required clinical seminar affording students the opportunity to administer nitrous oxide to fellow students and demonstrate clinical competency.

CDM 408H—Honors Program in Oral and Maxillofacial Surgery
This honors course will expand the clinical knowledge and experience of the D4 predoctoral student in oral and maxillofacial surgery, including providing the opportunity to participate in and be exposed to patients that require more difficult surgical extractions or implants and bone-grafting surgery, as well as those with impacted teeth, odontogenic infections, or oral pathologic lesions. Students will also learn how to manage medically compromised patients. The student will be able to participate in didactic conferences and rounds at the hospital and observation and assisting in the operating room. He or she will also be involved in emergency department patient management.

Department of Orthodontics and Dentofacial Orthopedics—Chair and Associate Professor: R. Singer | Postgraduate Program Director and Associate Professor: T. Premaraj | Director of Predoctoral Orthodontics and Dentofacial Orthopedics and Assistant Professor: C. Lin | Associate Professor: S. Khatami | Assistant Professor: G. Contasti | Adjunct Faculty Members: J. Coro, J. Ginzler, A. Kapit, M. Meister, P. Palacios, D. Shapiro

CDM 2005—Craniofacial Growth and Development
This course is intended to be an introductory course in craniofacial growth and development. Introductory and general concepts of somatic and craniofacial growth will be presented. Theories of craniofacial growth and development, the method of directional descent of the maxillary and mandibular complex, and correlation with the development of the occlusion will be included.

CDM 2200—Orthodontics Lecture/Laboratory
The orthodontics lecture course is designed to teach students to assess normal and abnormal growth and development, diagnosis and classification of malocclusion, and differentiation between limited and comprehensive orthodontic treatment. The orthodontics laboratory course is designed to teach principles and treatment concepts used in orthodontics and dentofacial orthopedics. Laboratory skills are taught in orthodontic mechatherapy, enabling students to participate in the clinical experience.
CDM 2081—Introduction to Pediatric Dentistry

The pediatric dentistry simulation laboratory sessions provide the student with basic knowledge and understanding of cavity preparation and restoration exercises with a variety of materials in the primary dentition. In addition, space maintenance and space analysis are reviewed during these laboratory sessions.

CDM 2180—Pediatric Dentistry Lecture

This course is a primer on the diagnosis and treatment planning of primary and mixed dentition patients. Emphasis will be placed on dental disease, etiology, and prevention, recognition and management of disorders common in childhood. This course prepares students for the second semester didactic and laboratory experience in pediatric dentistry.

CDM 2190—Pediatric Dentistry Laboratory

The pediatric dentistry simulation laboratory sessions provide the student with basic knowledge and understanding of cavity preparation and restoration exercises with a variety of materials in the primary dentition. In addition, space maintenance and space analysis are reviewed during these laboratory sessions.

CDM 3525—Clinical Pediatric Dentistry Rotation I

This course includes the clinical application of preclinical pediatric dentistry skills in children and adolescents. All patients are treated in a comprehensive care format with emphasis in: 1) behavioral guidance; 2) record keeping, comprehensive diagnosis, and treatment planning; 3) prevention, including caries and risk assessment; and 4) restorative dentistry including composite and amalgam restorations in primary and mixed dentition. All clinical treatment is accomplished under the direct supervision of faculty members from the Department of Pediatric Dentistry.

CDM 3605—Orthodontic Clinical Comanagement Program

The predoctoral student will work with the postgraduate orthodontic student in all phases of orthodontic care including examination, diagnostic record taking, analysis, diagnosis, differential diagnosis, and treatment planning. The predoctoral student will join the postgraduate student in the postgraduate clinic for patients' orthodontic appointments, assisting in all phases of clinical care.

CDM 410H—Honors Program in Pediatric Dentistry

This course has been designed with the purpose of exposing D4 students to activities that will enhance their knowledge and skills in pediatric dentistry, specifically in the areas of didactic and clinical expertise.

CDM 414H—Honors Program in Orthodontics and Dentofacial Orthopedics

This optional Honors course provides the interested student with an opportunity to further his or her knowledge in limited, co-management orthodontic treatment with postgraduate residents and their patients through attendance at postgraduate diagnostic conferences and continued learning of orthodontic diagnosis and treatment planning.

CDM 4525—Clinical Pediatric Dentistry Rotations II

Clinical application of pediatric dentistry preclinical skills and clinical skills acquired during the D3 year are accomplished in a population of indigent children attending extramural dental clinics in South Florida. All patients are treated in a comprehensive care format with emphasis in: 1) behavioral guidance; 2) record keeping, comprehensive diagnosis, and treatment planning; 3) prevention, including caries and risk assessment; 4) restorative dentistry including composite and amalgam restorations in primary and mixed dentition, anterior composites, pulp therapy, and stainless steel crowns; and 5) interceptive orthodontics (space analysis and maintenance). All clinical treatment is accomplished under the direct supervision of faculty members from the Department of Pediatric Dentistry.

CDM 414H—Honors Program in Orthodontics and Dentofacial Orthopedics

This optional Honors course provides the interested student with an opportunity to further his or her knowledge in limited, co-management orthodontic treatment with postgraduate residents and their patients through attendance at postgraduate diagnostic conferences and continued learning of orthodontic diagnosis and treatment planning.

CDM 3525—Clinical Pediatric Dentistry Rotation I

This course includes the clinical application of preclinical pediatric dentistry skills in children and adolescents. All patients are treated in a comprehensive care format with emphasis in: 1) behavioral guidance; 2) record keeping, comprehensive diagnosis, and treatment planning; 3) prevention, including caries and risk assessment; and 4) restorative dentistry including composite and amalgam restorations in primary and mixed dentition. All clinical treatment is accomplished under the direct supervision of faculty members from the Department of Pediatric Dentistry.

CDM 410H—Honors Program in Pediatric Dentistry

This course has been designed with the purpose of exposing D4 students to activities that will enhance their knowledge and skills in pediatric dentistry, specifically in the areas of didactic and clinical expertise.

CDM 1070—Periodontology I
This course provides an overview of periodontology and defines basic terminology. The relationship of anatomical structures relative to the periodontium; recognition and assessment of health and disease of the periodontium; introduction to histology of the gingival crevice in health, disease, and periodontal pathology; and the interrelationship between gingival microbiota, the formation of dental plaque, and gingival disease are discussed. Comprehensive periodontal examination and transcription of clinical and radiographic findings into records are also gone over, as well as an introduction to periodontal diagnoses.

CDM 1185—Introduction to Clinical Periodontology
Gives students the opportunity to apply the knowledge learned in Periodontology I and additional lectures in Periodontology II, which involve understanding and application of clinical data collection, examination of the periodontium, and instrumentation techniques. Students are required to apply their knowledge first on mannequins in simulation lab and then with their classmates.

CDM 2030—Periodontology II

CDM 2160—Periodontology III
This course discusses etiology, histopathology, and treatment of various periodontal lesions; phase I nonsurgical periodontal treatment planning; and options available for the treatment of periodontitis; reevaluation of periodontal treatment; and interdisciplinary considerations following periodontal therapy as part of the periodontal treatment plan. The course introduces the students to treatment to health, initial periodontal therapy for periodontal maintenance, prophylaxis, and scaling and root planning procedures, while emphasizing the need for supportive periodontal therapy and patient compliance. New paradigms of periodontal treatment modalities are introduced.

CDM 2185—IDG Clinical Periodontology Orientation
This course is a review for international dental graduates in periodontal instrumentation, techniques, and management of patient oral hygiene. Additionally, the course includes training in protection of health care records (HIPAA) and training in occupational safety (OSHA).

CDM 2501—Periodontology Clinic
The purpose of this course to introduce the course participant to the concepts of clinical periodontics involving diagnostic procedures and execution of treatment for patients on prophylaxis recalls (Type I cases—gingivitis).

CDM 3030—Periodontology IV
This course discusses etiology, histopathology, and treatment of periodontitis; phase II surgical periodontal treatment planning; and options available for the treatment of periodontitis. Indications and modalities of periodontal surgery including, but not limited to, treatment of furcations, osseous surgery, mucogingival surgery, regenerative techniques, wound healing, use of antibiotics in periodontal therapy, and periodontal medicine are also presented.

CDM 3501—Clinical Periodontology I
The purpose of this course is to provide students with the basic knowledge and clinical experience to recognize and treat periodontal disease and develop a process for formulating a properly sequenced and effective periodontal treatment plan. Students perform periodontal therapies and integrate periodontal therapy within a comprehensive plan of care.

CDM 3503—Clinical Periodontology Rotation
The purpose of this year in periodontology is to provide students with the opportunity to assist in periodontal surgical procedures at the postgraduate periodontics level. Students will be exposed to different modalities of periodontal surgical procedures.

CDM 4501—Clinical Periodontology II
The purpose of this year in periodontology is to provide students with the basic knowledge and clinical experience to recognize and treat periodontal disease of the hard and soft tissues and develop a process for formulating a properly sequenced and effective periodontal treatment plan. In addition, students will be exposed to protocols related to implant placement and restoration in harmony with the maintenance of a healthy periodontium.

CDM 402H—Honors Program in Periodontics
This course provides predoctoral students with the opportunity of assisting and performing periodontal surgical procedures. The objectives of the course are to help students to understand surgical anatomy related to periodontal surgery and principles of periodontal surgery, and to understand indications and sequencing of different modalities of periodontal surgical procedures. In addition, students will perform periodontal surgery including crown lengthening, gingivectomy/gingivoplasty and frenectomy.
of the mechanical and physical properties of dental materials. To understand the selection criteria based on clinical significance and handling characteristics for specific dental materials, as well as the optimum performance requirements, properties, and considerations in order to prepare students to confidently and accurately provide removable prosthodontic treatment for the complete or partially edentulous patient in clinical practice. This course, in conjunction with the laboratory course, will provide the foundation of clinical removable prosthodontics.

CDM 2198—Preclinical Removable Prosthodontics II Laboratory

This laboratory course provides a simulated experience of using removable partial dentures and removable complete dentures to replace lost teeth and their associated structures. As a continuation of Preclinical Removable Prosthodontics Laboratory I from the previous semester, it includes simulated clinical and laboratory exercises to provide the foundation of clinical removable prosthodontics.

CDM 2260/CDM 2270—Fixed Prosthodontics Lecture/Laboratory II

The lecture course presents theory and technique of anterior and posterior fixed partial dentures, porcelain application, and treatment of endodontically treated teeth as they relate to the overall restorative treatment of the patient. This course, in conjunction with the laboratory course, provides the foundation for the student to use the same knowledge and techniques that will be used in clinical application.

CDM 2995—Clinical Practice of Dentistry Fundamentals

This combined lecture and laboratory course is an integrated program that includes objectives from the following disciplines: oral diagnosis, oral medicine, dental anatomy, fundamentals of occlusion, operative dentistry, dental biomaterials, cariology, endodontics, periodontics, pediatric dentistry, orthodontics and fixed prosthetics, OMFS, and use of the EHR system. The clinical practice of dentistry program builds on the foundational knowledge learned in the D1 and D2 curriculum in order to prepare students for a comprehensive care competency-based clinical program. The course focuses on the application of the learning objectives obtained throughout the D1 and D2 curriculum. The student will be presented with de-identified patient cases and will be expected to prepare comprehensive treatment plans for the cases, as well as perform some of the necessary procedures in the simulation laboratory on typodonts.
**CDM 3120—Implant Restorative Dentistry Lecture**
This course is one of comparative implantology, which emphasizes the biological background related to implant systems. Demonstrations and case presentations will be provided. Evidence-based studies are referenced. Hands-on demonstrations and simulation of the use of implant parts is part of the course.

**CDM 3130—Cosmetic Dentistry Lecture**
This course provides formal lecture presentations in conjunction with preclinical laboratory hands-on exercises to prepare students with the necessary skills to perform esthetic dental procedures as discussed in lectures. The D3 student will learn the sequence of diagnostic steps required for a successful planning and treatment of the esthetic zone, as well as different treatment modalities and indications of use for all ceramic and indirect composite resin systems for the posterior teeth. New technologies and systems will be discussed and students will have the option of presenting a treatment-planned case to their classmates and faculty members.

**CDM 3131—Cosmetic Dentistry Laboratory**
This course provides preclinical laboratory hands-on exercises to prepare students with the necessary skills to perform esthetic dental procedures as discussed in lectures. The D3 student will learn the sequence of diagnostic steps and clinical procedures required for a successful planning and treatment of the esthetic zone, as well as different treatment modalities, along with indications of use for all ceramic and indirect composite resin systems for the posterior teeth.

**CDM 3200—Laboratory and Clinical Applications of Occlusion**
Occlusion is that branch of dentistry that applies knowledge of oral anatomy and biomechanical principles of jaw motion to clinical practice, including the relationship of the maxillary and mandibular teeth and the muscles of mastication. To fully understand the stomatognathic system, dental students should have a broad understanding of embryology, histology, growth and development, head and neck anatomy, dental anatomy, physiology, pathology, and pharmacology. Students will be responsible for incorporating the knowledge from previous courses to aid in their understanding of occlusion. They will apply these concepts in a hands-on clinical setting incorporating different modalities and techniques, including intra-oral scanning (IOS) technology.

**CDM 3260—Masticatory System Disorders: A Multidisciplinary Approach**
This is an integrated approach to teaching dental students about the clinical evaluation and diagnosis of patients that present with pain and/or dysfunction in the masticatory system (temporomandibular disorders) and other related orofacial pain conditions. Multiple disciplines will present to allow students to have a complete understanding of the normal function of the masticatory system, occlusal analysis, and occlusal diagnosis and its effect on the TMD and the masticatory system. Students will utilize knowledge from the course to diagnose and make recommendations for patient treatment referrals from their own family of patients.

**CDM 3410—Clinical Fixed Prosthodontics I**
This clinical experience consists of preparing and placing anterior and posterior fixed partial dentures and single coronal restorations. Restorations may be of full gold, metal-ceramic, or all ceramic. Restorations on implants are an integral part of the clinical experience. CAD/CAM restorations are included in this clinical experience. All clinical treatment is accomplished under the direct supervision of faculty members. A clinical rotation with the postgraduate prosthodontics residents is part of this course.

**CDM 3411—Clinical Removable Prosthodontics I**
Clinical application of preclinical skills in complete and removable partial dentures, overdentures on teeth, and implants are accomplished on patients. All patients are treated in the comprehensive care format with emphasis on the whole head and neck. All clinical treatment is accomplished under the direct supervision of faculty members.

**CDM 3530—Evidenced-Based Dentistry in Clinical Practice**
This lecture series presents historical aspects of the development of critical thinking in health care. The course provides the student with different sources for accessing scientific information and reviews scientific articles and principles in observational and epidemiological studies. It stresses the importance of evidenced-based cases and the principles of clinical decision-making and statistics methodology.

**CDM 3277—CAD/CAM Restorative Dentistry**
This lecture and hands-on laboratory course in CAD/CAM restorative dentistry presents an overview of digital dentistry. Students will learn about the systems for digital impression making and manufacture of restorations in the computer-assisted practice of the 21st century, including the CEREC (Sirona), E4D (PLANMECA), Encode (Biomet 3I), 3 Shape, and 3M True Definition Scanner. Students will prepare teeth for CAD/CAM restorations. They will scan, design, mill, characterize, glaze, and cement CAD/CAM generated restorations.
CDM 4410—Clinical Fixed Prosthodontics II
This clinical experience consists of preparing and placing anterior and posterior fixed partial dentures and single coronal restorations. Restorations may be of full gold, metal-ceramic, all ceramic, or CAD/CAM generated. Restorations on implants are an integral part of the clinical experience. All clinical treatment is accomplished under the direct supervision of faculty members.

CDM 4411—Clinical Removable Prosthodontics II
Clinical application of preclinical skills in complete and removable partial dentures, overdentures on teeth, and implants are accomplished on patients. All patients are treated in the comprehensive care format with emphasis on the whole head and neck. All clinical treatment is accomplished under the direct supervision of faculty members.

CDM 412H—Honors Prosthodontics
Advanced students with a high interest in prosthodontics attend advanced prosthodontic seminars and gain advanced experience in clinical prosthodontics, treating more complex patients.

Dental Medicine Related Educational Programs
The College of Dental Medicine also offers the following programs:

D.M.D./Master's Degree in Health Law
Students seeking specialized knowledge in law as related to health care may apply for admission to the D.M.D./Master's Degree in Health Law Program. The master's degree in health law is an online program offered by NSU's Shepard Broad Law Center, requiring significant self-directed study and learning.

D.M.D./Master's Degree in Public Health
An academic track providing specialized knowledge in public health, leading to the M.P.H. degree, is available to the doctor of dental medicine student, and may enhance career prospects in government and private health care enterprises. This program may require 6–12 months of additional study beyond the four years needed for the D.M.D. program. Application may be made on successful completion of the first dental-school year.

D.M.D./Master's or Doctoral Degree in Health Care Education
In the third dental year, applicants considering part-time or full-time teaching and administration in dental education and whose clinical competencies are current may apply for enrollment in either the master's degree or doctoral degree in health care education programs. Candidates for the master's degree in health care education will spend the year after dental school graduation in full-time study in education, while doctoral candidates will invest two to three years of study in education after receipt of the D.M.D. degree.

D.M.D./Master of Business Administration
The College of Dental Medicine (CDM) and the H. Wayne Huizenga College of Business and Entrepreneurship (HCBE) have partnered to create a dual-degree track. This track leads to the awarding of D.M.D. and Master of Business Administration (M.B.A.) degrees. The M.B.A. complements the D.M.D. program by providing specialized knowledge in business with 10 available concentration areas. The dual-degree track is available to all predoctoral students who are academically in good standing, have successfully completed their DJ year, and have permission from the dean of the College of Dental Medicine. Students may contact the HCBE program representative for details on this program. Completion of the M.B.A. may require 6–12 months of additional study beyond the four-year D.M.D. program.

Predoctoral Research Program
Students showing exceptional performance in basic sciences, laboratory, and clinical dentistry may be eligible to participate in the Predoctoral Research Program. Under the supervision of faculty members, these students will gain familiarity with the scientific method and engage in laboratory and clinical research. Predoctoral students seeking research opportunities should follow the guidelines of the Predoctoral Student Research Committee (PSRC) guidelines listed below.

Opportunities exist for predoctoral students to perform or participate in research at CDM. Students can perform independent research or participate in ongoing faculty or postgraduate student research. The following are guidelines or criteria to be followed:

• The earliest predoctoral students can participate in research is the winter semester of DMD I.
• A student must be in good standing; maintain a minimum average grade of B (80); and have a clear, non-grade-issue record.
• A student must be under the guidance of a faculty adviser at Nova Southeastern University who is experienced in the field of research the student is interested in.
• A student involved in independent research, assisting postgraduate residents, or ongoing faculty research projects must submit an application for eligibility and must have PSRC approval.
**Predoctoral Honors Peer Tutoring**
Students with exceptional academic records may be eligible to offer peer tutoring assistance to predoctoral students in need of academic assistance. Peer tutors will receive transcript credit and an hourly wage for their time.

**Predoctoral Honors Clinical Participation Program**
Students with exceptional academic records may be eligible for special clinical experiences in the third and fourth years of predoctoral study in endodontics, oral surgery, orthodontics, pediatric dentistry, and restorative dentistry. Selection of such participants will be at the discretion of the department chairperson and the CDM Office of Academic Affairs.

**Research**
The College of Dental Medicine’s research vision is to provide an infrastructure that fosters innovation, development, advancement, and dissemination of oral and craniofacial health sciences knowledge and related fields to benefit society. The college’s research program strives to advance our academic growth and scientific reputation and presence through interdisciplinary research and the integration of basic, clinical, translational, public health, and educational research. The college strives to be a global leader in research and education by collaborating and sharing information with other units within the university and other university, federal, and private organizations, as well as by enhancing our facilities and recruiting distinguished faculty members. Its goal is to develop and sustain a research program of distinction by engaging faculty and staff members and students in research. Research efforts are directed toward meeting the needs of the health sciences community, the underserved and special care populations, and the public at large. Current research at the College of Dental Medicine is focused around biomaterials, craniofacial anomalies and biology, evaluation of emerging therapeutics, regenerative medicine bioscience, epidemiology, and health services. The college has full-time research faculty members with degrees that include D.D.S./D.M.D., Ph.D.s, as well as basic science Ph.D.s. The international experience and reputation of the college’s faculty members and the opportunities for research exchange add strength and diversity to the research program.
Postdoctoral Programs

The College of Dental Medicine developed postdoctoral advanced education programs in several fields starting in the fall of 1997. There are training positions available in endodontics, operative dentistry, oral and maxillofacial surgery, orthodontics, pediatric dentistry, periodontology, prosthodontics, and advanced education in general dentistry.

These programs are supervised by board-certified and educationally qualified dental specialists. Lectures, seminars, and multidisciplinary conferences related to patients and their dental treatment, as well as in research, are conducted. Students also serve as instructors in the predoctoral laboratory and clinic. An original research project must be completed by each student. Upon successful completion of the program requirements, trainees receive certificates in their respective specialties.

Postdoctoral Core Courses

All postdoctoral students are required to take the following courses during their first year:

**CDM 5000—Advanced Dental Radiology**
Consideration of hard and soft tissue craniofacial imaging modalities, including MRI, tomography, and digital imaging.

**CDM 5004—Advanced Oral Histology and Embryology**
Cytological and developmental considerations in embryological, fetal, and neonatal human craniofacial growth and development.

**CDM 5005—Introduction to Postdoc Education**
This course is designed for postgraduate residents entering their first year of postgraduate education at the College of Dental Medicine. Topics covered include implant dentistry, caries risk management, professional relations, tobacco cessation, domestic violence, ethics, standards of care and informed consent, infection control, risk management, dental photography, and dental lasers.

**CDM 5006—Fundamentals of Biostatistics**
Analysis of descriptive and inferential statistics as used in contemporary biomedical research, including electronic-based statistical programs.

**CDM 5002—Research Design**
The objective of this course is to learn how to plan research projects, initiate the projects, and effectively present the findings. Critical evaluation of the literature about the field of interest will be emphasized.

**CDM 5003—Advanced Microbiology and Cell Biology**
This course offers graduate training in microbiology, including virology, bacteriology, microbial genetics, and microbial pathogenesis.

**CDM 5008—Advanced Medical Physiology**
This course gives a detailed examination of cells and their transport—cardiac, pulmonary, and acid base—as related to maintenance of oral health and onset of disease.

**CDM 5109—Ethics**
This course reviews hallmarks of dental professional ethics and aspects of the law that commonly impact on the daily practice of dentistry.

**CDM 5102—Advanced Oral and Maxillofacial Pathology**
Gross and histological specimen consideration in hard and soft tissue diseases of the oral and maxillofacial structures.

**CDM 5103—Advanced Head and Neck Anatomy Lecture Series**
Didactic and dissection-based consideration of head and neck structure and function essential to advanced dental practice.

**CDM 5104—Advanced Head and Neck Anatomy Lab Series**
Laboratory-based consideration of head and neck structure and function essential to advanced dental practice.

**CDM 5106—Advanced Systemic Oral Medicine and Pharmacology**
This course expands on the predoctoral education regarding the topic of oral medicine. The seminars will discuss current and classic literature to help refine the skills of students in interpreting a medical history and dental management of medically complex patients.

**CDM 8000—Advanced Dental Education Seminar Series**
Postgraduate residents in their first postgraduate year attend this seminar series, which provides the opportunity for interdisciplinary learning at an advanced level. Presentations are given on topics related to advanced general dentistry, endodontics, oral and maxillofacial surgery, operative dentistry, orthodontics and craniofacial orthopedics, pediatric dentistry, periodontology, and prosthodontics followed by collegial discussion. Advanced treatment planning cases are also presented in a format that encourages interdisciplinary discussion of complex cases.

**CDM 8001—Advanced Dental Education Seminar Series II**
Postgraduate residents in their second postgraduate year attend this seminar series, which provides the opportunity for interdisciplinary learning at an advanced level. Presentations are given on topics related to advanced general dentistry, endodontics, oral and maxillofacial surgery, operative dentistry, orthodontics and craniofacial orthopedics, pediatric dentistry, periodontology, and prosthodontics followed by
For patients with mild to severe disabling conditions. The Advanced Education in General Dentistry (AEGD 2) residency program is focused on the area of special needs dentistry. Special needs are defined as those individuals with developmental and acquired disabilities, the medically or physiologically compromised, and the frail elderly. The clinical experience is designed to refine and enhance the resident’s skills and scientific knowledge in the management and treatment of these patients. The AEGD 2 program is intended to prepare the general practice resident for involvement with the physical, emotional, and psychological issues faced by patients with mild to severe disabling conditions.

CDM 8060—Advanced Clinical Dentistry
This clinical course is designed to provide advanced training in general dentistry, including full-mouth prosthodontic rehabilitation, periodontal surgery, implant placement and restoration, endodontic therapy, pediatric dentistry, and oral surgery.

CDM 8061—Advanced Clinical Dentistry
This course is the second term continuation of the clinical course CDM 8060. It is designed to provide advanced training in general dentistry, including full-mouth prosthodontic rehabilitation, periodontal surgery, implant placement and restoration, endodontic therapy, pediatric dentistry, and oral surgery.

Postdoctoral Certificate in Advanced General and Special Needs Dentistry
The Department of Community and Public Health Sciences offers a one-year, postgraduate Certificate in Advanced General and Special Needs Dentistry. The goal of this certificate program is to provide the oral health practitioner with the skills to treat patients with special health needs. These needs may include those resulting from a range of developmental disabilities; acquired disabilities; or chronic, complex medical conditions.

Didactic and clinical training will prepare postgraduate students for patient evaluation and assessment of a patient’s health and his or her cognitive and mobility status. The expectation is that students will become comfortable with, and proficient in, assessing patients’ abilities to withstand and participate in their care, and providing services to patients with a range of intellectual, physical, or behavioral challenges.
Students' knowledge and patient-management skills, with respect to individuals with special health needs, is gained through an advanced, multidisciplinary approach working primarily with faculty members within the College of Dental Medicine, as well as additional resources in NSU and affiliated programs and sites. The program offers no stipend; however, professional liability insurance is provided.

Students in the Certificate in Advanced General and Special Needs Dentistry program are required to take the following postgraduate core courses:

**CDM 5000—Advanced Dental Radiology**
This course provides consideration of hard and soft tissue craniofacial imaging modalities, including MRI, tomography, and digital imaging.

**CDM 5002—Research Design**
The objective of this course is to learn how to plan research projects, initiate the projects, and effectively present the findings. Critical evaluation of the literature about the field of interest will be emphasized.

**CDM 5003—Advanced Microbiology and Cell Biology**
This course offers graduate training in microbiology, including virology, bacteriology, microbial genetics, and microbial pathogenesis.

**CDM 5006—Fundamentals of Biostatistics**
This course provides analysis of descriptive and inferential statistics as used in contemporary biomedical research, including electronic-based statistical programs.

**CDM 5008—Advanced Medical Physiology**
This course gives a detailed examination of cells and their transport—cardiac, pulmonary, and acid base—as related to maintenance of oral health and onset of disease.

**CDM 5102—Advanced Oral and Maxillofacial Pathology**
Gross and histological specimen consideration in hard and soft tissue diseases of the oral and maxillofacial structures are discussed.

**CDM 5103—Advanced Head and Neck Anatomy Lecture Series**
Didactic and dissection-based consideration of head and neck structure and function essential to advanced dental practice are discussed.

**CDM 5104—Advanced Head and Neck Anatomy Lab Series**
This course provides the laboratory-based consideration of head and neck structure and function essential to advanced dental practice.

**CDM 5106—Advanced Oral Medicine and Pharmacology**
This course expands on the predoctoral education in the topic of oral medicine. The seminars will discuss current and classic literature to help refine the skills of students in interpreting medical histories and in dental management of medically complex patients.

**CDM 5109—Ethics and Jurisprudence**
This course reviews hallmarks of dental professional ethics and aspects of the law that commonly impact on the daily practice of dentistry.

As part of a strong emphasis placed on attaining clinical experience and skills, the certificate program includes didactic instruction and participation in pertinent seminars; rounds; and case presentations regarding treatment planning, behavior modification techniques, and care coordination. The specific clinical training is tailored to the postgraduate students' educational and clinical backgrounds and their desired focus of interest. The program may afford students opportunities to participate in projects in the local public health community, as well as in community-based care activities. Students with interests in research activities and academic careers may have the opportunity to combine the Certificate in Advanced General and Special Needs Dentistry with the two-year Master of Science degree program available within the College of Dental Medicine.

**POSTDOCTORAL ENDODONTICS**
The postdoctoral program in endodontics is a 24-month certificate or 36-month master's degree program that integrates an extensive exploration of the dental literature, biological sciences, and clinical sciences, with the provision of a wide range of clinical procedures within the scope of endodontics as a dental specialty.

The clinical program in endodontics will focus on the delivery of patient care that is supported by both contemporary concepts and advanced technological developments. It will include, but not be limited to, the use of magnification in practice, the use of nickel titanium instruments, electronic apex locators, ultrasonic instrumentation and irrigation, digital and CBCT radiography, pulpal preservation procedures, regenerative procedures, and a wide range of surgical interventions. The program is bolstered in the delivery of contemporary care by its integration with the other dental specialties as appropriate.

The didactic program consists of a core curriculum that is designed to provide an interdisciplinary approach to the basic sciences as they relate to the specialty of endodontics and patient care. This basis is then supported by an in-depth review of the endodontic literature from both historical and contemporary perspectives and is designed to provide the resident student with the knowledge necessary to achieve board certification by the American Board of Endodontics.
To further the achievement of the residents and to provide the necessary educational experiences, the program will include experiences in research and the writing of protocols and, where indicated, grants for support, writing technical and scientific manuscripts, the potential for manuscript publication, experiences in the provision of lectures and seminars, and interaction with colleagues and leaders in endodontic education in professional meetings and seminars. The courses that exist within the endodontic curriculum are required of all residents and include the following:

CDM 5611–5618—Current Literature Review
This course focuses on monthly seminars that address the endodontic literature from a wide range of evidence-based and open access journals. These publications are reviewed and analyzed critically, with the intent of teaching residents how to read with discrimination. Residents will learn how to identify meaningful scientific and clinical merit and to integrate the information gleaned from these reviews with both the biomedical sciences and clinical delivery of patient care.

CDM 5621–5624—Classic Literature Review
This course consists of weekly seminars for first-year residents that focus on key endodontic literature that has provided the historical and contemporary basis for this specialty. Selected topics will provide the aspiring resident with an introduction to essential topics and clinical challenges in endodontics. This will include, but is not limited to, diagnosis, radiographic interpretation, treatment planning and case selection, tooth morphology, concepts within the provision of nonsurgical root canal procedures, regenerative initiatives, and treatment outcomes. It will also include pulpal preservation principles and procedures, such as the biological basis as it relates to both pulpal responses to adverse challenges and microbiological implications; the spread of infection; the disease process beyond the confines of the root canal system; and, when indicated, the surgical management of these challenges. These seminars use a topical format, providing the resident with the opportunity to investigate concepts that have molded and characterized the essence of this specialty over the past century. Residents will be taught how to read and analyze critically and relate their assessments to contemporary concepts and practices.

CDM 5625–5628—Classic Literature Review
This course is a continuation of CDM 5621–5624. It is designed for second-year residents to explore diverse and integrated topics not only within the scope of endodontics, but as this discipline integrates with other specialties. These topics will focus on, but not be limited to, all types of tooth/root resorption, diagnosis of non-odontogenic pain, emergencies within the scope of endodontics, iatrogenic challenges, tooth trauma and management, alterations in tooth structure (cracks/fractures), pulpal/periodontal interrelationships, pediatric/endodontic relationships, restorative/endodontic relationships, orthodontic/endodontic relationships, bleaching of vital and non-vital teeth, aging and systemic health, patient records and responsibilities, and expansion of surgical concepts beyond root-end surgery. Residents will be taught how to read and analyze critically and relate their assessments to contemporary concepts and practices.

CDM 5631–5638—Endodontic Topic and Case Presentation
Residents are expected to prepare three one-hour lectures (consisting of slides and handouts) on different topics approved by the postgraduate director pertaining or relating to the field of endodontics. They will present these lectures to their endodontic peers, classmates, and faculty members, who will then critically evaluate them. This will provide the resident with the training necessary to teach endodontics to practitioners and dental students of all levels. Following the topic presentation, the resident will present at least five cases, from start to finish, with at least one recall per case. Cases must include clinical photos, chief complaint, history (dental and medical), medications, radiographs (CBCT if necessary), sensitivity testing, probing, pre-op diagnosis, access, working lengths, photos through microscope, final clinical photos/radiographs, and post-op diagnosis (if different than pre-op). Throughout the case presentations, roundtable discussions will occur to enhance the learning experience. When the resident has completed the topic requirement, he or she will present surgery cases (from both externship and NSU), unusual cases, and board portfolio cases.

CDM 5641–5648—Transition to Private Practice
These seminars are devoted to the realities of private or corporate dental practice. Topics covered include goals, location, type of practices, legal structures, modes of practice, set-up of an office, rent vs. purchase, space needed with physical layout, contracts, finances, running the staff, insurance, and practice building. This will aid the resident in achieving competence upon entering the business world.

CDM 5652—Advanced Microbiology
This course will provide advanced perspectives on the microbiology of the oral tissues focusing on pulpitis, infection, disinfection, and asepsis in endodontics.

CDM 5653—Advanced Immunology
This course will provide advanced perspectives on the human innate and adaptive immune systems that are relevant to dentistry and endodontics.

CDM 5661–5662—Mock Oral Boards
Each year, residents will be challenged as to their command of the endodontic literature as it relates to the provision of procedures within the scope of endodontics. An oral examination will be given to the residents by selected
Diplomates of the American Board of Endodontics. They will provide a diverse set of circumstances and treatment challenges that are commonly seen in endodontic practice. Residents will have the opportunity to discuss and defend their diagnosis, treatment plan, chosen procedures, and outcomes of treatment. They will be expected to draw heavily on specific endodontic literature to support their case discussion. This course is designed to prepare residents for all phases of the examination process in the pursuit of board certification by the American Board of Endodontics.

CDM 5675–5678—Endodontic Surgery
These courses will provide residents with the knowledge of relevant biomedical sciences, clinical techniques, and new instruments and devices as they correlate to the theory and practice of surgical endodontics in accompaniment with their surgical experiences.

CDM 5681–5684—Endodontic Externship
This externship serves to educate residents with the knowledge and skills to diagnose, understand the basis of, and adequately interpret and treat—alone or in conjunction with other dental and medical practitioners—endodontic situations and their related diseases and to maintain the health of the attachment apparatus and integrity of the natural dentition. It provides residents with in-depth knowledge of relevant biomedical sciences as they correlate to the theory and practice of endodontics. It also provides residents with experience from a sufficient number of diagnostic cases, traumatic injuries, regeneration cases, and nonsurgical and surgical clinical experiences in other hospital settings and affords them the opportunity to work with and evaluate new instruments and techniques used to effectively treat medically compromised and special needs patients.

CDM 5685—Endodontic Surgical Externship
This externship serves to educate residents with the knowledge and skills to diagnose, understand the basis of, and adequately interpret and treat endodontic surgical situations to maintain the health of the attachment apparatus and integrity of the natural dentition. It will provide residents with surgical endodontics experience from a sufficient number of diagnostic and surgical clinical cases to result in proficiency in the practice of endodontics and prepare residents to effectively treat medically compromised and special needs patients. It will also afford students with the opportunity to work with and evaluate new instruments and techniques. During this externship, the student to faculty member ratio is one to one.

CDM 5695–5698—Teaching Enhancement/Methodology and Quality Assurance
These courses educate the graduating endodontist with knowledge and skills to diagnose, understand the basis of, and adequately interpret and treat—alone or in conjunction with other dental and medical practitioners—endodontic situations and their related diseases and to maintain the health of the attachment apparatus and integrity of the natural dentition. They provide the resident with in-depth knowledge of relevant biomedical sciences as they correlate to the theory and practice of endodontics and introduce in-depth advanced education in teaching methodology for the postgraduate resident.

Various teaching methodology will be presented to predoctoral residents, in forms including lectures and hands-on presentations, allowing them to demonstrate competency. Residents will be asked to evaluate endodontic outcomes (survival, success, failure, no change) through radiographs (CBCT’s, periapicals-FMX’s and panorex’s) on the NSU College of Dental Medicine’s pool of ongoing patients.

**POSTDOCTORAL OPERATIVE DENTISTRY**

The Department of Cariology and Restorative Dentistry offers a 24-month postdoctoral training program that is designed to fulfill the certification requirements of the American Board of Operative Dentistry. Residents are simultaneously enrolled in the Operative Dentistry and the Master of Science (M.S.) programs. A Certificate in Operative Dentistry and a Master of Science (M.S.) are awarded upon completion of the required core didactic courses, clinical competency program, and a research project (including successful defense of a thesis). The program has been developed to be consistent with the objectives set forth in the ADEA (formerly AADS) “Curriculum Guidelines for Postdoctoral Operative Dentistry” (*J Dent Educ* 1993; 57: 832–836).

The Postdoctoral Operative Dentistry Program provides each graduate student with an opportunity to enhance his or her knowledge in three main areas: research, clinical training, and teaching. Participants pursue highly intensive clinical training while simultaneously following a rigorous academic curriculum that is research oriented.

**First-Year Courses**

**CDM 7660—Advanced Operative Dentistry Clinic**
Students will incorporate the knowledge gained from didactic studies as they provide clinical services and dental restorations for patients by using caries risk analysis, diagnosis, prevention, fluoride, sealants, oral hygiene instructions, amalgam, resin composites, ceramic, metals, glass ionomers, tooth-whitening procedures, remineralization techniques, laser diagnosis, and minimally invasive surgical procedures. The philosophy of the course is based on the medical model of caries management that includes caries risk assessment and formulation of the preventive treatment plan. The department stresses the importance of early diagnosis of both primary and secondary caries and those steps necessary to encourage reversal of those lesions before resorting to an irreversible surgical procedure. When surgical procedures are indicated, they will be performed following evidence-based standardized techniques taught in preclinical courses. The overlying goals of this course are...
restoration to health of the dental patient and the prevention of future dental caries.

**CDM 7510—Advanced Cariology**
This course is designed to standardize the first-year, advanced-operative residents in definition, diagnosis, and management of dental caries. The independent roles of all contributing factors and all preventive measurements will be discussed in detail. Assessing patients' caries risk and the appropriate treatment models will be emphasized.

**CDM 7700—Advanced Treatment Planning**
The advanced dental treatment planning course applies the principles and guidelines for comprehensive dental treatment planning for in-classroom patients' case-based presentations and group discussions. Postgraduate residents are expected to identify multidisciplinary cases on the clinic floor for a diagnostic work up including photographic documentation, mounted casts, and diagnostic wax-ups for the elaboration of treatment plans that will be presented in PowerPoint format and followed by class discussion.

**CDM 7410—Literature Review Seminar**
This is a continual weekly seminar devoted to the review of classic operative dentistry and related literature and discussion of research methods. Selected articles in a particular topic are carefully reviewed and analyzed. The residents learn to critically read and evaluate the scientific evidence that supports advanced restorative dentistry principles and practice.

**CDM 7610—Evidence-Based Dentistry I**
The Evidence-Based Dentistry I course is designed to present the fundamentals of evidence-based dentistry. The first part of the course includes principles of evidence-based dentistry, PICO exercises, question formulation, practical examples, and online databases and search strategies. Students learn how to use the EBD website, Cochrane Database, and clinical queries searches on PubMed. Additionally, clinical research designs (case-control design, case series, case report studies, cohort design, randomized controlled trial, and split mouth design) are introduced. Concepts of study design, research methods, and literature review are emphasized and critically compared. In the second part of this course, strategies for evaluating web-based health information will be highlighted. A critical study appraisal session of the main study designs is presented. The purpose of these sessions is to allow students to gain confidence in their own ability to assess research articles and overcome the misconception that the conclusions of an article are correct simply because it has been published. Students are exposed to concepts of surrogates and true endpoints, bias and confounding assessing the effectiveness of treatments, and conflicts of interest in published research. Published literature is used as a basis for developing critical review skills and application of concepts during discussion.

**CDM 7664—Operative Dentistry, Advanced Review Course**
This lecture course presents the topic of diagnosis and treatment of carious lesions and other hard tissue defects, principles of direct restorative dentistry, and fundamental concepts in the practice of restorative dentistry. The lecture component, in conjunction with the laboratory component, provides the foundation for the student to utilize the same knowledge and techniques that will be used in clinical application.

**CDM 7667—Fixed Prosthodontics Review Course**
This course is designed to standardize and elevate first-year advanced operative dentistry residents' clinical and laboratory knowledge. The crown and fixed partial denture (FPD) section provides the techniques and skills required to prepare and fabricate diagnostic wax-ups, single crowns, and fixed partial dentures.

**CDM 7668—Introduction to Implant Prosthetics Review Course**
This course is designed to introduce the basic concepts and principles related to dental implants as pertains to implant prosthetics. The course format includes lecture, reading assignment materials, and hands-on activities.

**CDM 5001—Graduate Dental Biomaterials**
This is a course designed to provide a fundamental understanding of dental materials. Most dental professionals are not familiar with materials science terminology, definitions, and concepts that are required to select, manipulate, and evaluate the extraordinary range of dental materials products. This course treats structure and property relationships for metals, ceramics, polymers, and composites, as well as application-related information. It should form a framework to ensure that each student is capable of understanding the full complement of new products developed each year.

**CDM 7666—CAD/CAM Restorative Dentistry**
This combined lecture and laboratory course in CAD/CAM restorative dentistry presents the theory and practical application of high-tech dentistry. Students will learn about the various systems for digital impression making and manufacture of restorations in the computer-assisted practice of the 21st century, including the CEREC (Sirona), E4D (D4D), Encode (Biomet 3i), Lava COS (3M), Itero (Kadent), etc. The laboratory component of the course will incorporate preparing teeth, as well as making impressions for natural teeth and implants and completing the final restoration.

**CDM 7665—Academic Career in Operative Dentistry**
This course will provide graduate students with the opportunity to gain experience in teaching. Students will be exposed to teaching experiences by participating in the undergraduate program. Opportunities to lecture, supervise preclinical and clinical activities, and prepare didactic material will be offered.
to students with the objective of helping to develop the skills and experiences needed in an academic career.

Second-Year Courses

CDM 7661—Advanced Operative Dentistry Clinic

Students will incorporate the knowledge gained from didactic studies as they provide clinical services and dental restorations for patients by using caries risk analysis, diagnosis, prevention, fluoride, sealants, oral hygiene instructions, amalgam, resin composites, ceramic, metals, glass ionomers, tooth-whitening procedures, remineralization techniques, laser diagnosis, and minimally invasive surgical procedures. The philosophy of the course is based on the medical model of caries management that includes caries risk assessment and formulation of the preventive treatment plan. The department stresses the importance of early diagnosis of both primary and secondary caries and those steps necessary to encourage reversal of those lesions before resorting to an irreversible surgical procedure. When surgical procedures are indicated, they will be performed following evidence-based standardized techniques taught in preclinical courses. The overlying goals of this course are restoration to health of the dental patient and the prevention of future dental caries.

CDM 7701—Advanced Treatment Planning

The advanced dental treatment planning course applies the principles and guidelines for comprehensive dental treatment planning for in-classroom patients’ case-based presentations and group discussions. Postgraduate residents are expected to identify multidisciplinary cases on the clinic floor for a diagnostic work-up including photographic documentation, mounted casts, and diagnostic wax-ups for the elaboration of treatment plans that will be presented in PowerPoint format and followed by class discussion.

CDM 7420—Literature Review Seminar

This is a continual weekly seminar devoted to the review of classic operative dentistry and related literature and discussion of research methods. Selected articles in a particular topic are carefully reviewed and analyzed. The residents learn to critically read and evaluate the scientific evidence that supports advanced restorative dentistry principles and practice.

CDM 7669—Academic Career in Operative Dentistry

This course will provide graduate students with the opportunity to gain experience in teaching. Students will be exposed to teaching experiences by participating in the undergraduate program. Opportunities to lecture, supervise preclinical and clinical activities, and prepare didactic material will be offered to students with the objective of helping to develop the skills and experiences needed in an academic career.

POSTDOCTORAL ORAL AND MAXILLOFACIAL SURGERY

The program in oral and maxillofacial surgery is a four-year certificate program. Its objective is to prepare graduates for a successful and productive career in oral and maxillofacial surgery. The curriculum is designed to develop the clinical, academic, and communicative skills that will provide for diversified career options. The program is sponsored by the College of Dental Medicine (academic arm) and Broward Health Medical Center. At the completion of the program, an option to pursue a medical degree (M.D.) is available for eligible candidates. The program has been designed to give residents a broad academic and didactic experience in the complete spectrum of oral and maxillofacial surgery. Graduates of the program will be prepared to pursue a contemporary, full-scope oral and maxillofacial surgery practice and be prepared for licensure and the rigors of specialty board examination.

Four-Year Residency Curriculum

The first-year residency training is divided between oral and maxillofacial surgery, internal medicine, and anesthesia rotations. Four months are spent on the anesthesia service at Broward Health Medical Center, one month on pediatric anesthesia at Joe DiMaggio Children’s Hospital, two months on the internal medicine service, and five months on the oral and maxillofacial surgery service.

The third year of the program consists of expanded clinical training in oral and maxillofacial surgery at Broward Health Medical Center. The resident will function on a junior level, with experiences and expectations consistent with this level of training. This year of training includes one month of implant reconstruction and eleven months of oral and maxillofacial surgery service.

During the fourth year of the program, each resident serves as chief resident at Broward Health Medical Center and Memorial Regional Hospital. The primary responsibility of the chief resident is to oversee management of the oral and maxillofacial surgery surgical service. This includes, but is not limited to, formulating the call schedule, arranging resident case coverage of clinical responsibilities, and preoperative/postoperative patient evaluation and treatment in conjunction with designated faculty members. Residents will have rotations in implant reconstruction, craniofacial/cleft lip/palate surgery, and facial plastics.
It is expected that each resident have an abstract or poster based upon his or her research efforts for presentation at a national meeting and at the NSU CDM research day. Upon completion of the residency program, graduates will receive a certificate of training in oral and maxillofacial surgery. It is expected that all graduates will be prepared for the American Board of Oral and Maxillofacial Surgery examination and possess clinical aptitude in the full scope of oral and maxillofacial surgery.

POSTDOCTORAL ORTHODONTICS
The Department of Orthodontics and Dentofacial Orthopedics offers a 36-month program. The program is fully accredited by the Commission on Dental Accreditation. Residents are simultaneously enrolled in the orthodontic program and the Master of Science (M.S.) program. Upon completion of all program requirements, students are awarded both an M.S. degree and a Certificate in Orthodontics. A certificate-only track is not offered. Residents register for and take the American Board of Orthodontics (ABO) written examination as part of the program requirements. Residents fulfilling the graduation requirements of the program will be prepared to complete the ABO clinical examination. U.S., Canadian, and International graduates are encouraged to apply.

The full-time faculty members of this program represent a broad variety of academic, research, and clinical interests. In addition, the program employs numerous adjunct clinical faculty members, ensuring that residents are exposed to the most current ideas and techniques in all aspects of orthodontics.

Residents will treat adults, adolescents, and children and experience a variety of contemporary appliances and treatment disciplines, including orthognathic surgery. Interdisciplinary and dentofacial anomalies and Grand Rounds take place on a regular basis with other postgraduate residents and their respective faculty members and facilitate the treatment planning of complex cases. A diagnostic conference with faculty members occurs daily. All residents are required to attend these conferences.

The curriculum consists of clinical and didactic courses given through the department, as well as a core curriculum in which all postgraduate residents are enrolled. Residents are expected to be available 8:00 a.m. to 5:00 p.m., Monday through Friday and certain evenings and weekends for scheduled conferences, lectures, and seminars. It is unlikely that an individual would have time for outside work while an orthodontic resident.

Clinical Orthodontics I–XI
CDM 5050 Clinical Orthodontics I
CDM 5150 Clinical Orthodontics II
CDM 5250 Clinical Orthodontics III
CDM 5370 Clinical Orthodontics IV
CDM 5170 Clinical Orthodontics V
CDM 5350 Clinical Orthodontics VI
CDM 5360 Clinical Orthodontics VII
CDM 5370 Clinical Orthodontics VIII
CDM 5380 Clinical Orthodontics IX
CDM 5390 Clinical Orthodontics X
CDM 5400 Clinical Orthodontics XI

Clinical Orthodontics I–XI
These courses comprise the clinical component of the postgraduate orthodontic curriculum. Students will incorporate the knowledge gained from didactic studies as they provide orthodontic services for patients with a broad variety of malocclusions. Patients with typical malocclusions—those requiring early treatment, dentofacial orthopedics, orthognathic surgery, and/or interdisciplinary care—are selected as educational models. Techniques focus on standard edgewise technique including pre-torqued and pre-angulated brackets and lingual orthodontics. Various types of treatment approaches are presented.

Orthodontic Didactic
The orthodontic didactic courses include courses and seminars offered each semester. The courses follow the didactic process, fully developing a state-of-the-art understanding of contemporary orthodontics while being deeply built upon, the specialty’s historic foundations. The structure of the orthodontic didactic component of the curriculum continually contributes to residents developing a knowledge base, including evidence-based science, of sufficient depth and breadth necessary for proficiency in modern orthodontics.

CDM 5060—Orthodontic Didactic I
The first year, summer semester, didactic course curriculum consists of specialized course seminars including Cephalometrics, Biomechanics I, Introduction to Clinical Orthodontics, Management of TMJ Disorders, Tweed Wire Bending, and the Graduate Research Seminar I. Each seminar series provides an in-depth approach to the specific subject matter, with seminar syllabi outlining seminar topics, assignments, and outcome assessment of student learning.

CDM 5160—Orthodontic Didactic II
The first year, fall semester, didactic course curriculum consists of specialized course seminars including Biomechanics II, Graduate Research Seminar II, Introduction to Orthodontics, reading, and science. Each seminar series provides an in-depth approach to the specific subject matter, with seminar syllabi outlining seminar topics, assignments, and outcome assessment of student learning.

CDM 5080—Orthodontic Didactic III
The first year, winter semester, didactic course curriculum consists of specialized course seminars including Orthodontic Theory I (which focuses on the application of theory to diagnosis and treatment planning), Craniofacial Growth and Development, and History of Orthodontics. Each seminar series
provides an in-depth approach to the specific subject matter, with seminar syllabi outlining seminar topics, assignments, and outcome assessments of student learning.

CDM 5180—Orthodontic Didactic IV
The first year, spring semester, didactic course curriculum consists of specialized course seminars including Orthodontic Theory II, which focuses on the application of theory to diagnosis and treatment planning, and the Early Orthodontic Treatment seminar. Each seminar series provides an in-depth approach to the specific subject matter, with seminar syllabi outlining seminar topics, assignments, and outcome assessments of student learning.

CDM 5361—Orthodontic Didactic V
The second year, fall semester, didactic course curriculum consists of specialized course seminars including Orthodontic Theory III, which focuses on the application of theory to diagnosis and treatment planning; Orthodontics and Interdisciplinary Diagnosis and Treatment Planning I; and Surgical Orthodontics I. Each seminar series provides an in-depth approach to the specific subject matter, with seminar syllabi outlining seminar topics, assignments, and outcome assessments of student learning.

CDM 5351—Orthodontic Didactic VI
The second year, winter semester, didactic course curriculum consists of specialized course seminars including Orthodontic Theory IV, which focuses on the application of theory to diagnosis and treatment planning; Orthodontics and Interdisciplinary Diagnosis and Treatment Planning II; and Surgical Orthodontics II. Each seminar series provides an in-depth approach to the specific subject matter, with seminar syllabi outlining seminar topics, assignments, and outcome assessments of student learning.

CDM 5362—Orthodontic Didactic VII
The second year, spring semester, didactic course curriculum consists of specialized course seminars including Orthodontic Theory V, which focuses on the application of theory to diagnosis and treatment planning, and Orthodontics and Interdisciplinary Diagnosis and Treatment Planning III. Each seminar series provides an in-depth approach to the specific subject matter, with seminar syllabi outlining seminar topics, assignments, and outcome assessments of student learning.

CDM 5371—Orthodontic Didactic VIII
The third year, fall semester, didactic course curriculum consists of specialized course seminars including Orthodontic Theory VI, which focuses on the application of theory to diagnosis and treatment planning, and Orthodontics and Interdisciplinary Diagnosis and Treatment Planning IV. Each seminar series provides an in-depth approach to the specific subject matter, with seminar syllabi outlining seminar topics, assignments, and outcome assessments of student learning.

CDM 5381—Orthodontic Didactic IX
The third year, winter semester, didactic course curriculum consists of specialized course seminars including Research Journal Publication I, which focuses on identifying suitable journals to publish an article in, based upon the student’s master’s degree-level thesis research, and Orthodontic Outcome Assessment I, a course preparing residents for self-assessment and final case presentations. Each seminar series provides an in-depth approach to specific subject matter, with seminar syllabi outlining seminar topics, assignments, and outcome assessments of student learning.

CDM 5391—Orthodontic Didactic X
The third year, spring semester, didactic course curriculum consists of specialized course seminars including Research Journal Publication II, which focuses on identifying suitable journals to publish an article in, based upon the student’s master’s degree-level thesis research, and Orthodontic Outcome Assessment II, a course preparing residents for self-assessment and final case presentations. Each seminar series provides an in-depth approach to specific subject matter, with seminar syllabi outlining seminar topics, assignments, and outcome assessments of student learning.

POSTDOCTORAL PEDIATRIC DENTISTRY
The Department of Pediatric Dentistry offers a 24-month, postdoctoral training program in pediatric dentistry. The program is designed to prepare residents for specialty certification by the American Board of Pediatric Dentistry (ABPD). This university- and hospital-based program includes significant hospital and extramural affiliations in South Florida. Postgraduate core courses provide first-year residents with a didactic foundation to support the wide range of clinical situations they will experience. Hospital rotations in Pediatric Medicine, General Anesthesia, and Pediatric Emergency Medicine provide residents with clinical experience and deeper understanding of pediatric hospital practice. Lectures, seminars, guest speakers, and literature reviews occur weekly. Residents are active participants in a regional, multidisciplinary craniofacial anomalies team.

Patients requiring hospitalization and general anesthesia are treated in two area hospitals. Conscious sedation is utilized when appropriate. A partial listing of topics covered in lectures and seminars includes behavior management, restorative dental procedures, selecting and prescribing medications, pulp therapy, trauma, treatment of patients with special health care needs, and emergency management. Additional requirements, including successful completion of a mandatory, independent research project, are necessary to graduate. The application deadline for all required materials is September 1, 2018. In addition to the Certificate in Postgraduate Pediatric Dentistry, residents can also concurrently earn the Master of Science degree. The Master of Science degree can be completed
in two years. Information on that degree can be found in this section.

Students are trained in hospital and operating room protocol including the use of general anesthetics.

**CDM 6000—Pediatric Dentistry Didactic I**

The aim of the course is to provide the resident with an understanding of the basic principles and theories of child development and the age-appropriate behavior responses in the dental setting, as well as the objectives of various guidance methods such as principles of communication, informed consent, and objectives of sedation and general anesthesia as behavior guidance techniques. Students will acquire a judicious integration of systematic assessments of clinically relevant scientific evidence.

**CDM 5190—Pediatric Dentistry Didactic II**

The aim of the course is to provide the resident with an understanding of the mechanisms and patterns of craniofacial growth and development from prenatal through adulthood. Students will learn and understand the different mechanisms and treatment options in the different malocclusion in the child and adolescent patient; be familiar with methods of prevention of dental caries and periodontal diseases in children and adolescents; understand the complexity of the caries disease and its different manifestations; learn to diagnose and treat different caries stages; know and do advanced technique in operative procedures; and know the indications and contraindications of pulpotomy and pulpectomy in primary dentition, as well as techniques for apexification and revascularization in young, permanent teeth.

**CDM 6020—Pediatric Dentistry Didactic III**

The aim of the course is to provide the resident with an understanding and treatment alternatives in different clinical situations such as orofacial injuries, periodontal diseases, craniofacial disorders, special needs care patients, and medically compromised patients. Students will acquire a judicious integration of systematic assessments of clinically relevant scientific evidence.

**CDM 6110—Pediatric Dentistry Didactic IV**

In this didactic course, a significant revision of the main areas in pediatric dentistry will be presented by different faculty members from the pediatric dentistry department and other disciplines at NSU. The residents will acquire a judicious integration of systematic assessments of clinically relevant scientific evidence.

**CDM 5090—Pediatric Dentistry Clinic I**

Residents will incorporate the knowledge gained from didactic studies as they provide pediatric dentistry services for infants, children, adolescents, and patients with special health care needs with a broad variety of oral and dental problems. They will collect patient data, including dental and medical histories and appropriate radiographs and photographs; organize data into coherent and viable treatment plans; and present treatment plans to patients and their families, faculty members, and fellow residents. After a case is treated, follow-up visits and presentations will be given at six months and annually.

**CDM 6100—Pediatric Dentistry Clinic II**

Residents will incorporate the knowledge gained from didactic studies as they provide pediatric dentistry services for infants, children, adolescents, and patients with special health care needs with a broad variety of oral and dental problems. They will collect patient data, including dental and medical histories and appropriate radiographs and photographs; organize data into coherent and viable treatment plans; and present treatment plans to patients and their families, faculty members, and fellow residents. After a case is treated, follow-up visits and presentations will be given at six months and annually.

**CDM 5290—Pediatric Dentistry Clinic III**

Residents will incorporate the knowledge gained from didactic studies as they provide pediatric dentistry services for infants, children, adolescents, and patients with special health care needs with a broad variety of oral and dental problems. They will collect patient data, including dental and medical histories and appropriate radiographs and photographs; organize data into coherent and viable treatment plans; and present treatment plans to patients and their families, faculty members, and fellow residents. After a case is treated, follow-up visits and presentations will be given at six months and annually.

**CDM 6120—Pediatric Dentistry Clinic IV**

Residents will incorporate the knowledge gained from didactic studies as they provide pediatric dentistry services for infants, children, adolescent, and patients with special health care needs with a broad variety of oral and dental problems. They will collect patient data, including dental and medical histories and appropriate radiographs and photographs; organize data into coherent and viable treatment plans; and present treatment plans to patients and their families, faculty members, and fellow residents. After a case is treated, follow-up visits and presentations will be given at six months and annually.

**POSTDOCTORAL PERIODONTICS**

The postdoctoral program in periodontics is a 36-month certificate program that fulfills the specialty requirements of the American Dental Association Commission on Dental Accreditation and the American Board of Periodontology. The resident may also elect to pursue the optional Master of Science degree, which may be earned concurrently with the certificate course of study. The program is open to dentists who have graduated (or will graduate) from an accredited United States or Canadian dental school or from an international dental school that provides an equivalent educational background and standing. Completion of a General Practice Residency,
CDM 5200—Sedation and Anesthesia in Periodontics
This course focuses on the didactic and clinical aspects of managing patient anxiety through the use of iatrosedation, nitrous oxide/oxygen analgesia, oral sedation, and IV moderate sedation. The residents will gain experience with these modalities through laboratory sessions and the administration of these techniques to their patients in the course of providing comprehensive patient care in the postgraduate periodontics clinic.

CDM 6030—Advanced Clinical Periodontics I
This course offers clinical instruction related to the diagnosis, prognosis, and treatment of periodontal diseases.

CDM 6031—Foundation of Implant Dentistry
This course is designed to provide an advanced understanding of the fundamentals and principals of implant dentistry. It will provide the information necessary to allow first-year residents to utilize a team approach for placing and restoring the dentition with dental implants. During this course, first-year residents and faculty members will analyze and discuss the classic and current implant dentistry literature.

CDM 6032—Immunoregulation of Periodontal and Peri-Implant Diseases
This course integrates the knowledge of immunoregulation to wound healing and current treatment strategies. At the completion of this course, all the residents will understand the physiological, biochemical, and immunological regulation of healthy and diseased periodontal and peri-implant tissues. First-, second-, and third-year residents will also recognize the rationale of current materials and techniques used in periodontology and implant dentistry in relation to pathogenesis of periodontal and peri-implant diseases.

CDM 6033—Current Literature, Case Discussion, and Topic Presentation in Periodontics and Implant Dentistry
During this didactic course, first-, second-, and third-year residents will learn how to present a case and a topic using the material learned in seminars and core courses. This course will help residents to prepare for the In-Service exam and American Board of Periodontology Exam. At the completion of the course, residents will be able to stay up to date with the current literature in periodontics and implant dentistry.

CDM 6034—Classic Literature in Periodontology and Implant Dentistry
Classic Literature is a participatory seminar course for residents in periodontics in their first, second, and third year of training. Residents are responsible for obtaining, reading, abstracting, and understanding articles that have been identified as required reading. Additionally, residents are expected to be familiar with principles, materials, methods, and statistical analyses, which are necessary to understand the articles under discussion. Most importantly, residents are expected to collate the articles into a broader understanding, which becomes the basis for the therapy they provide to their patients. The seminar is led by a postgraduate resident on a rotating basis. The seminar leader is responsible for the planning and organization of the seminar, ensuring that the topic is covered in a logical basis with articles grouped into appropriate sections.

CDM 6035—Advanced Periodontics: Diagnosis and Treatment Planning
This course offers didactic instruction related to diagnosis and treatment of periodontal diseases. First-year residents and faculty members will discuss classic and current literature related to the diagnosis, prognosis, and non-surgical and surgical treatment modalities of periodontal diseases. First-year residents will understand all the aspects related to periodontal examination, diagnostic, and photographs for case documentation.

CDM 6050—Advanced Clinical Periodontics IV
This course offers clinical instruction and demonstrations in the use of advanced periodontal and implant therapy. Residents will be exposed to multidisciplinary cases and will be able to make diagnosis and execute advanced treatment plans.

CDM 6070—Advanced Clinical Periodontics VII
This course will provide residents with a deep knowledge of quality patient care and allow them to become proficient in providing periodontal and implant surgical care. Also, it will help them develop the capabilities necessary to participate as members of the total health care team, as well as correlate the dental and medical literature with clinical practice.

CDM 6130—Advanced Clinical Periodontics II
This clinical course offers instruction related to the full scope of periodontal treatment planning. Residents will be exposed
to diverse treatment modalities, including surgical and nonsurgical therapies.

**CDM 6150—Advanced Clinical Periodontics V**
This course offers clinical instruction in the treatment of advanced and complex cases. Periodontal, prosthodontics, and implant therapy modalities will be emphasized.

**CDM 6170—Advanced Clinical Periodontics VIII**
This course is designed to offer instruction on clinical and practice management. Residents will be assessing their clinical outcomes and be able to understand the importance of continuity maintenance of their cases.

**CDM 6230—Advanced Clinical Periodontics III**
This clinical course provides instruction that will lead the resident to have sufficient number of diagnostic, nonsurgical, and surgical clinical experiences. It will also cover implant therapy as a treatment modality.

**CDM 6250—Advanced Clinical Periodontics VI**
This course is designed to offer clinical instruction in the treatment and patient management of complex cases in conjunction with other disciplines.

**POSTDOCTORAL PROSTHODONTICS**
The 36-month postdoctoral program combines clinical experience with didactic instruction leading to a Certificate in Prosthodontics. Students may also elect a course of study leading to a master’s degree program. The certificate program satisfies the formal training requirements for eligibility for the American Board of Prosthodontics examination, and students are encouraged to pursue board certification. The program is fully accredited by the American Dental Association Commission on Dental Accreditation.

The didactic portion of the program includes a core curriculum designed to provide all postdoctoral students with a basic interdisciplinary education and a prosthodontics curriculum based on the review of classic and current dental literature, interdisciplinary seminars, and treatment planning presentations. The program also includes research, teaching, and continuing education courses by visiting faculty members.

The clinical portion of the program consists of extensive patient care within the different treatment modalities in prosthodontics (fixed, removable, and implant) and exposure to patients suffering from TMD or sleep-related disorders. It also encompasses the surgical placement of implants, as well as laboratory work supported by state-of-the-art technology and dental materials.

In addition to the postdoctoral core courses offered during the first year of the program, all postdoctoral prosthodontics residents are required to take the following courses:

**CDM 7300—Advanced Fixed Prosthodontics Course**
This course is designed to standardize and elevate the first-year, advanced prosthodontics resident’s clinical and laboratory knowledge in Fixed Prosthodontics. Techniques and skills required at a laboratory level to prepare and fabricate diagnostic wax-ups, single crowns, fixed partial dentures, and provisionals will be covered. In addition, demonstrations and hands-on training are to be provided in the simulation laboratory on teeth preparations for indirect and direct restorations and electrosurgery techniques for tissue management.

**CDM 5001—Advanced Dental Materials**
This is an advanced course covering dental materials science, test methods, properties of dental materials, and clinical applications.

**CDM 7000—Advanced Didactic Prosthodontics I**
This course offers didactic instruction related to the diagnosis and treatment of the advanced prosthodontic patient. Residents will review the classic and current literature related to fixed, removable, and implant prosthodontics. Articles are selected and discussed among the residents and faculty members. Residents will learn to analyze, summarize, and apply the literature to their clinical practice. Ultimately, residents will learn how to elaborate comprehensive treatment plans based on evidence-based dentistry.

**CDM 6090—Advanced Clinical Prosthodontics I**
This course focuses on the clinical aspect of prosthodontics, including fixed, removable, and dental implant-related therapies. Residents provide comprehensive therapy beginning with the complete examination, diagnosis, treatment planning, and treatment of patients with advanced prosthetic needs.

**CDM 7100—Advanced Didactic Prosthodontics II**
This course offers didactic instruction related to diagnosis and treatment of advanced prosthodontic cases. Residents will be able to demonstrate integration of fixed, removable, and implant dentistry in comprehensive diagnosis and treatment planning. Residents will also review the classic and current literature related to advanced prosthodontics. Articles are selected and discussed among the residents and faculty members. Residents will learn to analyze and apply the literature to their clinical practice. Case presentations involving multidisciplinary patient care will integrate concepts in the comprehensive understanding and planning of advanced cases.

**CDM 6190—Advanced Clinical Prosthodontics II**
This course focuses on the clinical aspect of prosthodontics, including fixed, removable, and dental implant-related therapies. Residents provide comprehensive therapy beginning with the complete examination, diagnosis, treatment planning, and treatment of patients with advanced prosthetic needs. In addition, residents will start developing clinical skills relating to implant dentistry, including the placement and maintenance of dental implants.
CDM 7020—Advanced Didactic Prosthodontics III
Residents will continue to review all the concepts related to diagnosis, prognosis, and treatment planning of the prosthodontic patient in areas of fixed, removable, and implant prosthodontics. This didactic course will also offer instructions on surgical and nonsurgical treatment modalities, including implant therapy.

CDM 6290—Advanced Clinical Prosthodontics III
This course focuses on the clinical aspect of prosthodontics, including fixed, removable, and dental implant-related therapies. Residents provide comprehensive therapy beginning with the complete examination, diagnosis, treatment planning, and treatment of patients with advanced prosthetic needs.

CDM 7120—Advanced Didactic Prosthodontics IV
This course provides in-depth knowledge related to the diagnosis, treatment, and prognosis of the advanced prosthodontic patient in areas of fixed, removable, and implant prosthodontics. Residents will continue reviewing the classic and current literature related to advanced prosthodontics. Articles are selected and discussed among the residents and faculty members. Residents will learn to analyze and apply the literature to their clinical practice. Case presentations involving multidisciplinary patient care will integrate concepts in the comprehensive understanding and planning of advanced cases.

CDM 7010—Advanced Clinical Prosthodontics IV
This course focuses on the clinical aspect of prosthodontics, including fixed, removable, and dental implant-related therapies. Residents provide comprehensive therapy beginning with the complete examination, diagnosis, treatment planning, and treatment of patients with advanced prosthetic needs. In addition, residents will start developing clinical skills relating to implant dentistry, including the placement and maintenance of dental implants.

CDM 7040—Advanced Didactic Prosthodontics V
This course offers didactic instruction related to diagnosis and treatment of advanced prosthodontic cases. Residents will be able to demonstrate integration of fixed, removable, and implant dentistry in comprehensive diagnosis and treatment planning. Residents will also review the classic and current literature related to advanced prosthodontics. Articles are selected and discussed among the residents and faculty members. Residents will learn to analyze and apply the literature to their clinical practice. Case presentations involving multidisciplinary patient care will integrate concepts in the comprehensive understanding and planning of advanced cases.

CDM 7110—Advanced Clinical Prosthodontics V
This course focuses on the clinical aspect of prosthodontics, including fixed, removable, and dental implant-related therapies. Residents provide comprehensive therapy beginning with the complete examination, diagnosis, treatment planning, and treatment of patients with advanced prosthetic needs.

CDM 7140—Advanced Didactic Prosthodontics VI
This course will offer advanced didactic information in the diagnosis and treatment of the advanced prosthodontic patient. Multidisciplinary approaches and modalities will be covered and instructed. This course offers a complete program on diagnosis, treatment planning, prognosis, and maintenance of comprehensive and prosthetically involved patients. Patient management and patient communication will be emphasized. Practice management will also be covered.

CDM 7210—Advanced Clinical Prosthodontics VI (CRN 10043)
This course focuses on the clinical aspect of prosthodontics including fixed, removable, and dental implant-related therapies. Residents provide comprehensive therapy beginning with the complete examination, diagnosis, treatment planning, and treatment of patients with advanced prosthetic needs.

CDM 7030—Advanced Clinical Prosthodontics VII (CRN 7030)
This course focuses on the clinical aspect of prosthodontics, including fixed, removable, and dental implant-related therapies. Residents provide comprehensive therapy beginning with the complete examination, diagnosis, treatment planning, and treatment of patients with advanced prosthetic needs.

CDM 7130—Advanced Clinical Prosthodontics VIII (CRN 40448)
This course focuses on the clinical aspect of prosthodontics, including fixed, removable, and dental implant-related therapies. Residents provide comprehensive therapy beginning with the complete examination, diagnosis, treatment planning, and treatment of patients with advanced prosthetic needs.

Anticipated Expenses
Equipment costs for each program will be equal to or less than the average for all U.S. dental schools.

Admissions Requirements—Postdoctoral Programs
The College of Dental Medicine selects postdoctoral students based on application content, academic record, letters of recommendation, test scores (if applicable), and personal interview. Most of the postdoctoral programs utilize the PASS application process, with the exception of endodontics and Advanced General and Special Needs Dentistry. Applicants are required to complete an NSU College of Dental Medicine application for postdoctoral students for all specialties. Applicants should refer to dental.nova.edu for program-specific requirements.
Prior to matriculation, applicants must have completed a D.M.D., D.D.S., or an equivalent degree.

**Application Procedures**

Applicants must send all required materials listed to

Nova Southeastern University
Enrollment Processing Services
College of Dental Medicine, Office of Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

The deadlines for applications vary by program and can be found on the admissions website (dental.nova.edu).

1. the completed College of Dental Medicine application for postdoctoral students
2. a nonrefundable application fee of $50
3. an official transcript from each college, professional school, or university attended

Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.

- World Education Services, Inc.
  Attn: Documentation Center
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org
- Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org
- Educational Credential Evaluators, Inc.
  101 West Pleasant Street, Suite 200
  Milwaukee, WI 53212-3963
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University, Enrollment Processing Services, College of Dental Medicine Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, FL 33329-9905.

4. The applicant must provide an official letter of graduation from the dean or designee of that institution, supporting the granting of the dental degree from that institution.

The applicant must arrange for the following to be sent to NSU.
1. official test scores, if applicable
   a. AEGD applicants will need to submit National Board scores
   b. Orthodontic program applicants will need to submit Graduate Record Examination (GRE) scores
   c. Oral and Maxillofacial Surgery applicants will need to submit National Board of Medical Examiners Comprehensive Basic Science Examination scores.

2. three letters of recommendation (They must be completed by dental school faculty members who are well acquainted with the applicant’s abilities or by individuals who can provide information relevant to the applicant’s potential. Letters from friends or family members are not acceptable.) For those programs using the PASS application process, applicants may also submit up to five Personal Potential Indexes (PPI) with their PASS application.

Upon receipt of the completed application and the required credentials, the director of each postdoctoral program, along with the Committee on Admissions, will select applicants to be interviewed. Those selected will be notified in writing. Not all applicants will be granted an interview. All applicants who are admitted to the college must be interviewed, but an invitation to appear for an interview should not be construed as evidence of acceptance.

**Postdoctoral Tuition and Fees**

- Tuition for all postdoctoral programs for 2020–2021 (subject to change by the board of trustees without notice) will be posted on our website (dental.nova.edu). A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually.

- Acceptance/Preregistration fee is $2,000 (Endodontics—$4,000). This fee is required to reserve the accepted applicant’s place in the entering first-year, postdoctoral class. This advance payment will be deducted from the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance.

The first semester’s tuition and fees, less the $2,000 (Endodontics—$4,000) previously paid, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met. It is extremely important that applicants be committed to meeting their financial responsibilities during their training. This should include tuition, living expenses, books, equipment, and miscellaneous expenses.

It is mandated that each student carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.


Master of Science Program

The Master of Science (M.S.) Program of the College of Dental Medicine (CDM) provides advanced education in study design and research methodology that culminates in a thesis. This program provides graduates with a foundation for academic careers and a better understanding of oral biology and the scientific basis of clinical dentistry. Typically, integrating clinical specialty training with the M.S. requires up to three years for completion.

According to the American Dental Association Foundation, the quality of dental education in the United States serves as a standard for the remainder of the world. As such, maintaining the quality of future faculty members teaching in dental schools is of utmost importance. Currently, there is a significant lack of academic training for future dental academicians, especially those trained in both clinical and academic dentistry. Moreover, there are many unfilled, funded faculty positions available in U.S. dental schools. The research and thesis experiences of this program require graduates to develop critical thinking, enabling them to more readily pursue research activities and academic careers. A student graduating from this program will, therefore, have many opportunities to pursue a career in academics, as well as in the private sector.

One of the main characteristics of the Master of Science Program is the mentee/mentor collaborative relationship. Mentors not only provide guidance for student’s research efforts, but they are also faculty role models who exemplify the pursuit of academic careers within dentistry and other health professions. The collaborative efforts of mentee and mentor provide students with firsthand insights of an academic or research career. This program provides the dental professional graduate student with an overall knowledge of health sciences research. It is expected that a graduate from this program will be qualified to work at any university in the United States or abroad.

Students enrolled concurrently in both an advanced dental education certificate program and the M.S. program must not allow requirements of the master’s degree program to interfere with their responsibilities and requirements in the advanced dental education program. It is expected that students’ activities related to the M.S. program will complement their dental education certificate programs and that they will exercise sound judgment in time-management to excel in both programs. Students are encouraged to initiate their master’s degree research study during their certificate program. Historically, completion of the Master of Science Program coincided with completion of the student’s clinical certificate program. However, it should be noted that students do have a limit of up to five years from the date of matriculation into their respective certificate program to fulfill all of the requirements of the Master of Science Program.

Students currently enrolled in the certificate programs in the departments of orthodontics and operative dentistry must complete the requirements of the M.S. program in partial fulfillment of the graduation requirements of their respective certificate programs. Students enrolled in any of the other CDM advanced dental education certificate programs must seek the approval of the appropriate advanced dental education program director to participate in this program. All students seeking to enroll in the M.S. program must submit the NSU Master of Science application to the program as soon as possible after matriculation into their respective certificate programs. While the advanced dental education program directors must monitor students’ activities in their respective advanced dental education certificate programs, the master’s degree program director must approve and monitor students’ activities in their M.S. program. The advanced dental education program directors and the master’s degree program director will work together to monitor students’ overall educational activities in these two concurrent programs.

Admissions Requirements

Those applying for entry into the Master of Science Program as full, degree-seeking candidates must meet the following eligibility requirements:

1. Applicants must be matriculated in a CDM clinical training program.

2. Applicants are required to submit a 250- to 300-word letter of interest in this program articulating their career plan, capabilities, and area(s) of scientific interest, along with two letters of reference from individuals familiar with the candidate’s aptitude to perform adequately at a graduate level.

3. Applicants must complete and submit the application for admission to the program and submit a description of their proposed research projects.

Application Procedures

Applicants must send all of the following required materials to

Nova Southeastern University
Enrollment Processing Services
College of Dental Medicine, Office of Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, FL 33329-9905

1. the completed College of Dental Medicine application

2. a nonrefundable application fee of $50

3. an official transcript from each college, professional school, or university attended
Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed following.

- World Education Services, Inc.
  Attn: Documentation Center
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org

- Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org

- Educational Credential Evaluators, Inc.
  101 West Pleasant Street, Suite 200
  Milwaukee, WI 53212-3963
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service to Nova Southeastern University, Enrollment Processing Services, College of Dental Medicine Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, FL 33329-9905.

4. an official letter of graduation from the dean or designee of the foreign institution, supporting the granting of the dental degree from that institution

The applicant must also arrange for the following to be sent to NSU.

1. official National Board scores (Please request the secretary of the National Board of Dental Examiners to forward all scores of the dental boards. The National Board is located at 211 East Chicago Avenue, Chicago, IL, 60611. Applicants who have not taken the National Boards must submit a letter of explanation.)

2. two letters of recommendation completed by dental school faculty members who are well acquainted with the applicant’s abilities or by individuals who can provide information relevant to the applicant’s potential

Upon receipt of the completed application, the required credentials, and the approval of the director of each program, the Master’s Degree Admissions Committee will select applicants to be interviewed. Those selected will be notified in writing.

Tuition and Fees
Tuition for 2020–2021 will be posted on our website (dental.nova.edu). A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually. All tuition and fees are subject to change by the board of trustees without notice.

It is required that each student carry adequate personal medical and hospital insurance. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

Course Descriptions
WRIT 5110—Writing Science
Through weekly writing exercise, feedback, and instruction, this course provides tools and techniques for lively and compelling scientific writing. Students will find much to use when tackling a master’s degree thesis, future article, study proposal, or even an effective memorandum or professional communications.

CVR 7200—Bioethics and Ethical Issues in Health Care
Health care professionals are required to act morally and ethically. This course is designed to expand the student’s basic understanding of ethics, promoting ethical awareness and enabling students to derive better health care decisions that reduce the risk of potential ethical consequences. Exposing students to bioethics and controversial ethical issues typically encountered in current health care allows them to practice making difficult decisions. Students will synthesize and implement strategies for applying morals, values, and ethics systematically in the various settings in which health care is delivered. Considering the perspectives of all stakeholders and the role of the health care provider, patient advocate, professional, and consumer of medical care, students will gain workable knowledge of contemporary ethical issues and appreciate that ethics permeate the majority of decisions made in health care.

CVR 7300—Biostatistics
This introductory statistical course will introduce elementary methods for presenting biological data in summary form, analyzing biological data, and designing experiments. It is not a mathematics course, so will not stress derivations of formulae but, rather, will emphasize the application of statistical ideas and methods to the analysis and interpretation of biological experiments and comparative data. The student will be able to assess a situation involving data analysis, state the null and alternative hypotheses proposed, decide on the correct statistical procedure to test the null hypothesis and the assumptions of the test used, calculate the statistic, assess its statistical significance, and interpret the data in light of the calculated result. Assessment of a student’s performance will be done through the use of problem sets, quizzes, and a final exam.
CVR 7310—Fundamentals of Statistical Inference
This course is the second course in the biostatistics sequence and is intended for consumers of statistics in the biological and medical fields, as well as researchers. It will concentrate on the more advanced methods of statistical analysis that are typical of biological and medical applications of statistics. For this course, the student will need to be familiar with basic statistics and statistical techniques as presented in CVR 7300. Students will be using the statistical program R to perform statistical processing; therefore, students must have basic skills in the use of R.

CVR 7400—Clinical Research Design
This course will provide students with an understanding of the basic methods and approaches used in health-related research. A major emphasis of the course will be on the conceptualization and design of research studies. The course will cover ethics, formulation of research questions, study design, reliability, validity, sampling, measurement, and interpretations of research findings. It will prepare students to critically evaluate published research articles, to abstract information and interpret findings appropriately from the published literature, and to design sound research studies. The course will be both theoretical and practical. Students will be challenged to apply the theoretical concepts presented in the classroom and in the readings to design studies to address health-related issues of their choice.

CVR 7500 Information Science for Clinical Research
This course introduces the student to the concept of a literature review as it relates to the development of a research proposal. Students will specify a research problem and provide an appropriate review of the literature. This literature review will identify and discuss related research that sets the proposed project within a conceptual and theoretical context. Students will learn to use reference sources (both electronic and hard copy) available in most public and academic libraries and/or via the Internet to locate and evaluate literature pertinent to clinical and basic vision science and basic research in related medical sciences. Use of evidence-based medicine as a research tool will be covered. Students will be expected to identify and effectively utilize all relevant information resources in their geographical area essential to the preparation of a thorough, high-quality literature review.

CVR 7600—Introduction to Research Funding and Proposal Development
This course enables the student to gain an in-depth understanding of the essential components of a well-written research proposal that addresses an identified scientific problem and the process for submitting the proposal to an agency/organization, requesting funding support to study the problem. Students will become familiar with a number of funding sources, including federal and state government and private foundations and corporations that support vision or dental research projects, and learn to use a variety of resources to target potential funding sources. They will become familiar with various grant-related terminology, as well as guidelines, rules, and regulations of awarding agencies, with particular focus on the National Institutes of Health (NIH) organization.

Students will be expected to come prepared to explore and discuss potential research areas they would like to study and to focus on ideas about projects to address their interests. They will be able to demonstrate their understanding of the essential components of a well-written proposal, including the significance statement, objectives and hypotheses, experimental design and methods, and the budget through class handouts, virtual discussions, and appropriate class activities related to the required readings.

CVR 7800—Ethical and Legal Issues in Human Subjects Research
This course introduces the ethical and regulatory aspects involved in human subject research. Students will gain understanding of the history that has shaped the rules that today govern research with human subjects, as well as be introduced to issues that researchers in the 21st century face. Students will become familiar with U.S. regulations that govern human subject research and the protection systems that are created as a part of those regulations. Issues related to research with a variety of vulnerable populations will also be discussed.

Students will be expected to come prepared to explore and discuss the variety of critical issues researchers face when they hope to conduct human subject research. They will be able to demonstrate an understanding of the key elements of informed consent documents, including statements required by U.S. regulations. Class activities related to the readings and CITI modules will permit students to gain an understanding of these topics while also completing the NSU required CITI program.

CVR 8220—Epidemiology
This course provides a study of the basic principles of epidemiology with emphasis on the application of epidemiology to clinical practice.
Ron and Kathy Assaf
College of Nursing
Mission Statement
Nova Southeastern University’s Ron and Kathy Assaf College of Nursing provides quality undergraduate and graduate educational programs within an atmosphere of scholarly inquiry, professional values, interprofessional collaboration, and community service.

Accreditation
NSU’s baccalaureate degree program in nursing/master’s degree program in nursing/Doctor of Nursing Practice program, and postgraduate A.P.R.N. certificate program at Nova Southeastern University’s Ron and Kathy Assaf College of Nursing are accredited by the Commission on Collegiate Nursing Education (ccneaccreditation.org).

Program Information
The Ron and Kathy Assaf College of Nursing offers a Bachelor of Science in Nursing (B.S.N.) program, Master of Science in Nursing (M.S.N.) programs, two pathways to the Doctor of Nursing Practice (D.N.P.), and two pathways to the Ph.D. in Nursing degree.

For nurses seeking a master’s degree, NSU offers a traditional M.S.N. degree with concentrations in nursing education, executive nurse leadership, and nursing informatics. For those who wish to enhance their provider role, NSU offers an M.S.N. A.P.R.N. degree. The M.S.N. A.P.R.N. degree prepares the graduate to take the national certification examination to become a family, adult-gerontology acute care, or psychiatric mental-health nurse practitioner.

NSU offers also two pathways to the Doctor of Nursing Practice (D.N.P.) for nurses who wish to obtain a doctoral degree. Students may apply to either the B.S.N. to D.N.P. program or directly to the D.N.P. program. The doctoral degree prepares nurses to advance in their A.P.R.N. role or build upon administrative positions in fields such as nurse administration, quality assurance, and community or public health as a nurse. NSU also offers two pathways to the Ph.D. in Nursing degree. Students may apply to either the D.N.P. to Ph.D. or the Ph.D. program. Both are offered in an online format.

All programs focus on developing nursing professionals to assume leadership roles in the complex health care environment.

College Administration
Marcella M. Rutherford, Ph.D., M.B.A., M.S.N.
Dean, Ron and Kathy Assaf College of Nursing
Room 1570, Ext. 21963

Jo Ann Kleier, Ph.D., Ed.D., A.R.N.P., ACNP-BC
Executive Associate Dean of Research and Program Compliance
Room 1553, Ext. 21978

Susan Holland, Ph.D., M.S.N., R.N.
Associate Dean of Academic Affairs
Fort Myers Campus—Room 438, Ext. 46959

Blondel Martin, Ph.D., M.S.N., R.N.
Assistant Dean of Academic Programs and Associate Professor
Miramar Campus—Room 1571, Ext. 21955

Joanne Masella, Ed.D., M.S.N., R.N.
Assistant Dean of Community Engagement and Integration
Palm Beach Campus—Room 219, Ext. 5220

Michelle Julian, Ph.D., M.S.N., R.N.
Department Chair of Undergraduate Programs and Associate Professor
Miami Campus—Room 332, (954) 275-5448

Stefanie La Manna, Ph.D., M.P.H., A.R.N.P., FNP-C, AGACNP-BC
Department Chair of Graduate Programs and Associate Professor
Palm Beach Campus—Room 219, Ext. 52111

Program Director of Advanced Practice Registered Nurse, Psychiatric-Mental Health Nurse Practitioner (PMHNP) Program—Miramar, and Assistant Professor
Miramar Campus—Room 316 E, Ext. 21797

Holly Madison, Ph.D., M.S.(N), R.N.
Program Director of M.S.N. Traditional, D.N.P., B.S.N. to D.N.P., Ph.D., and D.N.P. to Ph.D. Programs
Palm Beach Campus—Room 227, Ext. 52223

Timothy D. O’Connor, Ph.D., R.N., LNHA
Program Director of Entry B.S.N. Program—Fort Lauderdale/Davie and Assistant Professor
Room 1565, Ext. 21947
Health Professions Division degrees must be able to integrate and carry out the activities described below, candidates for and to render a wide spectrum of patient care. In order to and skills to function in a broad variety of clinical situations, the holders of health care degrees must have the knowledge, particular college, based upon appropriate circumstances. Such standards must be approved by the dean of the student’s personnel in performing common functions. Any exceptions to expectations required of health professions students and standards reflect what the university believes are reasonable of the patients whom its graduates will eventually serve. The university believes it must keep in mind the ultimate safety reasonable accommodation. In adopting these standards, the performance standards) as set forth herein, with or without students to meet certain minimal technical standards (core qualifications. The Nova Southeastern University Ron and Kathy Assaf College of Nursing is pledged to the admission and matriculation of qualified students and wishes to acknowledge awareness of laws that prohibit discrimination against anyone on the basis of race, color, religion or creed, sex, pregnancy status, national or ethnic origin, nondisqualifying disability, age, ancestry, marital status, sexual orientation, gender, gender identity, military service, veteran status, or political beliefs or affiliations.

Regarding those students with verifiable disabilities, the university will not discriminate against such individuals who are otherwise qualified, but will expect applicants and students to meet certain minimal technical standards (core performance standards) as set forth herein, with or without reasonable accommodation. In adopting these standards, the university believes it must keep in mind the ultimate safety of the patients whom its graduates will eventually serve. The standards reflect what the university believes are reasonable expectations required of health professions students and personnel in performing common functions. Any exceptions to such standards must be approved by the dean of the student’s particular college, based upon appropriate circumstances.

The holders of health care degrees must have the knowledge and skills to function in a broad variety of clinical situations and to render a wide spectrum of patient care. In order to carry out the activities described below, candidates for Health Professions Division degrees must be able to integrate consistently, quickly, and accurately all information received, and they must have the ability to learn, integrate, analyze, and synthesize data.

Honor and integrity of the health professions student and health care professional is essential and depends on the exemplary behavior of the individual health care provider in his or her relations with patients, faculty members, and colleagues. This includes accountability to oneself and to relationships with fellow students, future colleagues, faculty members, and patients who come under the student’s care or contribute to his or her training and growth, as well as members of the general public. This applies to personal conduct that reflects on the student’s honesty and integrity in both academic and nonacademic settings, whether or not involving an NSU-sponsored activity. All students must have the capacity to manage their lives and anticipate their own needs. Upon accepting admission to NSU, each student subscribes to, and pledges complete observance to, NSU’s Student Code of Conduct Policies. A violation of these standards is an abuse of the trust placed in every student and could lead to suspension or dismissal.

Candidates for degrees offered by the Ron and Kathy Assaf College of Nursing must have, with or without reasonable accommodation, multiple abilities and skills including intellectual, conceptual, integrative, and quantitative abilities; interpersonal communication; mobility and strength; motor skills; and hearing, visual, tactile, behavioral, and social attributes. Candidates for admission and progression must be able to perform these abilities and skills in a reasonably independent manner.

Intellectual, Conceptual, Integrative, and Qualitative Abilities

These abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem solving—a critical skill—requires all of these intellectual abilities. Candidates and students must have critical thinking ability sufficient for good clinical judgment. This is necessary to identify cause/effect relationships in clinical situations and to develop plans of care. In addition, candidates and students should be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures. An individual is expected to be able to perform multiple tasks in a diverse, dynamic, highly competitive, and challenging learning environment. All individuals are expected to meet their program requirements on a satisfactory level as determined by HPD administration or the applicable college/program administration.

A student must have sufficient proficiency with English to retrieve information from texts and lectures and communicate concepts on written exams and patient charts; elicit patient backgrounds; describe patient changes in mood, activity, and posture; and coordinate patient care with all members of the
health care team. A student must be able to communicate or provide communication in lay language so that patients and their families can understand the patient’s conditions, treatment options, and instructions. The student must be able to accurately enter information in the patient’s electronic health record, according to his or her program’s requirements.

**Motor Skills**
Candidates and students should have sufficient motor function to execute movements reasonably required to provide general care and emergency treatment to patients. Examples of emergency treatment reasonably required to some health care professionals are cardiopulmonary resuscitation (CPR), administration of intravenous medication, the application of pressure to stop bleeding, the opening of obstructed airways, and the ability to calibrate and use various pieces of equipment. Such actions require coordination of both gross and fine muscular movements, equilibrium, and functional use of the senses of touch and vision.

**Strength and Mobility**
Candidates and students must have sufficient mobility to attend to emergency codes and to perform such maneuvers as CPR when required. They must have the physical ability to move sufficiently from room to room and to maneuver in small places. Ron and Kathy Assaf College of Nursing students must have the ability to position and move patients.

**Hearing**
Candidates and students should have sufficient auditory ability to monitor and assess health needs. They must be able to hear information given by the patient in answer to inquiries; to hear cries for help; to hear features in an examination, such as the auscultatory sounds; and to monitor equipment.

**Vision**
Candidates and students must have visual ability sufficient for observation and assessment necessary in patient care. It must be consistent in many cases with being able to assess asymmetry, range of motion, and tissue texture changes. Ron and Kathy Assaf College of Nursing students must have adequate visual capabilities for proper evaluation and treatment integration. Students must be able to observe the patient and the patient’s responses, including body language and features of the examination and treatment, as well as interpret prescriptions and medical orders.

**Tactile/Sensory**
Students must have sufficient tactile ability for physical assessment. They must be able to perform palpation, functions of physical examination, and/or functions related to therapeutic intervention, including medication administration.

**Behavioral and Social Attributes**
Students must possess the emotional health required for full use of their intellectual abilities; the exercise of good judgment; the ability to take responsibility for their own actions—with respect to policies, protocols, and processes—with faculty and staff members, students, patients, patient surrogates, and administration during the student’s educational program; the prompt completion of all responsibilities attendant to the diagnosis and care of patients; and the development of mature, sensitive, and effective relationships with the patients. Students must be able to physically tolerate taxing workloads, adapt to changing environments, display flexibility, and learn to function in the face of uncertainties inherent in the clinical problems of many patients. Compassion, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities that will be assessed during the education process.

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**Graduate Nursing Program**
**Master of Science in Nursing (M.S.N.)—Traditional**

The Master of Science in Nursing Program is an online degree program for graduates of Bachelor of Science programs with a major in nursing or other related fields. Students who hold Registered Nurse (R.N.) licensure who enter the M.S.N. program without a B.S.N. degree, but with a B.S. or B.A. degree in another field, will be required to enroll in NSG 5000B—Transition to Advanced Nursing Practice in their first semester of admission to the M.S.N. program. This course is only offered in the fall term. Three concentrations are offered: nursing informatics, nursing education, and executive nurse leadership.

- Students can transform the landscape of patient care through Nursing Informatics. In a program that blends leadership skills with data management, students will learn how to catalyze the evolution of nursing through the evaluation and implementation of new technology. They will facilitate access to critical information, improving patient outcomes, while refining the health care experience for providers and recipients alike.
The next generation of nursing professionals require quality instructors to flourish in the ever-changing field of health care. With courses focusing on clinical decision making and curriculum development, the Nursing Education concentration will prepare its students to provide future nursing generations with the guidance they need. Students in this concentration will be prepared for career paths in staff development, vocational-technical training, or community college education. Graduates interested in teaching in B.S.N. or higher programs may then proceed through the Ph.D. in Nursing program, which focuses on nursing education.

The Executive Nurse Leadership concentration prepares students to assume the leadership roles that they deserve. By studying quality initiatives and the business of health care, students will understand how to make complex decisions that improve patient care and employee morale. They will gain the skills needed to inspire peers and take their organizations to new heights.

All M.S.N. students take 15 semester hours of core foundational nursing courses online/hybrid. M.S.N. Traditional students take an additional 21 semester hours of specialty courses, determined by their chosen concentration. This includes a practicum experience that reinforces skills acquired throughout the program. Thus, a total of 36 semester hours are required to complete the M.S.N. Traditional program. Courses are taught online/hybrid by faculty members with advanced preparation and extensive experience in their respective fields. All concentrations serve as a foundation for doctoral study.

Admissions Requirements
Prospective students for the Master of Science in Nursing Traditional Program are selected for admission based on application content, academic record, and professional nursing licensure.

Admission to the M.S.N. program requires the following:

- a Bachelor of Science (B.S.) or a Bachelor of Arts (B.A.) degree from a regionally accredited college or university
- Nursing degrees must be accredited by the Accreditation Commission for Education in Nursing (ACEN), the Commission on Collegiate Nursing Education (CCNE), or the Commission for Nursing Education Accreditation (CNEA).
- a B.S./B.A. GPA of 3.0 on a 4.0 scale
- a current, active, and unencumbered, U.S. R.N. license

The license must remain current and unencumbered in the jurisdiction of the practicum throughout the program.

For more information, call the Ron and Kathy Assaf College of Nursing at (954) 262-1975 or 800-356-0026, ext. 21975.

Application Procedures
The NSU Ron and Kathy Assaf College of Nursing participates in the centralized applications service called NursingCAS. NursingCAS does not take part in student selection. The NursingCAS application may be obtained

- online at nursingcas.org
- by calling NursingCAS at (617) 612-2880

The deadline to complete and submit the NursingCAS and NSU applications is August 1 for fall admission and December 9 for winter admission. The Office of Admissions works on a rolling basis. Applications are accepted year-round.

1. Send supporting documents to NursingCAS.

NursingCAS
P.O. Box 9201
Watertown, MA 02471

- All official college transcripts from undergraduate, graduate, and professional institutions attended must be sent to NursingCAS directly from those institutions.
- Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed following.
  - World Education Services, Inc.
    P.O. Box 5087
    New York, NY 10274-5087
    (212) 966-6311 • wes.org
    7101 SW 102 Avenue
    Miami, FL 33173
    (305) 273-1616 • (305) 273-1338 fax
    info@jsilny.org • jsilny.org
  - Educational Credential Evaluators, Inc.
    101 West Pleasant Street, Suite 200
    Milwaukee, WI 53212-3963
    (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service. To speak with a transfer evaluation services counselor or to schedule an appointment, please call (954) 262-8117 or 800-806-3680, ext. 28117.

- Students must submit a copy of their active, unencumbered U.S. R.N. license. The license must remain current in the jurisdiction of the practicum throughout the program.
2. In addition to NursingCAS, an online NSU application must be submitted at apply.nova.edu.

**Tuition and Fees**

Tuition for 2020–2021 is posted on the college’s website (nursing.nova.edu/msn). There is an NSU Student Services Fee—$500 per semester, not to exceed $1,500 annually. A Health Professions Division General Access Fee of $145 is required each year, as well as a one-time NSU Application Fee of $50.

Acceptance fee is $200. This fee is required to reserve the accepted applicant’s place in the class. This advanced payment will be deducted from the tuition payment due by registration day, but is nonrefundable in the event of a withdrawal. It is due within two weeks of an applicant’s acceptance.

All tuition and fees are subject to change by the board of trustees without notice.

The first semester’s tuition and fees, less the $200 previously paid tuition deposit, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.

Each student is required to carry adequate personal medical and hospital insurance. Students may purchase health insurance through NSU. Students who have adequate personal medical and hospital insurance may waive NSU’s health insurance by filling out the Student Health Insurance Waiver available through the Bursar’s Office (nova.edu/bursar/health-insurance). This must be completed by the designated due date to avoid charges.

Students are responsible for their own transportation to campus and to clinical agencies and other off-campus locations related to their program.

There are a number of national, state, and hospital grants available for the nursing student. The Office of Student Financial Assistance and the Ron and Kathy Assaf College of Nursing are eager to assist students in exploring financial aid options. Students may review scholarship opportunities at nursing.nova.edu/students/scholarships.html, and can speak to a financial aid representative by calling (954) 262-3380. Do not hesitate to ask for help.

**Academic Policies**

The following academic policies apply to all students in the graduate nursing program.

**Transfer Credits**

No more than 6 graduate credits may be transferred into the M.S.N. program from other graduate programs. Courses will be evaluated for credit toward the M.S.N. degree by the program director, whose decision will be final. To be considered for credit, a course must have been taken at an accredited graduate program and be the equivalent of a course offered in the NSU student’s chosen concentration. The student must have earned a grade of B or higher in the course. The student must submit the syllabus of any course he or she is seeking credit for directly to the program director. Additional documentation may be required by the program director before credit may be granted. Only courses completed prior to matriculation in the M.S.N. program will be considered for transfer credit.

**Progression Requirements**

Students are required to be continuously enrolled in the program, taking at least one graduate course each term. All courses must be completed with a minimum grade of B- for credit to be received toward the M.S.N. degree. A course may be repeated once if a grade less than B- is obtained. Only one repeated course can be applied toward the M.S.N. degree. A second course with a grade less than B- will preclude completion of the program and the student will be dismissed from the program.

Students in the M.S.N. Traditional program who have been dismissed may petition the program director for reinstatement if a year has passed since the dismissal. The applicant is required to present adequate evidence that the factors that caused the prior inadequate academic performance have changed significantly so that there is reasonable expectation that the applicant can perform satisfactorily if permitted to resume his or her study. Readmission will be at the discretion of the program director.

**Graduation Requirements**

To receive an M.S.N. Traditional degree, all students must fulfill the following requirements:

- successfully complete a minimum of 36 semester hours of coursework (for the M.S.N. specialty tracks of nursing education, executive nurse leadership, and nursing informatics)
- satisfactorily complete all program requirements for the degree with a grade of B- or higher
- apply for graduation
- have satisfactorily met all financial and library obligations
- receive a recommendation for graduation by the program director
Curriculum Outline

Core Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 5000</td>
<td>Advanced Nurse Roles</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5101</td>
<td>Theory and Research</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5111</td>
<td>Evidence and Practice</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5220</td>
<td>Health Promotion and Disease Prevention</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5130</td>
<td>Health Care Policy and Leadership</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Core Semester Hours 15**

In addition to the core M.S.N. courses, the following courses are required to complete the M.S.N. in Nursing Education concentration:

M.S.N. Education Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 5300</td>
<td>Nursing Curriculum Development</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5370</td>
<td>Introduction to Educational Concepts</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5380</td>
<td>Educational Concepts I: Principles of Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5531</td>
<td>Advanced Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5502</td>
<td>Advanced Health Assessment</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5510</td>
<td>Advanced Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5360</td>
<td>Nurse Educator Practicum</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Education Semester Hours 21**

In addition to the core M.S.N. courses, the following courses are required to complete the M.S.N. in Executive Nurse Leadership concentration:

M.S.N. Executive Nurse Leadership Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 5230</td>
<td>Nursing Decision Making in Complex Health Systems</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5240</td>
<td>Nursing Governance and Resource Management in Complex Health Systems</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5340</td>
<td>Nursing Leadership Roles in Complex Health Systems</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5250</td>
<td>Fiscal Management in Complex Health Systems</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5460</td>
<td>Quality Initiatives: Transforming Care</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5471</td>
<td>Business and Economics of Health Care</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5492</td>
<td>Executive Nurse Leadership Practicum</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Executive Nurse Leadership Semester Hours 21**
In addition to the core M.S.N. courses, the following courses are required to complete the M.S.N. in Nursing Informatics concentration:

<table>
<thead>
<tr>
<th>Nursing Informatics Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI 5130 Database Systems in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 5204 Clinical Decision Support Systems</td>
<td>3</td>
</tr>
<tr>
<td>MI 5100 Survey of Biomedical Informatics (with emphasis in Nursing Informatics)</td>
<td>3</td>
</tr>
<tr>
<td>MI 5121 Information Systems Project Management and Leadership in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 6413 Lean Six Sigma Yellow Belt for Health Care</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5600 Nursing Informatics Practicum</td>
<td>4</td>
</tr>
<tr>
<td>NSG 5610 Advanced Practice in Nursing Informatics</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Nursing Informatics Semester Hours** 21

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**Graduate Nursing Program**

**Master of Science in Nursing—Advanced Practice Registered Nurse (M.S.N.—A.P.R.N.)**

The Master of Science in Nursing (M.S.N.)—Advanced Practice Registered Nurse (A.P.R.N.) Program is a hybrid degree program for the registered nurse (R.N.) with a bachelor’s degree. Students who enter the M.S.N. program without a B.S.N. degree, but with a B.S. or B.A. degree in another field, will be required to enroll in NSG 5000B—Transition to Advanced Nursing Practice in their first semester of admission to the M.S.N. program. This course is only offered in the fall term. Three concentrations are offered: Family Nurse Practitioner (FNP), Adult-Gerontology Acute Care Nurse Practitioner (AGACNP), and Psychiatric Mental Health Nurse Practitioner (PMHNP).

- **The Family Nurse Practitioner (FNP)** provides primary care to newborns, infants, children, adolescents, adults, pregnant and postpartum women, and older adults. The focus of care is the family unit, as well as the individuals belonging to the family. Family nurse practitioners practice primarily in ambulatory care settings. This concentration is presented in a hybrid format at NSU’s Palm Beach and Tampa Bay campuses. A postgraduate certificate is also available.

- **The Adult-Gerontology Acute Care Nurse Practitioner (AGACNP)** provides care to adults and older adults with acute, critical, and complex-chronic physical and mental illnesses across the entire adult age spectrum, including late adolescents to adults and older adults. AGACNPs can provide services ranging from disease prevention to the critical care needed to stabilize a patient’s condition, prevent complications, restore maximum health, and/or provide palliative care. The AGACNP practice focuses on patients who are characterized as physiologically unstable, technologically dependent, and/or highly vulnerable to complications. It is presented in an executive format (one weekend per month) at NSU’s Palm Beach Campus. A postgraduate certificate is also available.

- **The Psychiatric Mental Health Nurse Practitioner (PMHNP)** program is for those nurses interested in providing a full range of primary mental health services in a wide variety of settings. It is offered in a hybrid format at the Miramar and Tampa Bay campuses. A postgraduate certificate is also available.

All M.S.N. students take 15 semester hours of core foundational nursing courses online. AGACNP, PMHNP, and FNP students take an additional 36 credits of specialty courses specific to their concentration.

**Admissions Requirements**

Prospective M.S.N.—A.P.R.N. students are selected for admission based on application content, academic record, professional nursing licensure, and active clinical experience.
Admission to the M.S.N.—A.P.R.N. program requires the following:

- a Bachelor of Science (B.S.) or a Bachelor of Arts (B.A.) degree from a regionally accredited college or university

  Nursing degrees must be accredited by the Accreditation Commission for Education in Nursing (ACEN), the Commission on Collegiate Nursing Education (CCNE), or the Commission for Nursing Education Accreditation (CNEA).

- a B.S./B.A. GPA of 2.75 on a 4.0 scale

- a current, active, and unencumbered state of Florida R.N. license

  This license must remain active, without discipline, and in the state of Florida, throughout the program.

- at least one year of current clinical experience (direct patient care)

- CV/résumé

- living within a 150-mile drive from the program campus

* Students who enter the M.S.N.—A.P.R.N. program without a B.S.N. will be required to enroll in NSG 5000B—Transition to Advanced Nursing Practice in their first semester. This course is only offered in the fall.

For more information, call the Ron and Kathy Assaf College of Nursing at (954) 262-1975 or 800-356-0026, ext. 21975.

Application Procedures

The NSU Ron and Kathy Assaf College of Nursing participates in the centralized applications service called NursingCAS. NursingCAS does not take part in student selection. The NursingCAS application may be obtained

- online at nursingcas.org
- by calling NursingCAS at (617) 612-2880

The deadline to complete and submit the NursingCAS and NSU applications is August 1 for fall admission and December 9 for winter admission. The Office of Admissions works on a rolling basis. Applications are accepted year-round.

1. Send supporting documents to NursingCAS.

   NursingCAS
   P.O. Box 9201
   Watertown, MA 02471

   a. All official college transcripts from undergraduate, graduate, and professional institutions attended must be sent to NursingCAS directly from those institutions.

   b. Coursework taken at a foreign institution must be evaluated for U.S. institution equivalence by an approved National Association of Credential Evaluation Services (NACES) organization, such as one of the services listed below.

      - World Education Services, Inc.
        Bowling Green Station
        P.O. Box 5087
        New York, NY 10274-5087
        (212) 966-6311 • wes.org

        7101 SW 102 Avenue
        Miami, FL 33173
        (305) 273-1616 • (305) 273-1338 fax
        info@jsilny.org • jsilny.org

      - Educational Credential Evaluators, Inc.
        101 West Pleasant Street, Suite 200
        Milwaukee, WI 53212-3963
        (414) 289-3400 • ece.org

   c. M.S.N.—A.P.R.N. students must submit a copy of their active, unencumbered Florida R.N. license. The license must remain active and unencumbered in the state of Florida throughout the length of the program.

   d. Applicants must submit a current CV or résumé.

2. In addition to NursingCAS, an online NSU application must be submitted at apply.nova.edu.

Tuition and Fees

Tuition for 2020–2021 will be posted on the college’s website (nursing.nova.edu/aprn). There is an NSU Student Services Fee—$500 per semester, not to exceed $1,500 annually. A Health Professions Division General Access Fee of $145 is required each year. A lab fee of $100 is required per semester, as well as a one-time NSU Application Fee of $50.

Acceptance fee is $200. This fee is required to reserve the accepted applicant’s place in the class. This advanced payment will be deducted from the tuition payment due by registration day, but is nonrefundable in the event of a withdrawal. It is due within two weeks of an applicant’s acceptance.

All tuition and fees are subject to change by the board of trustees without notice.
The first semester's tuition and fees, less the $200 previously paid tuition deposit, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.

Each student is required to carry adequate personal medical and hospital insurance. Students may purchase health insurance through NSU. Students who have adequate personal medical and hospital insurance may waive NSU's health insurance by filling out the Student Health Insurance Waiver available through the Bursar's Office (nova.edu/bursar/health-insurance). This must be completed by the designated due date to avoid charges.

Students are responsible for their own transportation to campus and to clinical agencies and other off-campus locations related to their program.

There are a number of national, state, and hospital grants available for the nursing student. The Office of Student Financial Assistance and the Ron and Kathy Assaf College of Nursing are eager to assist you in exploring all of your financial aid options. Students can review scholarship opportunities at nursing.nova.edu/students/scholarships.html, and can speak to a financial aid representative by calling (954) 262-3380. Do not hesitate to ask for help.

**Academic Policies**

The following academic policies apply to all students in the graduate nursing program.

**Transfer Credits**

No more than 6 graduate credits may be transferred into the M.S.N. program from other graduate programs. Courses will be evaluated for credit toward the M.S.N. degree by the program director, whose decision will be final. To be considered for credit, a course must have been taken at an accredited graduate program and be the equivalent of a course offered in the student’s chosen track. The student must have earned a grade of B or higher in the course. The student must submit the syllabus of any course he or she is seeking credit for directly to the program director. Additional documentation may be required by the program director before credit may be granted. Only courses completed prior to matriculation in the M.S.N. program will be considered for transfer credit.

**Progression Requirements**

Students are required to be continuously enrolled in the program, taking at least one graduate course each term. All courses must be completed with a minimum grade of B- for credit to be received toward the M.S.N. degree. A course may be repeated once if a grade less than B- is obtained. Only one repeated course can be applied toward the M.S.N. degree. A second course with a grade less than B- will preclude completion of the program and the student will be dismissed from the program.

**Graduation Requirements**

To receive an M.S.N.—A.P.R.N. degree, all students must fulfill the following requirements:

- successfully complete a minimum of 51 semester hours of coursework, depending on the specialization
- satisfactorily complete the program requirements for the degree with a grade of B- or higher
- apply for graduation
- have satisfactorily met all financial and library obligations
- receive a recommendation for graduation by the program director
### Curriculum Outline

**Core Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 5000</td>
<td>Advanced Nurse Roles</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5101</td>
<td>Theory and Research</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5111</td>
<td>Evidence and Practice</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5220</td>
<td>Health Promotion/Disease Prevention</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5130</td>
<td>Health Care Policy and Leadership</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Core Semester Hours**  15

In addition to the core M.S.N. courses, the following courses are required to complete the M.S.N.—Advanced Practice Registered Nurse, Family Nurse Practitioner program:

**M.S.N.—Advanced Practice Registered Nurse, FNP**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 5502</td>
<td>Advanced Health Assessment</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5510</td>
<td>Advanced Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5531</td>
<td>Advanced Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5542</td>
<td>Primary Care: Adult I</td>
<td>6 (130 practicum hours)</td>
</tr>
<tr>
<td>NSG 5550</td>
<td>Primary Care: Adult II</td>
<td>6 (130 practicum hours)</td>
</tr>
<tr>
<td>NSG 5560</td>
<td>Primary Care: Women</td>
<td>3 (65 practicum hours)</td>
</tr>
<tr>
<td>NSG 5571</td>
<td>Behavioral Health for Advanced Practice Nurses</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5580</td>
<td>Primary Care: Pediatrics</td>
<td>3 (65 practicum hours)</td>
</tr>
<tr>
<td>NSG 5590</td>
<td>Family Nurse Practitioner Practicum</td>
<td>6 (130 practicum hours)</td>
</tr>
</tbody>
</table>

**Total Family Nurse Practitioner Semester Hours**  36
In addition to the core M.S.N. courses, the following courses are required to complete the M.S.N.—Advanced Practice Registered Nurse, Adult-Gerontology Acute Care Nurse Practitioner program:

### M.S.N.—Advanced Practice Registered Nurse, AGACNP*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 5531</td>
<td>Advanced Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5510</td>
<td>Advanced Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5502</td>
<td>Advanced Health Assessment</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5620</td>
<td>Adult-Gerontology: Acute Care I</td>
<td>6 (130 practicum hours)</td>
</tr>
<tr>
<td>NSG 5630</td>
<td>Adult-Gerontology: Acute Care II</td>
<td>6 (130 practicum hours)</td>
</tr>
<tr>
<td>NSG 5471</td>
<td>Behavioral Health for Advanced Practice Nurses</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5650</td>
<td>Adult-Gerontology: Acute Care III</td>
<td>6 (130 practicum hours)</td>
</tr>
<tr>
<td>NSG 5660</td>
<td>Adult-Gerontology: Acute Care Practicum</td>
<td>6 (130 practicum hours)</td>
</tr>
</tbody>
</table>

**Total Adult-Gerontology Acute Care Nurse Practitioner Semester Hours** 36

*Courses progress in lock-step order.

In addition to the core M.S.N. courses, the following courses are required to complete the M.S.N.—Advanced Practice Registered Nurse, Psychiatric Mental Health Nurse Practitioner program:

### M.S.N.—Advanced Practice Registered Nurse, PMHNP*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 5531</td>
<td>Advanced Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5532</td>
<td>Neurobiology Psychopharmacology</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5510</td>
<td>Advanced Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5502</td>
<td>Advanced Health Assessment</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5710</td>
<td>Psychiatric Management I: Psychopathology and the DSM-V</td>
<td>6 (130 practicum hours)</td>
</tr>
<tr>
<td>NSG 5720</td>
<td>Psychiatric Management II: Developmental Theories for Child and Adolescent Mental Health</td>
<td>6 (130 practicum hours)</td>
</tr>
<tr>
<td>NSG 5730</td>
<td>Psychiatric Management III: Modalities of Psychotherapy</td>
<td>6 (130 practicum hours)</td>
</tr>
<tr>
<td>NSG 5790</td>
<td>Psychiatric Care Management: Integration Practicum</td>
<td>6 (130 practicum hours)</td>
</tr>
</tbody>
</table>

**Total Psychiatric Mental Health Nurse Practitioner Credits** 36

*Courses progress in lock-step order.*
The online Doctor of Nursing Practice (D.N.P.) program at Nova Southeastern University is a practice-focused terminal degree designed to serve post-M.S.N. nurse practitioners, nurse informaticists, clinical nurse specialists, nurse midwives, nurse anesthetists, nurse educators, and nurse managers/executives. The D.N.P. curriculum features a convenient, online format that builds on current M.S.N. programs by supporting evidence-based practice, quality improvement, and systems thinking, and reflects the Essentials of Doctoral Education for Advanced Nursing Practice (American Association of Colleges of Nursing, 2006).

Students may focus on a direct care role or an aggregate/systems/organizational role, such as informatics, nursing administration, or community health. Students remain engaged in online coursework combined with face-to-face practicum experience that culminates in the student’s D.N.P. project. Emphasizing practice that is innovative and based in evidence, the final project reflects the application of the student’s research findings.

This online program attracts highly experienced faculty members with advanced preparation and extensive experience in the area of specialization. Faculty members work directly with students to achieve each student’s professional nursing goals, and each student will be assigned an adviser to further assist with individualized program guidance. Graduates of the D.N.P. program are prepared to lead and engage in practical, clinically focused scholarship and research utilization.

**Bachelor of Science in Nursing to Doctor of Nursing Practice (B.S.N. to D.N.P.)**

For R.N.’s with a B.S.N. degree who wish to pursue the highest clinical degree, multiple pathways are available to pursue a D.N.P. Once enrolled, students are eligible to complete components of both the M.S.N. and D.N.P. through one, streamlined track. Upon completing the entire curriculum, graduates are awarded both an M.S.N. and a D.N.P. degree.

Students who wish to pursue a traditional D.N.P. role are able to complete the program totally online. Concentrations in this track include Executive Nurse Leadership, Nursing Informatics, or Nurse Education. Students who pursue the A.P.R.N. track complete the clinical courses in hybrid format and must live within 150 miles of their campus. Concentrations in this track include Family Nurse Practitioner, Adult-Gerontology Acute Care Nurse Practitioner, or Psychiatric-Mental Health Nurse Practitioner.

**Admissions Requirements**

Prospective D.N.P. and B.S.N. to D.N.P. students are selected for admission based on application content, academic record, curriculum of completed required courses, professional nursing licensure, and evaluation forms. Individual student transcripts and writing samples are evaluated by select faculty members, the program director, and the assistant dean of nursing.

Admissions requirements and application procedures for NSU’s Bachelor of Science in Nursing (B.S.N.) degree program can be found at nursing.nova.edu/undergraduate/undergraduate-nursing-admissions.html.

Admission to the D.N.P. program requires

- a master’s degree in nursing or a related field from a regionally accredited or internationally accredited school (Nursing degrees must be accredited by the Accreditation Commission for Education in Nursing [ACEN], the Commission on Collegiate Nursing Education [CCNE], or the Commission for Nursing Education Accreditation [CNEA]).
- an overall cumulative GPA of 3.0 on a 4.0 scale in the candidate’s master’s degree

Admission to the B.S.N. to D.N.P. program requires

- an overall cumulative GPA of 3.0 on a 4.0 scale

Admission to both programs require

- a current, active, and unencumbered United States R.N. license
- two reference forms from individuals other than relatives (suggested sources include professors, academic advisers, and professional nursing references)
- a writing sample (instructions on the following page)
- a CV/résumé
- official documentation of all supervised, postbaccalaureate practice hours

* Students who enter the D.N.P. program without an M.S.N. will be required to enroll in NSG 7299—Transition to D.N.P. in the first semester of admission to the program. This course is only offered in the fall.
Application Procedures
The NSU Ron and Kathy Assaf College of Nursing participates in the centralized application service called NursingCAS. NursingCAS does not take part in student selection. The NursingCAS application information may be obtained:

- online at nursingcas.org
- by calling NursingCAS at (617) 612-2880

The deadline to complete and submit the NursingCAS application is August 1 for fall admission and December 9 for winter admission.

1. Send supporting documents to NursingCAS.
   NursingCAS
   P.O. Box 9201
   Watertown, MA 02471
   a. All official college transcripts from undergraduate, graduate, and professional institutions attended must be sent to NursingCAS directly from those institutions.
   b. Coursework taken at foreign institutions must be evaluated for U.S. institutional equivalence by an approved National Association of Credential Evaluation Services (NACES) organization such as one of the services listed below.
      • World Education Services, Inc.
        Bowling Green Station
        P.O. Box 5087
        New York, NY 10274-5087
        (212) 966-6311 • wes.org
      • Josef Silny & Associates, Inc.,
        International Education Consultants
        7101 SW 102 Avenue
        Miami, FL 33173
        (305) 273-1616 • (305) 273-1338 fax
        info@jsilny.org • jsilny.org
      • Educational Credential Evaluators, Inc.
        101 West Pleasant Street, Suite 200
        Milwaukee, WI 53212-3963
        (414) 289-3400 • ece.org
   It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service.
   c. Submit a writing sample (use APA 7th edition formatting, including headings for each section) directly to NursingCAS. Include the following information in your statement:

   Problem/Issue
   Discuss a problem or issue in your professional practice setting that needs to be addressed from a D.N.P. perspective. (250 words minimum)

   Applicant’s Goals
   Discuss your personal and professional goals related to the D.N.P. (250 words minimum)
   d. Submit a current curriculum vitae/résumé.
   e. Submit a copy of your active, unencumbered United States R.N. license. The license must remain active and current.

2. In addition to NursingCAS, applicants must submit an online NSU application at apply.nova.edu.

3. Submit official documentation of all supervised, postbaccalaureate practice hours from any regionally or internationally accredited schools attended.

Documentation must be from the program director of the previous postbaccalaureate program and include the following information on university letterhead:

- date
- university name and department
- applicant’s full name
- date and title of degree earned
- specialization earned and total number of preceptor-verified clinical experience hours
- program director’s signature
- contact information for follow up, if necessary

Tuition and Fees
Tuition for 2020–2021 is posted on the college’s websites (nursing.nova.edu/dnp or nursing.nova.edu/bsntodnp). There is an NSU Student Services Fee—$500 per semester, not to exceed $1,500 annually. A Health Professions Division General Access Fee of $145 is required each year, as well as a one-time NSU Application Fee of $50. A lab fee of $100 is required per semester for B.S.N. to D.N.P. students who chose the A.P.R.N. concentration.

Acceptance Fee is $500. This fee is required to reserve the accepted applicant’s place in the class. This advance payment will be deducted from the tuition payment due by registration day, but is not refundable in the event of a withdrawal. It is due within two weeks of an applicant’s acceptance.

All tuition and fees are subject to change by the board of trustees without notice.

The first semester’s tuition and fees, less the $500 previously paid tuition deposit, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.
Each student is required to carry adequate personal medical and hospital insurance. Students may purchase health insurance through NSU. Students who have adequate personal medical and hospital insurance may waive NSU’s health insurance by filling out the Student Health Insurance Waiver available through the Bursar’s Office (nova.edu/bursar/health-insurance). This must be completed by the designated due date to avoid charge.

Students are responsible for transportation to clinical agencies and other off-campus locations related to their program.

There are a number of national, state, and hospital grants available for the nursing student. The Office of Student Financial Assistance and the Ron and Kathy Assaf College of Nursing are eager to assist students in exploring financial aid options. Students can review scholarship opportunities at nursing.nova.edu/students/scholarships.html, and can speak to a financial aid representative by calling (954) 262-3380. Do not hesitate to ask for help.

**Academic Policies**
The following academic policies apply to all students in the graduate nursing programs.

**Transfer Credits**
No more than 6 graduate credits may be transferred into the D.N.P. program from other doctoral programs. Courses will be evaluated by the program director and the assistant dean on an individual basis for credit toward the D.N.P. The decision will be final. To be considered for credit, a course must have been taken at an accredited graduate program and be the equivalent of a course offered in the Ron and Kathy Assaf College of Nursing D.N.P. program. The student must have earned a grade of B or higher in the course. Students must submit the syllabus of any course for which they are seeking credit directly to the program director. Additional documentation may be required before credit may be granted. Only courses completed prior to matriculation into NSU’s D.N.P. program will be considered for transfer credit.

**Program Progression**
Students are required to satisfactorily complete all required courses for the program with a grade of B or higher. A student who fails two courses in the program will be dismissed with the second failure. Student must be continuously enrolled in the program.

**Graduation Requirements**
• completion of all program requirements for the degree with a B or higher
• completion of all degree requirements within five years
• satisfaction of all financial requirements within the university
• application for graduation
• recommendation for graduation by the program director

**Curriculum Outlines**

Attendance at the Fort Lauderdale/Davie Campus for the two–three days of the Summer Institute is required at the end of May/beginning of June.

<table>
<thead>
<tr>
<th>D.N.P. Courses</th>
<th>Semester Hours</th>
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<tbody>
<tr>
<td>NSG 7020 Health Care Policy and Advocacy</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7131 Epidemiology and Public Health</td>
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<td>NSG 7135 Health Care Information Systems and Outcomes Management</td>
<td>3</td>
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<tr>
<td>NSG 7300 D.N.P. Roles</td>
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<tr>
<td>NSG 7350 Leading in Complex Health Care Systems</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7400 Nursing Science for Clinical Practice</td>
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<tr>
<td>NSG 7431 Project I: Mentored Scholarship*</td>
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<tr>
<td>NSG 7444 Project II: Project Plan*</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7445 Project III: Implementation*</td>
<td>3</td>
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</tbody>
</table>
Minimum Total Semester Hours  36

Students may focus on a direct care role or an aggregate/systems/organizational role such as informatics, nursing administration, or community health.

*These courses are practice-immersion courses that help students become experts in a practice field while the project is completed. Each course requires a minimum of 130 clinical practice hours.

D.N.P. graduates are required to complete 1,000 clinical practice hours post-Bachelor of Science in Nursing. Hours from the M.S.N. credited toward these practice hours must be verified by the university where the student completed the M.S.N. Students may be required to complete additional hours in order to meet the 1,000-hour requirement. Students may enroll in NSG 7460—Scholarly Inquiry in Clinical Practice until required hours are completed. All but 130 of the required 1,000 clinical hours must be completed prior to starting NSG 7451.

If an applicant is an R.N. or B.S.N. with a master’s degree in another health-related field, the applicant may enroll in a transitional course, NSG 7299—Transition to D.N.P., to meet M.S.N. essentials prior to the start of D.N.P. coursework. This course is only offered in the fall semester.

Students will work with an adviser to plan their individual program of study.

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<td>NSG 5300 Nursing Curriculum Development</td>
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<td>NSG 5370 Introduction to Educational Concepts</td>
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<td>NSG 5380 Educational Concepts I: Principles of Evaluation</td>
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<td>NSG 7020</td>
<td>D.N.P. Role in Health Care Policy and Advocacy</td>
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<td>Project IV: Evaluation</td>
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**Total Nursing Education**

| Semester Hours | 69 |
| Clinical Hours  | 1,040 |

**B.S.N.–D.N.P.—Nursing Informatics**

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<td>NSG 5220</td>
<td>Health Promotion/Disease Prevention</td>
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<td>MI 6413</td>
<td>Lean Six Sigma Yellow Belt for Health Care</td>
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<td>MI 5121</td>
<td>Information Systems Project Management and Leadership in Health Care</td>
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<td>NSG 7460</td>
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<tr>
<td>MI 5204</td>
<td>Clinical Decision Support System</td>
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<td>MI 5130</td>
<td>Database Systems in Health Care</td>
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<td>NSG 5610</td>
<td>Advanced Practice in Nursing Informatics</td>
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**Total Nursing Informatics**

| Semester Hours | 69 |
| Clinical Hours  | 1,040 |

524 Ron and Kathy Assaf College of Nursing—Doctor of Nursing Practice
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<td>NSG 5230</td>
<td>Nursing Decision Making in Complex Health Systems</td>
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<td>NSG 5250</td>
<td>Fiscal Management of Complex Health Systems</td>
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<td>NSG 5240</td>
<td>Nursing Governance and Resource Management in Complex Health Systems</td>
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<td>NSG 5460</td>
<td>Quality Initiatives: Transforming Care in Complex Health Systems</td>
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**Total Executive Nurse Leadership**

- Semester Hours: 69
- Clinical Hours: 1,040

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<td>Advanced Health Assessment</td>
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<td>NSG 5571</td>
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**Total Family Nurse Practitioner**

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<td>Semester Hours</td>
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<td>NSG 5531</td>
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**Total Adult-Gerontology Acute Care Nurse Practitioner**

- Semester Hours: 75
- Clinical Hours: 1,040

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**Total Psychiatric-Mental Health Nurse Practitioner**

- Semester Hours: 75
- Clinical Hours: 1,040
Doctor of Philosophy in Nursing (Ph.D.)

The Doctor of Philosophy (Ph.D.) in Nursing, with a focus on Nursing Education, is an online degree program for graduates of accredited Master of Science programs who have a degree in nursing or in a related field from a regionally accredited school. (The M.S.N. degree program must be accredited by the Accreditation Commission for Education in Nursing [ACEN], the Commission on Collegiate Nursing Education [CCNE], or the Commission for Nursing Education Accreditation [CNEA].) Applicants must hold U.S. Registered Nurse (R.N.) licensure.

The program is designed to prepare nurse scholars to conduct research supporting nursing education, to provide scholarly service at academic facilities and to the professional and health care communities as nurse educators, and to teach nurses and potential nurses in the academic and clinical setting. Graduates of the program will be able to assess, plan, implement, and evaluate teaching-learning strategies and use traditional, as well as advanced technological, educational strategies.

All students in the Ph.D. track take 9 semester hours of core courses. Courses within the Ron and Kathy Assaf College of Nursing include 12 semester hours of nursing science and nursing theory courses, 15 semester hours of advanced nursing research courses, 15 semester hours of higher education, and a minimum of 9 semester hours of dissertation.

The Doctor of Philosophy in Nursing degree is based on an interprofessional approach to education. NSU’s Health Professions Division provides eight courses that are offered in an interprofessional format with the Ron and Kathy Assaf College of Nursing and the departments of Occupational Therapy, Physical Therapy, and Health Science.

For further information, call the Ron and Kathy Assaf College of Nursing at (954) 262-1975 or 800-356-0026, ext. 21975.

Doctor of Nursing Practice to Doctor of Philosophy (D.N.P. to Ph.D.) Program

The D.N.P. to Ph.D. program is designed for nurses who have completed the D.N.P. degree through an accredited school (CCNE, ACEN, NLNAC), and have an interest in further advancing their education to complete a Ph.D. with a focus on Nursing Education. The program begins in the winter semester. It is six semesters (27 semester hours) of coursework, followed by a minimum of three semesters (9 semester hours) of dissertation. The entire program consists of 36 semester hours at a minimum. The classes are online, and there is a one-week summer institute held at the Fort Lauderdale/Davie Campus. (D.N.P. to Ph.D. students will attend two summers.) The summer institute occurs once per year, generally in late May or early June, and attendance is required each year.

Admissions Requirements

Prospective Ph.D. in Nursing and D.N.P. to Ph.D. students are selected for admission based on application content, academic record, professional nursing licensure, and reference forms.

Admission to the Ph.D. program requires

- a current, active, and unencumbered United States R.N. license.
- an M.S. degree with a major in nursing or an M.S.N. from a regionally accredited college or university
  - Nursing degrees must be accredited by the Accreditation Commission for Education in Nursing (ACEN), the Commission on Collegiate Nursing Education (CCNE), or the Commission for Nursing Education Accreditation (CNEA).
- an overall GPA of 3.0 in the candidate’s master’s or post-master’s degree program in nursing
- two reference forms from individuals other than relatives (suggested sources include professors, academic advisers, and professional nursing references)
- a writing sample that includes an unpublished or published paper, using APA 7th edition formatting—including headings for each section
- a CV or résumé

Attendance is required for a mandatory, one-week summer institute that includes an orientation session. This summer institute is usually held the end of May or beginning of June on the Fort Lauderdale/Davie Campus for all accepted students and students completing their first and second year. Attendance for this two-day to three-day institute is mandatory. This is a one-time attendance, the first year of admission.

Application Procedures

The NSU Ron and Kathy Assaf College of Nursing participates in the centralized applications service called NursingCAS. NursingCAS does not take part in student selection. The NursingCAS application may be obtained

- online at nursingcas.org
- by calling NursingCAS at (617) 612-2880

The deadline to complete and submit the NursingCAS and NSU applications will be March 1 for fall admission. Applications are accepted year-round.

1. Send supporting documents to NursingCAS.

NursingCAS
P.O. Box 9201
Watertown, MA 02471
a. All official college transcripts from undergraduate, graduate, and professional institutions attended must be sent to NursingCAS directly from those institutions.

b. Coursework taken at foreign institutions must be evaluated for U.S. institutional equivalence by an approved National Association of Credential Evaluation Services (NACES) organization such as one of the services listed below.

- World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, NY 10274-5087
  (212) 966-6311 • wes.org

- Josef Silny & Associates, Inc.,
  International Education Consultants
  7101 SW 102 Avenue
  Miami, FL 33173
  (305) 273-1616 • (305) 273-1338 fax
  info@jsilny.org • jsilny.org

- Educational Credential Evaluators, Inc.
  101 West Pleasant Street, Suite 200
  Milwaukee, WI 53212-3963
  (414) 289-3400 • ece.org

It is the applicant’s responsibility to have this coursework evaluated. An official course-by-course evaluation with a cumulative grade point average must be sent directly from the evaluation service.

c. Applicants must submit a current curriculum vitae or résumé.

d. Applicants must submit a copy of their active, unencumbered United States R.N. license. The license must remain current throughout the program.

e. Two references must be completed by individuals other than relatives (suggested sources include professors, academic advisers, and professional nursing references).

f. Applicants must submit a professional writing sample using APA 7th edition formatting, including headings for each section.

2. In addition to NursingCAS, applicants must submit an online NSU application at apply.nova.edu.

**Tuition and Fees**

Tuition for 2020–2021 is posted on the college’s website (nursing.nova.edu/phd). There is an NSU Student Services Fee—$500 per semester, not to exceed $1,500 annually. A Health Professions Division General Access Fee of $145 is required each year, as well as a one-time NSU Application Fee of $50.

Acceptance Fee is $500. This fee is required to reserve the accepted applicant’s place in the class. The advance payment will be deducted from the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is payable within the two weeks of an applicant’s acceptance.

All tuition and fees are subject to change by the board of trustees without notice.

The first semester’s tuition and fees, less the $500 previously paid tuition deposit, are due on or before registration day. Tuition for each subsequent semester is due on or before the appropriate registration day. Students will not be admitted until their financial obligations have been met.

Each student is required to carry adequate personal medical and hospital insurance. Students may purchase health insurance through NSU. Students who have adequate personal medical and hospital insurance may waive NSU’s health insurance by filling out the Student Health Insurance Waiver available through the Bursar’s Office (nova.edu/bursar/health-insurance).

Students are responsible for transportation to clinical agencies and other locations related to their program. Students will incur additional costs, such as books, FNSA dues, uniforms, lab coat, and graduation costs.

The college will pay for the first background check per student. Any additional background checks will be funded by the student.

There are a number of national, state, and hospital grants available for the nursing student. The Office of Student Financial Assistance and the Ron and Kathy Assaf College of Nursing are eager to assist you in exploring financial aid options. Students can review scholarship opportunities at nursing.nova.edu/students/scholarships.html, and can speak to a financial aid representative by calling (954) 262-3380. Do not hesitate to ask for help.

**Academic Policies**

The following academic policies apply to all students in the graduate nursing programs.

**Transfer Credits**

No more than 6 graduate credits may be transferred into the Ph.D. program from other doctoral programs. Courses will be evaluated by the program director and the associate dean on an individual basis for credit toward the Ph.D. Their decision will be final. To be considered for credit, a course must have been taken at an accredited graduate program and be the equivalent of a course offered in NSU’s Ph.D. program. The student must have earned a grade of B or higher in the course. Students must submit the syllabus of any course for which they are seeking credit directly to the program director. Additional
documentation may be required by the program director before credit may be granted. Only courses completed prior to matriculation into NSU’s Ph.D. program will be considered for transfer credit.

Program Progression
Students are required to satisfactorily complete all required courses for the program with a grade of $B$ or higher. A student who fails two courses in a program may be dismissed with the second failure.

Graduation Requirements
• completion of all program requirements for the degree with a $B$ or higher
• completion of all degree requirements within seven years of matriculation into the program
• satisfaction of all financial requirements within the university
• application for graduation
• receipt of a recommendation for graduation by the program director

Curriculum Outlines

Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPH 7220</td>
<td>Research Ethics</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7300</td>
<td>Biostatistics I</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7310</td>
<td>Biostatistics II</td>
<td>3</td>
</tr>
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</table>

Total Core Semester Hours 9

Nursing Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 7000</td>
<td>Theory Development</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7500</td>
<td>Philosophy of Science</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7020</td>
<td>Health Care Policy and Advocacy</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7260</td>
<td>Health Care Education</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7470</td>
<td>Advanced Nursing Research</td>
<td>3</td>
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Total Nursing Semester Hours 15

Research Nursing Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>HPH 7400</td>
<td>Quantitative Research Design</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7410</td>
<td>Qualitative Research Design</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7600</td>
<td>Grants and Publications</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7210</td>
<td>Evidence-Based Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7270</td>
<td>Doctoral Inquiry</td>
<td>1</td>
</tr>
<tr>
<td>NSG 7280</td>
<td>State of the Science</td>
<td>1</td>
</tr>
<tr>
<td>NSG 7290</td>
<td>Comprehensive Examination: Seminar III</td>
<td>1</td>
</tr>
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</table>

Total Research Nursing Semester Hours 15

530 Ron and Kathy Assaf College of Nursing—Ph.D. Program
<table>
<thead>
<tr>
<th>Cognates</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 7030 Leadership in Higher Education</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7140 Theories of Education</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7150 Instructional Design and Curriculum Development</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7700 Tests and Measurements</td>
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</table>

**Total Cognate Semester Hours** 12

<table>
<thead>
<tr>
<th>Dissertation</th>
<th>Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>NSG 7340 Dissertation</td>
<td>9 (minimum)</td>
</tr>
</tbody>
</table>

**Total Semester Hours for Degree** 9 (minimum)

**Total Semester Hours** 60 (minimum)

* 90 hours of research experience with a nurse researcher required after the completion of qualitative and quantitative research coursework

There is an annual, on-campus, one-week residency requirement.

<table>
<thead>
<tr>
<th>D.N.P. to Ph.D. in Nursing with a Focus on Nursing Education</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPH 7500 Philosophy of Science</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7310 Biostatistics II</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7140 Theories of Education</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7150 Instructional Design and Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7270 Doctoral Inquiry</td>
<td>1</td>
</tr>
<tr>
<td>NSG 7210 Evidence-Based Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7280 State of Science</td>
<td>1</td>
</tr>
<tr>
<td>NSG 7470 Advanced Nursing Research</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7400 Quantitative Research Design</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7410 Qualitative Research Design</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7290 Comprehensive Exam</td>
<td>1</td>
</tr>
<tr>
<td>NSG 7340 Dissertation</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7340 Dissertation</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7340 Dissertation</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Semester Hours** 36
Course Descriptions

HPH 7220—Research Ethics
This course introduces students to ethics concepts as they apply to questions and challenges in conducting research with human subjects. The aim is to increase students’ awareness of, and ability to reason through, ethical issues that arise in human subjects research. The course will draw upon historical examples, codes, declarations, and other sources of ethical guidance, including discussions of contemporary controversies in human subjects research. (3 semester hours)

HPH 7300—Biostatistics I
The application of quantitative techniques has expanded rapidly in medical decision making. The emphasis on evidence-based health care means that health care workers must be able to evaluate the results from published health care research studies. This course is the first of two courses designed to provide students with the knowledge of quantitative techniques. It will cover descriptive statistics, parametric group comparison statistics, and basic nonparametric statistics. It will also provide an introduction to linear modeling. (3 semester hours)

HPH 7310—Biostatistics II
The aim of this course is to enable students to appreciate the richness of statistical science and the concepts of probabilistic thinking. Statistics is the science of the future. Any technique that students learn will help them to understand the unknown better and, in turn, will increase their success in other courses and in future professional careers. Principles of statistical inference build upon the Fundamentals of Biostatistics course. The goals of this course are threefold: (1) introduce the basic concepts of probability and methods for calculating the probability of an event; (2) assist students in developing and understanding probability theory and sampling distributions; and (3) familiarize students regarding inferences involving one or two populations, ANOVA, regression analysis, and chi-square tests. Prerequisite: Fundamentals of Biostatistics (3 semester hours)

HPH 7400—Quantitative Research Design
This course will provide students with a fundamental understanding of the basic methods and approaches used in health-related research. A major emphasis of the course will be on the conceptualization and design of research studies. The course will cover ethics, formulation of research questions, study design, reliability, validity, sampling, measurement, and interpretation of research findings. It will prepare students to critically evaluate published literature and to design sound research studies. The course will be both theoretical and applied. Students will be challenged to apply the theoretical concepts presented in the classroom and in the readings to design a study that addresses a health-related issue of their choice. (3 semester hours)

HPH 7410—Qualitative Research Design
The Doctor of Philosophy degree programs in occupational therapy (OT) and physical therapy (PT) are designed to prepare students to conduct research in their discipline. In HPH 7410, students will focus primarily on the knowledge and skill competencies needed to design and conduct OT/PT qualitative research successfully. In this pursuit, students will immerse themselves in the epistemological, theoretical, ethical, methodological, and procedural understanding of qualitative research; apply this knowledge to the conceptualization and conduct of OT/PT qualitative research; report the findings of the research in the form of a research article; and appraise the quality of such qualitative research products. Upon completion of the course, students will have demonstrated that they have mastered the basic competencies needed to create, plan, and complete a qualitative research dissertation. (3 semester hours)

HPH 7500—Philosophy of Science
This course will address classical issues in the philosophy of science, including demarcation, the distinction between what science is and is not, hypothesis development, confirmation and falsification, causation, and explanation. The course will also explore the ontological, epistemological, methodological, and axiological foundation of the major paradigms within which inquiry in the human services professions are located. Issues of congruence between research question selection and paradigm selection will be addressed as well. (3 semester hours)

HPH 7600—Grants and Publications
This course is designed to provide writing experiences that prepare the learner for manuscript and grant proposal submissions. This introductory experience into the grant process from proposal to funding to management will include project management, funding sources, and funding challenges. Other course requirements include a research proposal (manuscript) that is ready for submission for publication and development of a dissertation proposal. (3 semester hours)

HPH 7700—Tests and Measurements
The course provides a foundation in the basic principles of measurement error with a focus on how to assess and control for error through research design methods and statistical analysis. Students will explore test construction and parsimonious data analysis methods to develop an understanding for designing instruments and assessment tools. Topics in the course will include survey implementation, sampling, data collection, follow-up, and ethical issues. A focus on issues specific to measurement error in the medical sciences will also be examined throughout the course. (3 semester hours)
**MI 5100—Survey of Biomedical Informatics**

This online, interactive course is an introductory survey of the discipline of biomedical informatics. It will introduce the student to the use of computers for processing, organizing, retrieving, and utilizing biomedical information at the molecular, biological system, clinical, and health care organization levels through substantial, but not overwhelming, reading assignments. The course is targeted at individuals with varied backgrounds, including medical, nursing, pharmacy, administration, and computer science. It will describe essential concepts in biomedical informatics that are derived from medicine, computer science, and the social sciences. (3 semester hours)

**MI 5121—Information Systems Project Management in Health Care**

This course introduces the fundamental principles of project management from an information technology perspective as they apply to health care organizations. Critical features of core project management are covered, including integration management, scope management, time management, cost management, quality management, human resource management, communication management, risk management, and procurement management. Also covered is the following information technology management related to project management: user requirements management, infrastructure management, conversion management, software management, workflow management, security management, interface management, test management, customer management, and support management. The following areas of change management related to project management will be covered as well: realization management, sponsorship management, transformation management, training management, and optimization management. Students will explore and learn hands-on skills with project management software assignments and participate in a health care systems implementation—a course-long group project intended to apply their newly developed knowledge and skills in a controlled environment. (3 semester hours)

**MI 5130—Database Systems in Health Care**

This course covers basic to intermediate knowledge of the concept, design, and implementation of database applications in health care. Students will study tools and data models for designing databases such as E-R Model and SQL. The course also covers Relational DBMS systems such as Access, SQL Server, Oracle, and MySQL. In addition, database connectivity design (essential in data-driven web development) and database administration will also be introduced. (3 semester hours)

**MI 5204—Clinical Decision Support System**

This course introduces students to theoretical, statistical, and practical concepts underlying modern medical decision making. Students will be provided with a review of the multiple methods of knowledge generation for clinical decision support systems (CDSS) and create their own prototype of CDSS. Current implementations of stand-alone and integrated CDSS will be evaluated. Techniques for planning, management, and evaluation of CDSS implementations will be reviewed. Human factors—including work-flow integration and the ethical, legal, and regulatory aspects of CDSS use—will be explored, as applicable to commercial implementations in patient-care settings. Future models of health care, supported by CDSS and evidence-based medicine, will be discussed and reviewed. (3 semester hours)

**MI 6413—Lean Six Sigma Yellow Belt for Health Care**

Lean Six Sigma for Health Care (Yellow Belt) participants will learn the basic philosophy, tools, and techniques to deliver breakthrough business improvements that will reduce waiting times, improve quality, and reduce costs in a health care environment. More specifically, they will learn to apply a comprehensive set of 15–20 Lean Six Sigma process improvement tools by using the PDCA (Plan, Do, Check, Act) problem-solving model. They will learn techniques for both quantitative and qualitative analysis, as well as methods and tools for waste reduction and process enhancement and acceleration. The course also covers how to map out processes and identify sources of variation, as well as gain a basic understanding of descriptive statistical analysis. Finally, students will learn how to perform basic pilot studies and analyze the results, in order to determine the most effective way to improve and stabilize processes. Candidates will work on either an integrated health care case study or on an actual business project and will apply classroom techniques to the project. (3 semester hours)

**NSG 5000B—Transition to Advanced Nursing Practice**

This course is designed to assist the registered nurse with a non-nursing bachelor’s degree to develop the knowledge and skills to transition into the Master of Science in Nursing (M.S.N.) program. The student will build upon current nursing experience and knowledge as well as previous baccalaureate education in order to demonstrate recommended competencies in baccalaureate nursing prior to beginning the M.S.N. coursework. (6 semester hours)

**NSG 5000—Advanced Nurse Roles**

This course introduces and facilitates transition of the R.N. into the advanced practice role. Students will integrate the new functions and activities of the master’s degree-prepared nursing role into professional practice. The role of the master’s degree-prepared nurse to work effectively in interdisciplinary relationships or partnerships, recognizing the uniqueness and similarities among the various roles, is emphasized. Students will understand the underpinnings that provide an ethical framework for nursing practice. They will explore and analyze how values shape professional practice and influence decisions, interventions, and patient-centered care. Students are introduced to scholarship, evidence-based practice,
informatics, and health care technologies in the master’s degree-prepared nurse role to improve health care outcomes. 

(3 semester hours)

NSG 5101—Theory and Research
This course focuses on the nature and the use of inquiry in the development and refinement of nursing concepts and theories. It provides students with the opportunity to discuss, analyze, and critique a wide range of concepts and theories from nursing and the other sciences. This course also focuses on research from the evidenced-based practice (EBP) paradigm. Quantitative and qualitative research designs and methods of appraisal are reviewed. Ethical dimensions of the conduct of nursing research, EBP, translational research, and application of health care ethics, including use of information technology, are examined. (3 semester hours)

NSG 5111—Evidence and Practice
This course provides an overview of research in nursing with a focus on translating and ethically integrating scientifically based evidence into practice to improve outcomes. Students learn to formulate researchable questions and to develop further skills in assessing databases and searching the literature. Methods of disseminating evidence and the use of information technology to reduce risks and improve practice outcomes are explored. (3 semester hours)

NSG 5130—Health Care Policy and Leadership
This course focuses on providing the master’s degree-prepared nurse leader with an understanding of how policy influences the structure of health care, nursing practice, and health outcomes at the institutional, local, state, and federal levels. With ever-evolving changes in the organization and financing of health care, the master’s degree-prepared nurse must have the knowledge and skills necessary to assume a leadership role in policy-making. The responsibilities of the nurse leader in advocating for policy change to provide quality, cost-effective care will be explored. (3 semester hours)

NSG 5220—Health Promotion and Disease Prevention
This course provides a theoretical basis for health promotion and disease prevention. Organizational, patient-centered, and culturally responsive concepts are examined as they pertain to population health. The master’s degree-prepared nurse will collaborate, communicate, and consult with the interprofessional team to design evidence-based health promotion; disease prevention; population care; and services to individuals, families, communities, and aggregates/clinical populations nationally and globally. Health promotion and disease prevention will be explored from an ecological/epidemiological perspective, including critical social, political, racial/ethnic, cultural, and economic environments. The importance of health policy, information technology, and leadership principles are examined pertaining to health promotion and disease prevention. (3 semester hours)

NSG 5230—Nursing Decision Making in Complex Health Care Systems
This course prepares students to utilize decision-making models, processes, and theoretical frameworks as a foundation for leadership activities in complex health systems. Internal and external factors impacting decision making within a health system will be explored and analyzed. Economics, trend analysis, and evidence-based systems leadership will be analyzed. (3 semester hours)

NSG 5240—Nursing Governance and Resource Management in Complex Health Systems
This course focuses on the structure and design of nursing governance models and prepares the master’s degree-prepared nurse to participate in the design and implementation of new models of care delivery and coordination. Governance models drive the operational, educational, and research process for nursing practice in a healthcare system. Operational processes include technology and the need for human resource management. Education is maintained through life-long learning, membership in professional organizations, and certification. Through application of evidence-based research, the master’s degree-prepared nurse leader evaluates and applies best practices to the delivery of health care. (3 semester hours)

NSG 5250—Fiscal Management in Complex Health Systems
This course focuses on the interconnectedness of fiscal management, regulation, and financial reimbursement decision-making utilizing a systems-thinking approach. Students will develop decision-making strategies for integrating financial data to improve health care delivery in complex health systems. Students will apply fiscal management principles to a current health care issue. The relationship between fiscal and ethical responsibility is examined. (3 semester hours)

NSG 5300—Nursing Curriculum Development
This course introduces the student to the process of curriculum development. The relationship of nursing curriculum to the parent institution’s mission and philosophy is analyzed. Issues of accreditation, standards of professional nursing practice, and legal/ethical issues are analyzed within the context of curriculum development and program evaluation. Selected theories, principles, and techniques of curriculum development are explored. The role of the educator is explored. (3 semester hours)

NSG 5340—Nurse Leadership Roles in Complex Health Systems
This course focuses on nursing leadership roles within a complex health care system. The student will apply leadership, change, and organizational theories within a framework of systems thinking. Students will develop strategies for introducing and sustaining change. Ethical and legal concerns related to the nursing leadership role are explored. (3 semester hours)
NSG 5360—Nurse Educator Practicum
This course addresses two distinct foci for the nurse educator: role preparation in both academic and health care settings and development of in-depth knowledge and expertise in a particular area of nursing. For the educator-role focus, students will analyze, synthesize, and utilize concepts of education. For the clinical-expertise focus, students will apply advanced conceptual knowledge in graduate-level clinical practice experiences. Students work directly with preceptors to fulfill clinical and educational objectives. (3 semester hours)

NSG 5370—Introduction to Educational Concepts
This course examines the conceptual basis and evidence-based educational research for teaching and learning. The relationships between learning outcomes, learning styles, instructional strategies, assignments, and activities in educational environments are identified. Strategies for promoting student success and classroom management are examined. Various educational environments are explored. Legal and ethical considerations of instruction are included. (3 semester hours)

NSG 5380—Educational Concepts I: Principles of Evaluation
This course focuses on methods to assess and evaluate learning outcomes in various educational environments. Evidence-based educational research that supports evaluation is explored. Legal and ethical aspects impacting evaluations are discussed. (3 semester hours)

NSG 5460—Quality Initiatives: Transforming Care
This course prepares the student with the knowledge and skills to promote safe, effective, timely, efficient, equitable, culturally responsive, patient-centered care. The course will focus on the trend of patient safety, quality, and risk management data over time by the use of performance improvement tools that provide analysis and assist with the future direction of the health care organization. (3 semester hours)

NSG 5470—Business and Economics of Health Care
This course introduces the student to basic economic concepts, principles, and theories used to analyze and evaluate a variety of health care issues. Students will utilize knowledge and skills to evaluate U.S. and international health care systems. (3 semester hours)

NSG 5492—Executive Nurse Leadership Nurse Practicum
Students analyze, synthesize, and utilize all prior courses in a practice environment. The course provides an opportunity to combine beginning research skills, theoretical knowledge, and professional nursing experience to engage in graduate-level nursing activities in a specialty area. In this learning experience, students implement projects that reflect their mastery of all program outcomes. (3 semester hours)

NSG 5502—Advanced Health Assessment
This course is required core content for students in the nurse practitioner and nurse educator advanced practice specialization tracts. This course builds upon baccalaureate knowledge and clinical mastery of health and physical assessment. Comprehensive physical, psychosocial, spiritual, and cultural assessments of individuals across the life span are emphasized. Clinical disease prevention and population health promotion are incorporated into the assessment process. Assessment criteria are appreciated as underpinnings of differential diagnoses and plans of care. (3 semester hours)

NSG 5510—Advanced Pharmacology
Students develop an advanced understanding of pharmacologic principles, which includes the cellular-response level. This area of core content includes both pharmacotherapeutics and pharmacokinetics of broad categories of pharmacologic agents. The purpose of this content is to provide the knowledge and skills to assess, diagnose, manage, and prescribe the appropriate pharmacologic agents in common health problems with a safe, exceptional quality and in a cost-effective manner. (3 semester hours)

NSG 5531—Advanced Pathophysiology I
This course focuses on the pathophysiological concepts that serve as primary components of the foundation for clinical assessment, decision making, and management for advanced nursing practice. Changes associated with individuals of different racial origins, genders, and points across the life span are included. (3 semester hours)

NSG 5532—Neurobiology Psychopharmacology
This course lays the groundwork for advanced practice nurses caring for individuals with mental disorders and/or substance use disorders. It builds on fundamental knowledge of anatomy and pathophysiology, reflecting current scientific knowledge of the neurobiology of serious mental illness. The course will focus on the application of psychopharmacology to clinical problems and factors underlying causality of these disorders, such as genetic or genomic factors, injury, trauma, and infection, as well as nerve degeneration. The complex networks involved in maintaining homeostasis between the brain and body will be examined. Indications for use of psychotropic medications, informed consent, and patient adherence strategies are also considered. (3 semester hours)

NSG 5542—Primary Care: Adult I
This course focuses on the theoretical concepts of health promotion and disease prevention in adults in the primary care setting. It examines acute illnesses and initial presentation of diseases the advanced practice nurse will see in primary care. Students will develop a systematic approach to evaluation and management of common conditions encountered. Content builds upon previous knowledge and clinical reasoning in the development of appropriate differential diagnoses,
diagnostic modalities, and treatment and management plans. Individualized, evidence-based treatment and management plans are implemented by the advanced practice nurse. *(6 semester hours)*

**NSG 5550—Primary Care: Adult II**
This course focuses on the theoretical concepts of health promotion and disease prevention in adults in the primary care setting. It examines acute illnesses and initial presentation of diseases the advanced practice nurse will see in primary care. Students will develop a systematic approach to evaluation and management of common conditions encountered. Content builds upon previous knowledge and clinical reasoning in the development of appropriate differential diagnoses, diagnostic modalities, and treatment and management plans. Individualized evidence-based treatment and management plans are implemented by the advanced practice nurse. *(6 semester hours)*

**NSG 5560—Primary Care: Women**
This course focuses on the development of the domains and competencies of the FNP, providing evidence-based health care for culturally/spiritually diverse female clients and their families in the primary care setting. Concepts of advanced health assessment, pharmacology, and pathophysiology are incorporated in the interdisciplinary management of routine, chronic, and acute health problems in this population. *Prerequisite: NSG 5550 (3 semester hours)*

**NSG 5571—Behavioral Health for Advanced Practice Nurses**
This course focuses on common mental health issues and counseling strategies relevant to advanced practice nurses in various health care settings. Emphasis is on the assessment and management of behavioral, developmental, and lifestyle issues across the life span and in culturally/spiritually diverse populations. Individual and family intervention strategies are presented. *(3 semester hours)*

**NSG 5580—Primary Care: Pediatrics**
This course focuses on the development of the domains and competencies of the Family Nurse Practitioner (FNP), providing evidence-based health care for culturally/spiritually diverse pediatric clients and their families in the primary care setting. Concepts of advanced health assessment, pharmacology, pathophysiology, and integrative alternatives to care are incorporated in the interdisciplinary management of routine, chronic, and acute health problems in this population. *(3 semester hours)*

**NSG 5590—Family Nurse Practitioner Preceptorship**
This course represents the culmination and integration of all previous coursework and provides an opportunity for the student to continue to master the domains and competencies of the FNP. Course content specifically addresses issues for professional practice needed for the graduate to enter the workforce as an advanced practice nurse. *Prerequisite: All courses must be completed prior to enrolling in this course. (6 semester hours)*

**NSG 5600—Nursing Informatics Practicum**
This course provides students with the opportunity to perform the role and function of an entry-level, professional informatics nurse specialist (INS) in a health care setting. The students develop their own field-based projects or participate in an ongoing project, as approved by course faculty members. Students apply nursing informatics principles to enhance health care outcomes. Students are mentored by preceptors that are experienced in nursing informatics in complex health systems. *(4 semester hours)*

**NSG 5610—Advanced Practice in Nursing Informatics**
This course analyzes the role of the informatics nurse specialist (INS) as it relates to the three domains of practice (Foundations, Systems Development Life Cycle, and Data Management and Health Care Technology) and strategies that improve patient outcomes. *(2 semester hours)*

**NSG 5620—Adult-Gerontology: Acute Care I**
This course builds on prerequisite knowledge and skills obtained in foundational courses. Coursework will focus on the theoretical and clinical foundation of advanced practice nursing diagnosis and management of acute and chronic health care problems common to adult and geriatric patients, while integrating evidence-based practice guidelines to ensure safe, evidence-based care. Clinical procedures specific to organ systems and disease processes introduced during this course will be demonstrated. Diverse teaching approaches are used to challenge students to critically think and to improve quality outcomes for patients. Interdisciplinary collaboration among health care providers is promoted. Direct care clinical hours are completed in various inpatient and specialty care settings. *(6 semester hours)*

**NSG 5630—Adult-Gerontology: Acute Care II**
This course builds on prerequisite knowledge and skills obtained in foundational courses. Coursework will focus on the theoretical and clinical foundation of advanced practice nursing diagnosis and management of acute and chronic health care problems common to adult and geriatric patients, while integrating evidence-based practice guidelines to ensure safe, evidence-based care. Clinical procedures specific to organ systems and disease processes introduced during this course will be demonstrated. Diverse teaching approaches are used to challenge students to critically think and to improve quality outcomes for patients. Interdisciplinary collaboration among health care providers is promoted. Direct care clinical hours are completed in various inpatient and specialty care settings. *(6 semester hours)*
NSG 5640—Adult-Gerontology: Acute Care Procedural Course
This course focuses on the development of clinical competency in the performance and evaluation of skills and procedures associated with the adult-gerontology acute care nurse practitioner practice. (2 semester hours)

NSG 5650—Adult-Gerontology: Acute Care III
This course builds on prerequisite knowledge and skills obtained in foundational courses. Coursework will focus on the theoretical and clinical foundation of advanced practice nursing diagnosis and management of acute and chronic health care problems common to adult and geriatric patients, while integrating evidence-based practice guidelines to ensure safe, evidence-based care. Clinical procedures specific to organ systems and disease processes introduced during this course will be demonstrated. Diverse teaching approaches are used to challenge students to critically think and to improve quality outcomes for patients. Interdisciplinary collaboration among health care providers is promoted. Direct care clinical hours are completed in various inpatient and specialty care settings. (6 semester hours)

NSG 5660—Adult-Gerontology: Acute Care Practicum
This course builds on prerequisite knowledge and skills obtained in foundational courses. Coursework will focus on the theoretical and clinical foundation of advanced practice nursing diagnosis and management of acute and chronic health care problems common to adult and geriatric patients, while integrating evidence-based practice guidelines to ensure safe, evidence-based care. Clinical procedures specific to organ systems and disease processes introduced during this course will be demonstrated. Diverse teaching approaches are used to challenge students to critically think and to improve quality outcomes for patients. Interdisciplinary collaboration among health care providers is promoted. Direct care clinical hours are completed in various inpatient and specialty care settings. (6 semester hours)

NSG 5710—Psychiatric Management I: Psychopathology and the DSM V
Building on diagnostic skills learned in Advanced Health Assessment, this course focuses on the etiology and epidemiology of psychopathological disorders. Strategies for assessment and differential diagnosis of commonly occurring mental disorders for adults and children will be explored using case-based approaches. With the clinical practicum, students will apply advanced-level skills for the differential diagnosis of mental disorders in the psychiatric evaluation. These will include observational and interviewing skills, the use and interpretation of screening tools, and laboratory tests. Assessment and treatment strategies for clinical problems will be considered, according to the Diagnostic and Statistical Manual for Mental Disorders (DSM V), from a framework of cultural humility. (6 semester hours)

NSG 5720—Psychiatric Management II: Developmental Theories for Child and Adolescent Mental Health
This course provides an overview of developmental theories and research related to psychotherapeutic treatments for mental disorders across the life span, with emphasis on children and adolescents. It builds upon assessment techniques from previous courses with an emphasis on the differential diagnosis of, and interventions for, care of children and adolescents with psychiatric comorbidities. Students will be prepared for application of developmentally relevant, evidence-based brief psychotherapies, as well as psychopharmacological treatment, i.e., prescription and medication management of these conditions. With the clinical practicum, students will develop competencies in providing ethical, safe, collaborative, and evidence-based care to children, adolescents, and families in the context of a complex health care system. Students will also develop evidence-based biopsychosocial assessment, diagnosis, and treatment of children and adolescents with mental and/or developmental disorders. Emphasis is placed upon the knowledge of professional, policy, and practice issues influencing the PMHNP's role as mental health provider. (6 semester hours)

NSG 5730—Psychiatric Management III: Modalities of Psychotherapy
This course builds upon previous courses with an emphasis on the psychiatric assessment, considering mental health promotion and disease prevention as well as consideration of differential diagnoses and therapeutic interventions for care of individuals with psychiatric conditions. With the clinical practicum, students will engage in comprehensive assessment, diagnosis, intervention, management, and evaluation of patient care, incorporating evidence-based practice therapy. Applications of various psychotherapeutic approaches, including cognitive behavioral, dialectical behavioral, group and family therapy, and Motivational Interviewing will be applied in detail through a case-based learning approach. Students will participate in treatment team meetings, collaborating along with their preceptors, as peers on the multidisciplinary health care team for individuals with mental disorders. (6 semester hours)

NSG 5790—Psychiatric Care Management Integration Practicum
This course provides continued clinical training in the full role of the psychiatric mental health nurse practitioner in mental health or integrated care settings. It focuses on statutes and standards that define scope of practice and prescriptive authority for practitioners prescribing psychiatric medications. Continued focus is on the roles of the PMHNP related to health promotion, leadership, ethical and legal decision-making, health policy and advocacy, quality improvement and safety,
and interprofessional practice. With the clinical practicum, students will further develop competencies in ethical, safe, collaborative, and evidence-based provision of mental health services. (6 semester hours)

NSG 7000—Theory Development
This course examines the nature of nursing knowledge and the development of its underpinnings. Selected approaches to concept/theory development, analysis, and evaluation are examined and applied. The course explores the linkages among theory, research, and practice in the development of nursing knowledge and prepares students to select a theoretical framework for testing in their dissertation. (3 semester hours)

NSG 7020—Health Care Policy and Advocacy
This course provides a holistic overview of health care policy planning from development to implementation. Students will apply current evidence to analyze and evaluate health care policy frameworks from the perspective of professional, political, social, and regulatory issues. They will examine the current U.S. health care system based on public and governmental interests and will explore the role of the doctorally prepared nurse as an advocate and leader in the integration of health care policies into practice. (3 semester hours)

NSG 7030—Leadership in Higher Education
This online course focuses on a variety of topics of importance to nursing leaders in higher education. The structures and functions of college and university settings of all kinds will be explored. Students will examine an agenda of scholarship for self, colleagues, and the discipline. They will investigate multiple dimensions of academic excellence, including faculty members, students, administrators, programs and curricula, teaching and evaluation methods, and resources. These key components will be discussed in the context of educational accreditation. Current issues affecting higher education will also be discussed. (3 semester hours)

NSG 7131—Epidemiology and Public Health
This course provides the student with a foundation in clinical prevention and population health care. Students will be introduced to culturally proficient care in response to societal needs for improved health care outcomes for individuals and populations. This course integrates clinical prevention, screening, behavior change, self-care, disease management, and cultural competency related to the health of populations. An emphasis will be placed on evidence-based clinical prevention and population health services. (3 semester hours)

NSG 7135 Health Care Information Systems and Outcomes Management
This course focuses on the interprofessional collaborative role of the Doctor of Nursing Practice (D.N.P) in selecting, using, and evaluating clinical and administrative information system technologies in health care organizations. Students will explore processes used for collection, analysis, and tracking of quality and safety data. They will explore issues, policies, processes, and standards applicable to the analysis, use, and tracking of quality and safety data. Emerging health care information technologies and methods for collecting appropriate and accurate data for evidence-based practice will be examined. Evaluation of consumer health information technology resources and tools for credibility and health literacy will be explored. (3 semester hours)

NSG 7140—Theories of Education
This course is designed to enhance the student’s knowledge and application of educational theory. The relationship between nursing theory and educational theory is explored. Methods to test educational theories will be evaluated. (3 semester hours)

NSG 7150—Instructional Design and Curriculum Development
This course examines the process of curriculum development from faculty and administrative viewpoints. The relationship of learning theory to curriculum and instructional design is explored. Curricula are analyzed within the context of accreditation standards and program evaluation. Instructional design models are assessed for applicability to a nursing course. A method to generate evidence related to instructional strategies is developed. (3 semester hours)

NSG 7210—Evidence-Based Evaluation
This course focuses on the exploration of the state of evaluation in today’s educational settings as they relate to nursing education. Critical assessment of issues related to evaluation in various educational environments is included. The integration and utilization of various evaluation methods in the curriculum is studied. Students will analyze, synthesize, and propose research on assessment and evaluation in nursing education. (3 semester hours)

NSG 7220—Higher Education Leadership
This online course focuses on a variety of topics of importance to nursing leaders in higher education. Students will examine the leadership demands specific to the higher education environment as well as personal application of these concepts. The structures and functions of college and university settings of all kinds will be explored. Students will investigate multiple dimensions of academic excellence including faculty members, students, administrators, programs and curricula, teaching and evaluation methods, and resources. These key components will be discussed in the context of educational accreditation. Current issues affecting higher education will also be discussed. (3 semester hours)

NSG 7230—Health Care Leadership
This course provides an opportunity to present future nursing leaders with an understanding of health care leadership. This
course applies leadership and decision-making principles to the health care environment as it relates to nursing practice, research, and quality. The course focuses on current and future leadership issues and trends, best practices, and characteristics of current nursing leaders in health care. Students will examine the opportunities and roles for nurse leaders; apply strategies for change related to nursing leadership, roles, function, and image; and develop a personal leadership philosophy. (3 semester hours)

NSG 7260—Health Care Education
This course provides present and future nurse leaders with an understanding of professional development theory and practice to support the enhancement of quality within health care environments. It will focus on the role of the nurse educator in health care organizations, as well as the implementation of evidence-based practice; clinical competency measurement and validation; continuing education planning; academic partnerships; and the association of quality metrics, research, and education in health care organizations. (3 semester hours)

NSG 7270—Doctoral Inquiry
This course provides students with the opportunity to move from the conceptualization phase of a dissertation topic to the refinement of a research problem statement and clarification of research questions. Students will determine the philosophical underpinnings of their proposed inquiries and consider theoretical frameworks that will serve to explain, predict, or test the phenomena to be studied. (1 semester hour)

NSG 7280—State of the Science
This course will provide an opportunity for the student to carry out a detailed literature review based on the current state of the science on the topic of the student’s proposed doctoral dissertation. The course focus is on carrying out the process of organizing, integrating, analyzing, synthesizing, and evaluating the most relevant information. (1 semester hour)

NSG 7290—Comprehensive Examination: Seminar III
In this course, the student’s mastery of doctoral study is assessed. Through the comprehensive examination process, the student will exhibit knowledge of relevant current and historical literature in the focused area of study and current issues, as well as the ability to apply and design a research study using methods of the discipline. The student’s ability to think critically, form sound responses to questions, and communicate effectively in writing is evaluated. The completion of this course is indicative of the student’s readiness to commence dissertation work. Successful completion of the course is required before dissertation work can begin. (1 semester hour)

NSG 7299—Transition to the Doctor of Nursing Practice Program
This course is designed to assist the B.S.N.-prepared registered nurse with a non-nursing master’s degree to develop the Master of Science in Nursing competencies required to transition into the Doctor of Nursing Practice (D.N.P.) program. The student will build upon current nursing experience and previous graduate education in order to demonstrate achievement of the essentials of M.S.N. education prior to beginning D.N.P. coursework. Clinical immersion hours are required. (6 semester hours)

NSG 7300—D.N.P. Roles
This course focuses on key concepts related to the role of the Doctor of Nursing Practice in clinical, educational, and health care system settings. Students will analyze the history of nursing education, with emphasis on the development of the Doctor of Nursing Practice. Interprofessional teams, collaboration, and communication skills needed for the effectiveness of this role need to be thoroughly examined. (3 semester hours)

NSG 7340—Dissertation
This course provides an opportunity for direct engagement between the student and the dissertation committee. It focuses on design, implementation, and completion of the scholarly research study. (minimum 9 semester hours)

NSG 7350—Leading in Complex Health Care Systems
This course focuses on principles of business, finance, economics, and leadership in United States and global health care systems. Solutions to complex ethical, political, economic, and cultural health care systems issues will be explored. Students will use collaborative and interprofessional skills to examine proposed system solutions. This course challenges students to create new ideas, adopt new behaviors, and identify new opportunities to view and solve health care dilemmas. As transformational leaders, students will analyze strategies to support organizational and systems change that leads to improved health care outcomes. (3 semester hours)

NSG 7400—Nursing Science for Clinical Practice
This course explores the scientific principles and philosophical underpinnings of nursing practice relevant to the role of the D.N.P. Concepts, models, and theories from nursing and other disciplines will be applied to clinical practice problems. Students will analyze various approaches used in research and evaluate the quality of published research. Students will develop search strategies to answer questions related to a selected topic of interest. (3 semester hours)

NSG 7431—Project I: Mentored Scholarship
The cornerstone course will provide students with the tools and support they require to conduct a scholarly literature review and to develop a clear statement of the problem. Clinical immersion hours are required. Clinical immersion objectives and activities are mutually developed by the student and faculty members and based on the proposed clinical project. (3 semester hours)
NSG 7443—D.N.P. Independent Study
This independent study course is individualized according to each student’s educational needs. Course content is different for each student. A written contract between the course faculty and the student is developed at the beginning of the semester that establishes student-identified course goals and objectives, learning activities, D.N.P. competencies to be met, and evaluation methods. (3 semester hours)

NSG 7444—Project II: Project Plan
This course will provide students with the support and direction needed to develop a comprehensive, site-specific project plan in collaboration with faculty members and his or her mentor. Clinical immersion hours are required. Clinical immersion objectives and activities are mutually developed by the student and faculty members and based on the proposed clinical project. (3 semester hours)

NSG 7445—Project III: Implementation
This project experience provides an opportunity for the student to execute the project plan in collaboration with the sponsoring site. The experience reflects the interest of the student and is designed to meet individual interests and career goals. This advanced practice project allows the student to learn to manage time and resources, assess implementation issues, and utilize communication and collaboration while working with a clinical mentor to implement the project plan. Clinical immersion hours are required. Clinical immersion objectives and activities are mutually developed by the student and faculty members and based on the proposed clinical project. (3 semester hours)

NSG 7451—Project IV: Evaluation
This is the final component of the project experience. The course content, as in the other project courses, reflects the interest of the student and is designed to meet individual student needs and career goals. This final course allows the student, with guidance from mentor and faculty, to evaluate the evidenced-based practice (EBP) project outcomes and develop scholarly written and oral reports that disseminate and integrate new knowledge. The final product will reflect the student’s ability to employ effective communication and collaboration skills; to take a leadership role; to influence health care quality and safety; to evaluate practice; and to successfully negotiate change in health care delivery for individuals, families, populations, or systems across a broad spectrum of health care. Clinical immersion hours are required. Clinical immersion objectives and activities are mutually developed by the student and faculty members and based on the proposed clinical project. (3 semester hours)

NSG 7470—Advanced Nursing Research
This course will provide students with advanced concepts applicable to nursing research. Techniques that lead to the identification of the research problem, refinement of the research question, and selection of appropriate research design and methods will be explored. The conceptual and operational definitions of variables will be discussed. Strategies to maintain the integrity of data and ensure rigorous analysis for the interpretation of results will be examined. Students will compare and contrast selected quantitative and qualitative methodologies and methods to generate empirical evidence for the advancement of nursing science. (3 semester hours)

NSG 7500—Translating Evidence for Clinical Practice
This course provides essential skills for utilizing research to support practice change, including assessing practice-based problems, analyzing current evidence, proposing practice changes, and developing plans for implementing evidence-based practice concepts. The role of the advanced practice nurse in collaborative research and dissemination of findings is explored. Emphasis is on ethical, cultural, and financial implications of evidence-based practice and the synthesis of clinical evidence and knowledge translation for point-of-care decision making and identification of best practice. Students will utilize tools to evaluate evidence-based clinical practice problems and solutions in nursing and health care delivery systems. (3 semester hours)
Dr. Kiran C. Patel
College of Allopathic Medicine
Dr. Kiran C. Patel College of Allopathic Medicine

Dr. Kiran C. Patel College of Allopathic Medicine (NSU MD) Mission, Vision, and Core Values

Mission
Our mission is as simple as it is enormous: **advancing human health through innovation in medical education, research, and patient care.** We are dedicated to educating and inspiring individuals to be exemplary physicians and scientists, leaders in medicine, scholars in discovery, and adopters of innovative technology to improve the health and well-being of all.

Vision
Our vision drives us to

- develop new leaders in the biomedical sciences, public health, medical education, and clinical care who will measurably improve human health
- advance innovation from discovery to outcomes
- develop and maintain excellent clinical programs to provide outstanding care
- cultivate excellence and collegiality within a community that is diverse, inclusive, and equitable
- observe the highest standards of ethics, integrity, and compassionate care
- share our vision and advances through wide-reaching programs and global partnerships

Core Values
Excellence • Innovation • Teamwork • Communication • Diversity • Integrity • Accountability

These core values define how we work together in building a 21st-century medical school with a compelling and sustainable future. We strive for excellence in all of our endeavors and constantly seek innovative ways to improve our research, education, and patient-care efforts to best serve our diverse communities. Teamwork, communication, and new partnerships will catalyze our evolution from the concept stage to an academic program of distinction. Diversity and inclusiveness are fundamental core values, supported throughout the institution, that enrich our learning, research, and clinical-practice environments. We strive to create a culture of integrity and accountability that aligns our goals and expectations and links recognition and rewards with high academic performance.

Administration
Johannes Vieweg, M.D.
Dean

Patrick Hardigan, Ph.D.
Executive Associate Dean of Research

Irving Rosenbaum, D.P.A., Ed.D.
Executive Associate Dean of Administration and Finance

Paula Wales, Ed.D.
Executive Associate Dean of Academic and Student Affairs

Lindsey Henson, M.D. Ph.D.
Associate Dean of Faculty Affairs

Susan Collingwood, J.D.
Assistant Dean of Educational Standards and Quality

Daniel Griffin, Ph.D.
Assistant Dean of Preclerkship Curriculum

Maria Padilla, M.D.
Assistant Dean of Curricular Integration, Assessment, and Faculty Development

Donald Pritchett, J.D.
Assistant Dean of Admissions and Student Affairs

Sharon Sholiton, M.D.
Assistant Dean of Clerkship Curriculum

Vijaykumar Rajput, M.D.
Chair, Department of Medical Education
Interim Chair, Department of Clinical Sciences

Stefanie Carter, Ed.D.
Director of Faculty Development

Michelle Demery-Beckler, Ph.D.
Director of M.B.S. Program

Alyssa K. Eason, Ed.D.
Director of Student Licensing and Credentialing

Christine Kircher
Director of Finance and Human Resources
Accreditations

The NSU Dr. Kiran C. Patel College of Allopathic Medicine (NSU MD) has been granted preliminary accreditation by the Liaison Committee for Medical Education (LCME). This body is recognized by the U.S. Department of Education and the Council of Post-Secondary Accreditation as the accrediting agency for colleges educating allopathic (M.D.) physicians and surgeons.

Nova Southeastern University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate’s, baccalaureate, master’s, educational specialist, doctorate, and professional degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Nova Southeastern University.

Admissions Requirements

NSU MD assesses applicants in a holistic manner and appreciates many different types of achievements demonstrated and challenges faced by potential students in its program. Our academic program is fast paced and rigorous and will require our students’ best. Applicants for the first-year class must meet the following minimum requirements prior to matriculation:

1. have successfully completed a minimum of 90 semester hours of coursework from a regionally accredited college or university
2. have completed adequate preparation in physics, biology, chemistry and mathematics
3. have successfully completed these required courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology—one year with lab</td>
<td>8</td>
</tr>
<tr>
<td>General chemistry—one year with lab</td>
<td>8</td>
</tr>
<tr>
<td>Organic chemistry—one year with lab</td>
<td>8</td>
</tr>
<tr>
<td>(Biochemistry without lab may be substituted for a second semester of organic chemistry.)</td>
<td></td>
</tr>
<tr>
<td>Physics—one year</td>
<td>8</td>
</tr>
<tr>
<td>Mathematics (college level)—one semester or two quarters (Calculus is not required. Statistics is acceptable.)</td>
<td>8</td>
</tr>
</tbody>
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Note: Advanced Placement (AP) courses will fulfill the prerequisite requirements if the individual courses and credits awarded are detailed on the applicant’s college/university transcript.

The college views the social sciences, languages, and behavioral sciences, as well as medical sciences and related courses, to be important in creating a well-rounded physician. Courses in microbiology, computer science, cellular physiology, genetics, embryology, biostatistics, quantitative analysis, physical chemistry, humanities, and social and behavioral sciences, while not required, are useful in providing some essential skills and knowledge required for a medical education.

4. All applicants are required to take the Medical College Admission Test (MCAT). Applications for the MCAT may be obtained online at aamc.org, from your college’s preprofessional adviser’s office, by calling (319) 337-1357, or by writing directly to Medical College Admission Test Program Office 2255 North Dubuque Road P.O. Box 4056 Iowa City, IA 52243-4056

MCAT scores must be no more than three years old prior to the application cycle.

The college expects to receive thousands of applications for admission each year, from which only 50 students will be chosen. These students will have varied backgrounds, and while some may enter the college directly from an undergraduate program, other students will come from successful careers. The Committee on Admissions recommends applicants to the dean on the basis of demonstrated academic excellence, leadership, compassion, and commitment to the medical profession.

Technical Standards for Medical School Admission, Continuation, and Graduation

Introduction

Applicants to the NSU MD are selected for admission on the basis of their academic, personal, and extracurricular attributes. Applicants must also have the intellectual, physical, and emotional capabilities to meet the requirements of NSU MD’s curriculum and of a successful medical career.

The mission of NSU MD is to provide its graduates with broad, general knowledge in all fields of medicine and the basic skills and competence requisite for the practice of medicine. Therefore, the faculty of NSU MD believes that a broad-based and patient-oriented curriculum is necessary for the development of such knowledge and skills and is best suited to the education of future generalists, specialists, physician investigators, and leaders in medicine. In other words, NSU MD seeks to graduate students who will have the knowledge and skills to function in a broad variety of clinical situations and to render a wide spectrum of patient care. The following technical standards are based on standards suggested by the Special Advisory Panel on Technical
Standards for Medical School Admissions convened by the AAMC (Memorandum #79-4) in January 1979*. These guidelines were formally adopted by the NSU MD Committee on Admissions in 2016, are reviewed annually, and updated periodically. These guidelines specify the attributes considered essential for completing medical school training and for enabling each graduate to enter residency and clinical practice. Moreover, because the Doctor of Medicine (M.D.) degree signifies that the holder is a physician prepared for entry into the practice of medicine within postgraduate training programs, it follows that graduates must have the knowledge and skills to function in a broad variety of clinical situations and to render a wide array of patient care. As such, these standards, along with the academic standards established by the faculty, describe the essential functions that applicants must demonstrate to meet the requirements of a general medical education, and are prerequisites for entrance, continuation, promotion, and graduation.

NSU MD will consider for admission and continuation any applicant who meets its academic and nonacademic criteria and who demonstrates the ability to perform skills and meet the standards listed in this document, with or without reasonable accommodations, consistent with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. These standards also conform to the AAMC guidelines for medical schools. NSU MD believes that all applicants must possess the intellectual, physical, and emotional capabilities necessary to undertake the required curriculum in a reasonably independent manner without having to rely on the assistance of others or intermediaries, and that all applicants must be able to achieve the levels of competence required by the faculty. All applicants for admission, both those with and without disabilities, are expected to be competitive with others in the applicant pool in academic, personal, and extracurricular attributes. The institutional policy is to make admissions decisions on a case-by-case basis and on the basis of each applicant’s qualifications to contribute to NSU MD’s educational mission. For purposes of this document, and unless otherwise defined, the term “applicant” or “candidate” means applicants for admission to medical school, as well as enrolled medical students who are candidates for promotion and graduation.

*Recommendations of the AAMC Special Advisory Panel on Technical Standards for Medical School Admissions, approved by the AAMC Executive Council on January 18, 1979, are reproduced below.

Technical (Nonacademic) Standards for Medical School Admission

A candidate for the M.D. degree must have abilities and skills in the five functional areas described following, and must have the physical and emotional stamina and capacity to function in a competent manner, and consistent with these standards, in the classroom, clinical, and laboratory settings, including settings that may involve heavy workloads, long hours, and stressful situations.

1. Observation: The candidate must be able to observe demonstrations and experiments in the basic sciences, including, but not limited to, anatomic, physiologic, and pharmacologic demonstrations; microbiologic cultures; and microscopic studies of microorganisms and tissues in normal and pathologic states. A candidate must be able to observe a patient accurately at a distance and close at hand. Observation necessitates the functional use of the senses of vision and hearing and somatic sensation. It is enhanced by the sense of smell.

2. Communication: A candidate must be able to speak, to hear, and to observe patients in order to elicit information; describe changes in mood, activity, and posture; and perceive nonverbal communications. A candidate must be able to communicate effectively and sensitively with patients. Communication includes not only speech, but reading and writing. The candidate must be able to communicate effectively and efficiently in oral and written form with all members of the health care team.

3. Motor: Candidates must have sufficient motor function to elicit information from patients by palpation, auscultation, percussion, and other diagnostic maneuvers that comprise a complete physical examination (including pelvic examination). A candidate must be able to perform the basic and advanced clinical procedures that are requirements of the NSU MD curriculum. A candidate must be able to execute motor movements reasonably required to provide general care and emergency treatment to patients. Examples of emergency treatment reasonably required of physicians are cardiopulmonary resuscitation, the administration of intravenous medication, the application of pressure to stop bleeding, the opening of obstructed airways, the suturing of simple wounds, and the performance of simple obstetrical maneuvers. Such actions require coordination of both gross and fine muscular movements; equilibrium; and functional use of the senses of touch, vision, and hearing.

4. Intellectual: Conceptual, Integrative, and Quantitative Abilities: These abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem-solving, the critical skill demanded of physicians, requires that candidates be able to learn, retrieve, analyze, sequence, organize, synthesize, and integrate information efficiently and reason effectively. They also should be able to measure and calculate accurately and to understand the spatial relationships of structures.

5. Behavioral and Social Attributes: A candidate must possess the emotional health required for full utilization of his or her intellectual abilities; the exercise of good judgment; the prompt completion of all responsibilities attendant to the diagnosis and care of patients; and the development of mature, sensitive, and effective relationships with patients. Candidates must be able to work effectively, respectfully, and professionally as part of the health care team, and to interact with patients, their families, and health care personnel in a courteous, professional, and respectful manner. Candidates
must be able to tolerate physically taxing workloads and to function effectively under stress. They must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in the clinical problems of many patients. Compassion, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities that are required.

Technological compensation can be made in certain of these areas, but a candidate should be able to perform in a reasonably independent manner. The use of a trained intermediary, a person trained to perform essential skills on behalf of the candidate, or a person used such that a candidate’s judgment must be mediated by someone else’s power of selection and observation, is not permitted.

In addition to the abilities and skills set forth above, candidates must possess the general physical health necessary for performing the duties of a medical student and physician in training without endangering the lives of patients and/or colleagues with whom the student might have contact. Candidates whose performance is impaired by abuse of alcohol or other substances are not suitable candidates for admission, continuation, promotion, or graduation.

**Process for Assessing the Applicant’s Compliance with the Technical Standards**

Applicants are required to attest at the time they accept an offer to matriculate that they meet NSU MD’s Technical Standards, and thereafter, must attest on an annual basis that they continue to meet the standards. These standards are not intended to deter any student who might be able to complete the requirements of the curriculum with reasonable accommodations. Requests from applicants for reasonable accommodations in meeting the technical standards will be reviewed and considered by the NSU Office of Student Disability Services. Students requesting accommodations must complete NSU’s Academic Accommodations form (nova.edu/disabilityservices/forms/academic_accomodations.pdf). For additional information about the college's process for assessing an applicant’s compliance with the technical standards, contact Patrick Hardigan, Ph.D., at (954) 262-1524 or HPDdisabilityservices@nova.edu.

**Application Procedures**

The college participates in the American Medical College Application Service (AMCAS) for the receipt and processing of all applications. AMCAS takes no part in the selection of students.

Applicants should submit applications electronically through AMCAS online, using an interactive, web-based application. More information can be found online at https://students-residents.aamc.org/applying-medical-school/applying-medical-school-process/applying-medical-school-amcas/. For questions, applicants may call (954) 262-0515.

The following steps are necessary to the primary application process.

1. The applicant must submit the following materials to AMCAS by January 15:
   • completed AMCAS application
   • official transcripts from the registrars of all colleges or universities attended, mailed directly to AMCAS by the college or university
   • MCAT scores (must be no more than three years old prior to the application cycle)

2. The applicant must submit the following to the college by March 1:
   • a secondary application, which will be sent to the applicant by the college upon receipt of the AMCAS application
   • a nonrefundable application fee of $50
   • three letters of recommendation via the AMCAS Letters Service (if not included in the initial application)

A personal interview is a part of the admission process; however, being interviewed is not a guarantee of admission. Not all applicants will be granted an interview. Those selected for an interview will be notified of the date and time of such interview by the college’s Office of Admissions and Student Affairs. Notice of acceptance will be on a rolling or periodic schedule; therefore, early completion of the application is in the best interest of the applicant, because of the limited number of spaces available in each class.

After acceptance, final and official documents and requirements must be received by the Office of Admissions and Student Affairs before the first day of orientation to the program. The college will provide accepted students with a detailed schedule of due dates for all documents and requirements. If these final and official documents are not received, or other requirements are not met by that time, or the student is not present at the start of orientation, the student will forfeit his or her place in the class and an applicant from the wait list will be offered the position in the class. Financial aid will not be disbursed to anyone until he or she has been fully admitted as a regular student (all admissions requirements have been approved by the program office).

**Tuition and Fees**

1. The yearly tuition for 2020–2021 will be posted on our website (https://md.nova.edu/admissions/cost.html). It is subject to change by the board of trustees without notice. Tuition is paid by the semester.

2. Fees include an annual Health Professions Division General Access Fee of $145. An NSU Student Services Fee of $1,500 is also required each year.
3. Additional NSU and NSU MD program, administrative, and service fees apply as follows:
   a. Registration Fee: $30. This fee is per semester.
   b. Late Payment Fee: $100.
   c. First-Year Technology Fee: $1,950. This fee is due fall semester, upon registration for MDF 6000—Professional Immersion.
   d. Third-Year Technology Fee: $460. This fee is due winter semester, upon registration for MDC 7001—Diagnostic Medicine.
   e. Degree Application Fee (seniors only): $275.
   f. Official Transcript Fee: $10. This fee is for each official transcript requested.
   g. ID Replacement Fee: $25.
   h. Diploma Replacement Fee: $30.

Additional program fees may apply.

4. Tuition and fees are due in full at time of registration.

5. Student Health Insurance Fee is based on coverage period.
   a. coverage May 1, 2020–April 30, 2021: $2,146
   b. coverage May 1, 2020–July 31, 2021: $2,687

See nova.edu/bursar/health-insurance for additional details, including criteria for waiving the insurance.

The financial ability of applicants to complete their training at the college is important because of the limited number of positions available in each class. Applicants should have specific plans for financing four years of medical education, including tuition, living expenses, books, equipment, clinical rotation, travel, and miscellaneous expenses.

**Technology Requirements**

During each student's tenure at NSU MD, the college will provide the student with an Apple iPad® with a minimum of 64 gigabytes (GB) of memory. Students have access to a variety of computer educational resources and course material, including:

- Canvas courses, including Tegrity® recordings via iShark
- Electronic textbooks
- Interactive learning via Turning Point®
- KBIT courses
- Medical Spanish
- Web modules
- Electronic library
- UpToDate
- Academic/board review materials
- Clinical procedures resources
- Examinations

A campus-wide wireless network exists to provide students with electronic access anywhere on campus, and students will have connectivity to university library facilities online using a password-protected portal.

**Academics**

**Transfer of Credit**

Given the intensive curriculum at NSU MD, which is founded upon problem-based learning and devoted to integrated, self-directed learning and discovery to develop multiple competencies, this is not likely to be possible. Therefore, the college will not accept transferring students.

**Course of Study**

NSU MD has a dedicated faculty; strong affiliations with medical centers, hospitals, and health care systems; and a mission to educate the finest physician-leaders possible. Physicians do not work in a vacuum, but rather in a health care team, and NSU MD promotes interdisciplinary cooperation through the curriculum. Students also share teaching faculty members for some disciplines, as well as campus facilities, with NSU's osteopathic medicine, pharmacy, dental, optometry, physician assistant, physical therapy, occupational therapy, public health, nursing, and medical science students. This proximity to colleagues from other professions promotes collegiality.

**Schedule of Application for Admission Cycle**

**June**—Application cycle for the next academic year begins. Inquiries are invited by NSU MD and AMCAS forms are made available.

**July**—Credentials sent to AMCAS are processed, and applicant records are forwarded to NSU MD. A supplemental application is then sent to the applicant. When the supplemental application is completed and returned and when recommendations are received, the completed application is evaluated for interview.

**August**—Personal interviews start.

**January 15**—Deadline for AMCAS applications for the next academic year.

**March 1**—Deadline for NSU MD supplemental applications.
The M.D. Program’s curriculum proceeds sequentially in blocks dedicated to preclerkship disciplines and organ systems and courses covering clinical skills until spring of year 2, when required clinical clerkships begin, to be followed by electives. A schematic of the curriculum for the first year is shown below. The schematics for the second and third year represent the curriculum under non-COVID conditions. Links to the most current curricular schematics can be found on the NSU MD academics web page at md.nova.edu/academics/curriculum.html.

### Curriculum Schematic

<table>
<thead>
<tr>
<th>Year 1</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>January</th>
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<th>May</th>
<th>June</th>
<th>July</th>
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<tbody>
<tr>
<td></td>
<td>Professional Immersion (2)</td>
<td>Fundamentals (12)</td>
<td>RIA (1)</td>
<td>GI, Nutrition, Endocrine, Reproductive (10)</td>
<td>RIA (1)</td>
<td>Cardiovascular, Pulmonary, Renal (12)</td>
<td>RIA (1)</td>
<td>RIA (1)</td>
<td>Summer Break (4)</td>
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<tr>
<td></td>
<td>Practice of Medicine 1 (16)</td>
<td>RIA (1)</td>
<td>Water Break (2)</td>
<td>Practice of Medicine 2 (22)</td>
<td>Winter Break (3)</td>
<td>Practice of Medicine 3 (14)</td>
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<tr>
<td>Longitudinal Threads</td>
<td>Ethics and Humanities, Genomics, Research, Interprofessional Collaboration, Biomedical Informatics, and Leadership</td>
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<tr>
<th>Year 2</th>
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<th>September</th>
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<th>June</th>
<th>July</th>
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<tbody>
<tr>
<td></td>
<td>Required Research or Required Independent Study (4)</td>
<td>Brain, Body, Behavior (14)</td>
<td>RIA (1)</td>
<td>USMLE Step 1 Study (8)</td>
<td>RIA (1)</td>
<td>Diagnostic Medicine Clerkship (6)</td>
<td>RIA (1)</td>
<td>RIA (1)</td>
<td>Summer Break (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Practice of Medicine 3 (14)</td>
<td>RIA (1)</td>
<td>Winter Break (3)</td>
<td>Break (1)</td>
<td>Break (1)</td>
<td>Break (1)</td>
<td>Break (1)</td>
<td>Break (1)</td>
<td>Break (1)</td>
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<td>Longitudinal Threads</td>
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<th>July</th>
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<tbody>
<tr>
<td></td>
<td>Core Required Clerkships</td>
<td>RIA and Planning for Year 4-5 (8)</td>
<td>RIA and End of Year 3 OSCE (2)</td>
<td>Required Research or Required Clinical Rotation* or Elective (4)</td>
<td>Required Research or Required Clinical Rotation* or Elective (4)</td>
<td>Required Research or Required Clinical Rotation* or Elective (4)</td>
<td>Required Research or Required Clinical Rotation* or Elective (4)</td>
<td>Required Research or Required Clinical Rotation* or Elective (4)</td>
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<tr>
<td></td>
<td>(Medicine + Surgery + OB/GYN + Pediatrics + Primary Care Medicine + Psychiatry + Selective)</td>
<td>Break (1)</td>
<td>USMLE Step 2 Study (8)</td>
<td>Core Required Clerkships</td>
<td>Core Required Clerkships</td>
<td>Core Required Clerkships</td>
<td>Core Required Clerkships</td>
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<td>Longitudinal Threads</td>
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<tr>
<th>Year 4</th>
<th>August</th>
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<th>October</th>
<th>November</th>
<th>December</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
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<tbody>
<tr>
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<td>Required Research or Required Clinical Rotation* or Elective (4)</td>
<td>Required Research or Required Clinical Rotation* or Elective (4)</td>
<td>Required Research or Required Clinical Rotation* or Elective (4)</td>
<td>Required Research or Required Clinical Rotation* or Elective (4)</td>
<td>Required Research or Required Clinical Rotation* or Elective (4)</td>
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<td>Remaining Requirements or Elective(s) as Needed</td>
<td></td>
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</tr>
<tr>
<td>* All Students are required to complete one Sub-Internship. Required research is replaced by an elective for students who completed research in Year 2. RIA = Reflection, Integration, and Assessment—This includes assessments, longitudinal mentoring activities, leadership training, reflective exercises, and interprofessional activities.</td>
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### Blocks/Courses and Credit Hour

**M.D. Program Blocks (in sequence)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDF 6000</td>
<td>Professional Immersion</td>
</tr>
<tr>
<td>MDF 6001</td>
<td>Fundamentals</td>
</tr>
<tr>
<td>MDF 6002</td>
<td>Hematology</td>
</tr>
<tr>
<td>MDF 6003</td>
<td>Gastrointestinal/Human Nutrition/Endocrine/Reproductive</td>
</tr>
<tr>
<td>MDF 6004</td>
<td>Cardiovascular/Pulmonary/Renal</td>
</tr>
<tr>
<td>MDF 6005</td>
<td>Brain, Body, Behavior</td>
</tr>
<tr>
<td>MDF 6009</td>
<td>Independent Study (Step 1)</td>
</tr>
<tr>
<td>MDF 6999</td>
<td>Independent Study</td>
</tr>
<tr>
<td>MDC 7009</td>
<td>Independent Study (Step 2)</td>
</tr>
<tr>
<td>MDR 8010</td>
<td>Research</td>
</tr>
<tr>
<td>MDR 8011</td>
<td>Research (optional continuation)</td>
</tr>
<tr>
<td>MDR 8012</td>
<td>Research (optional continuation)</td>
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**Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MDC 6050</td>
<td>Practice of Medicine 1</td>
</tr>
<tr>
<td>MDC 6051</td>
<td>Practice of Medicine 2</td>
</tr>
<tr>
<td>MDC 6052</td>
<td>Practice of Medicine 3</td>
</tr>
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**Clerkships (required)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MDC 7000</td>
<td>Clinical Skills and Reasoning</td>
</tr>
<tr>
<td>MDC 7001</td>
<td>Diagnostic Medicine</td>
</tr>
<tr>
<td>MDC 7002</td>
<td>Internal Medicine</td>
</tr>
<tr>
<td>MDC 7003</td>
<td>Obstetrics and Gynecology</td>
</tr>
<tr>
<td>MDC 7004</td>
<td>Pediatrics</td>
</tr>
<tr>
<td>MDC 7005</td>
<td>Psychiatry</td>
</tr>
<tr>
<td>MDC 7006</td>
<td>Surgery</td>
</tr>
<tr>
<td>MDC 7007</td>
<td>Primary Care Medicine</td>
</tr>
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</table>

**Electives and Selectives (minimum 30 hours required for graduation)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>MDS 8100</td>
<td>Selective: Radiology</td>
</tr>
<tr>
<td>MDS 8101</td>
<td>Selective: Neurology</td>
</tr>
<tr>
<td>MDS 8102</td>
<td>Selective: Family Medicine</td>
</tr>
<tr>
<td>MDS 8103</td>
<td>Selective: Anesthesiology and Pain Management</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>MDS 8104</td>
<td>Selective: Emergency Medicine</td>
</tr>
<tr>
<td>MDI 8202</td>
<td>Sub-Internship: Internal Medicine</td>
</tr>
<tr>
<td>MDI 8203</td>
<td>Sub-Internship: Obstetrics and Gynecology</td>
</tr>
<tr>
<td>MDI 8204</td>
<td>Sub-Internship: Pediatrics</td>
</tr>
<tr>
<td>MDI 8207</td>
<td>Sub-Internship: Primary Care Medicine</td>
</tr>
<tr>
<td>MDI 8205</td>
<td>Sub-Internship: Psychiatry</td>
</tr>
<tr>
<td>MDI 8206</td>
<td>Sub-Internship: Surgery and Surgery Subspecialties</td>
</tr>
<tr>
<td>MDE 9201</td>
<td>Elective: Internal Medicine</td>
</tr>
<tr>
<td>MDE 9202</td>
<td>Elective: Internal Medicine</td>
</tr>
<tr>
<td>MDE 9203</td>
<td>Elective: Internal Medicine</td>
</tr>
<tr>
<td>MDE 9301</td>
<td>Elective: Obstetrics/Gynecology</td>
</tr>
<tr>
<td>MDE 9302</td>
<td>Elective: Obstetrics/Gynecology</td>
</tr>
<tr>
<td>MDE 9303</td>
<td>Elective: Obstetrics/Gynecology</td>
</tr>
<tr>
<td>MDE 9401</td>
<td>Elective: Pediatrics</td>
</tr>
<tr>
<td>MDE 9402</td>
<td>Elective: Pediatrics</td>
</tr>
<tr>
<td>MDE 9403</td>
<td>Elective: Pediatrics</td>
</tr>
<tr>
<td>MDE 9501</td>
<td>Elective: Psychiatry</td>
</tr>
<tr>
<td>MDE 9502</td>
<td>Elective: Psychiatry</td>
</tr>
<tr>
<td>MDE 9503</td>
<td>Elective: Psychiatry</td>
</tr>
<tr>
<td>MDE 9601</td>
<td>Elective: Surgery and Surgery Subspecialties</td>
</tr>
<tr>
<td>MDE 9602</td>
<td>Elective: Surgery and Surgery Subspecialties</td>
</tr>
<tr>
<td>MDE 9603</td>
<td>Elective: Surgery and Surgery Subspecialties</td>
</tr>
<tr>
<td>MDE 9801</td>
<td>Other Elective</td>
</tr>
<tr>
<td>MDE 9802</td>
<td>Other Elective</td>
</tr>
<tr>
<td>MDE 9803</td>
<td>Other Elective</td>
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<tr>
<td>MDE 8009</td>
<td>Residency Preparation</td>
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<tr>
<td>MDC 9009</td>
<td>Math and Transition to Residency</td>
</tr>
<tr>
<td>MDC 9999</td>
<td>Advanced Independent Study</td>
</tr>
</tbody>
</table>
Course Descriptions

MDF 6000—Professional Immersion
This course provides activities to introduce students to the curriculum, the learning approaches, and the learning environment of the NSU MD college.

MDF 6001—Fundamentals
This block is designed to provide students with a broad foundation in critical biomedical science subject areas, including biochemistry, cell biology, molecular biology, genetics/genomics, microbiology, immunology, pharmacology, physiology, anatomy, embryology, and histology. The course begins with four weeks focusing on human structure (anatomy, histology, and embryology, including anatomy laboratory instruction) followed by eight weeks addressing the other subject areas. Content in each week is linked to a theme, which is reflected in the weekly problem-based learning (PBL) case and other sessions.

MDF 6002—Hematology
This block provides students with basic concepts and vocabulary related to normal histology, physiology, pathophysiology, clinical diagnosis, and therapeutics of the hematologic system. This includes hematopoiesis, anemias and other disorders of red blood cells; disorders of white blood cells, including leukemia and lymphoma; and blood coagulation. Content in each week is linked to a theme, which is reflected in the weekly problem-based learning (PBL) case and other sessions.

MDF 6003—Gastrointestinal/Human Nutrition/Endocrine/Reproductive
This block provides basic concepts in normal anatomy, physiology, pathophysiology, clinical diagnosis, and therapeutics of the gastrointestinal and hepatic systems, human nutrition, the endocrine system, and the male and female reproductive systems. This includes normal nutrition, diagnosis and managements of common nutritional disorders, the structure and mechanisms of action of the classical hormones, principles of control and regulation of hormone synthesis and release, and approaches to diagnosis and treatment of common endocrine disorders. The reproductive section covers basic concepts and vocabulary of male and female biology as it relates to pathology, gynecological diseases, and infertility. The block includes laboratory instruction, as well as real and simulated clinical experiences (anatomy, histology, and cases). Problem-based learning (PBL) cases provide the fundamental knowledge of common gastrointestinal and hepatic disorders (including nutritional implications, where appropriate) and are complemented by lectures for specific diseases. The simulation component emphasizes correlations with clinical cases and localization of digestive system lesions. Students learn male and female genitourinary exams with standardized patients during the concurrent clinical course. Content in each week is linked to a theme, which is reflected in the weekly problem-based learning (PBL) case and other sessions.

MDF 6004—Cardiovascular/Pulmonary/Renal
This block provides basic concepts in normal anatomy, physiology, pathophysiology, clinical diagnosis, and therapeutics of the cardiovascular, respiratory, and renal systems. Content includes structures, processes and diseases of the coronary and peripheral vasculature, cardiac muscle, conduction system, cardiac valves, and pericardium; mechanism and significance of abnormal findings on cardiovascular and pulmonary exams; roles of the renal and cardiovascular systems in regulation of blood pressure; role of the kidneys in regulation of fluid, electrolyte, and acid-base balance; approach to a broad spectrum of pulmonary disease categories and diagnosis and treatment of respiratory failure; interpretation of laboratory findings to identify and manage common acid-base disturbances; and renal glomerular, vascular, and interstitial diseases. The block includes laboratory instruction (anatomy, histology, and simulation center activities that emphasize correlations with clinical cases). Content in each week is linked to a theme, which is reflected in the weekly inquiry (IQ) case and other sessions.

MDF 6005—Brain, Body, and Behavior
This block provides basic concepts in the integumentary, musculoskeletal, neurologic, and behavioral sciences in the context of both normal and abnormal development. This will include a focus on the normal anatomy, physiology, pathophysiology, clinical diagnosis, and therapeutics of the nervous, musculoskeletal, and integumentary systems. Sessions will emphasize the biopsychosocial factors involved in the development, prognosis, and treatment of common neurologic, psychiatric, neurocognitive, dermatologic, musculoskeletal, and rheumatic conditions with a focus on disease prevention and wellness at each stage of the life cycle—including the role of behavior in prevention. Concepts are delivered through a combination of lecture, team- and case-based learning, and simulated clinical encounters. The block includes laboratory instruction covering pertinent gross anatomy, histology, and embryology of the nervous, musculoskeletal, and integumentary systems to emphasize correlation to clinical cases, including the localization of nervous system lesions. Content in each week is linked to a theme, which is reflected in the weekly inquiry (IQ) cases and other sessions.
MDC 6009—Independent Study: Step 1—Preparation
This is an independent study course in which medical students pursue directed independent study with faculty support and resources in preparation for the USMLE Step 1 Examination.

MDC 6050—Practice of Medicine 1
The goal of the Practice of Medicine courses is to provide students with foundational clinical skills and professional behaviors to be successful in the clinical clerkships. The courses are designed as a developmental sequence. This is a 16-week course, with one half-day session each week. It begins with an introduction to the essentials of doctor-patient relationship, followed by a series of sessions in which students will learn each aspect of the basic history and physical exam using a hypothesis-driven approach that requires them to learn not only the how, but also the why for each new skill. The final month focuses on integrating the components into a logical whole and writing the clinical note. At the end of this course, students will pass an objective, structured clinical examination covering the basic history and physical examination and writing a clinical note.

MDC 6051—Practice of Medicine 2
The goal of the Practice of Medicine courses is to provide students with foundational clinical skills and professional behaviors to be successful in the clinical clerkships. The courses are designed as a developmental sequence. This course is 22 weeks, with two half-day sessions per week, and builds on the basic clinical skills from Practice of Medicine I (establishing a doctor-patient relationship, hypothesis-driven history taking and physical examination, and writing clinical notes) by adding 1) a weekly, half-day experience with patients in the office of a primary care preceptor; 2) sessions on advanced/specialized physical examinations; 3) small-group case discussions focused on threads such as ethics, leadership, research, and biomedical informatics; and 4) a required service-learning project in interprofessional teams. At the end of this course, students will pass an objective, structured clinical examination covering a focused and complete history and physical examination, writing a clinical note, and giving an oral case presentation.

MDC 6052—Practice of Medicine 3
The goal of the Practice of Medicine courses is to provide students with foundational clinical skills and professional behaviors to be successful in the clinical clerkships. The courses are designed as a developmental sequence. This is a 14-week course with two half-day sessions per week. It builds on the more advanced clinical skills and experiences with patients from Practice of Medicine II by 1) further sessions on advanced clinical skills including the history and physical examination with pediatric patients; 2) continuing a weekly, half-day experience with patients in the office of a primary care preceptor, with emphasis on differential diagnosis, treatment planning, and patient counseling; and 3) additional small-group case discussions focused on threads such as ethics, leadership, research, and biomedical informatics. By the end of this course, students will pass a USMLE Step 2 CS format objective, structured clinical examination.

MDC 7000—Clinical Skills and Reasoning
This course is an intensive, second-year clinical course designed to further develop skills in problem-solving and ethical decision making, both at a patient and a systems level. This course will help to develop clinical and critical thinking strategies that can be applied to patient care across multiple settings. Upon completion of the course, competent students will be able to demonstrate an efficient system of clinical judgement that can be effectively shared with all members of the health care team, appropriately incorporate evidence-based strategies into making clinical decisions, and discuss ethical strategies to the provision of health care across populations.

MDC 7001—Diagnostic Medicine Clerkship
This intensive, second-year clinical course is designed to prepare students for understanding and interpreting patient-related data. It will help further awareness and comprehension in the fields of radiology, medical laboratory, and medical diagnostic procedures. Upon completion of the course, competent students will be able to compare and contrast diagnostic data on a patient level, demonstrate skills in understanding patient safety and infection control, and be able to discuss the appropriate allocation of scarce health care resources.

MDC 7002—Internal Medicine Clerkship (2 months)
Students develop a comprehensive approach to the evaluation and care of the adult medical patient, focusing on improving their ability to obtain, record, analyze, and communicate clinical information. This includes both inpatient experience as a member of a resident team and outpatient clinics. Each student gains an awareness of the knowledge, skills, values, and attitudes that internists strive to acquire and maintain throughout their professional lives. Students have supervised responsibility for patient care, learning to integrate clinical knowledge with practical experience. The NBME Medicine Subject Examination and other assessments of knowledge and skills occur during the RIA Weeks that follow the clerkship. **Prerequisite:** Pass all foundational science blocks and courses, pass Step 1, pass Clinical Skills and Reasoning, pass Diagnostic Medicine clerkship.

MDC 7003—Obstetrics and Gynecology Clerkship (1 month)
This clerkship consists of an inpatient labor and delivery experience, an inpatient gynecologic surgery experience, and a subspecialty experience (reproductive endocrinologist, maternal-fetal specialist, uro-gynecologist, or gynecologic oncologist). It provides opportunity for students to observe and gain basic knowledge in the care of both obstetrics and gynecology patients in inpatient settings. Under supervision by teaching faculty members, students are involved in every
aspect of the patient’s care. The NBME OB/GYN Subject Examination and other assessments of knowledge and skills occur during the RIA Weeks that follow the clerkship. **Prerequisite:** Pass all foundational science blocks and courses, pass Step 1, pass Clinical Skills and Reasoning, pass Diagnostic Medicine clerkship.

**MDC 7004—Pediatrics Clerkship (1 month)**

This clerkship provides medical students with the knowledge and clinical experience necessary to develop basic skills in the evaluation and management of health and disease in infants, children, and adolescents. The clerkship provides experiences in the inpatient setting, emphasizing those aspects of pediatrics that should be understood and mastered by all physicians, regardless of ultimate career goals. The NBME Pediatrics Subject Examination and other assessments of knowledge and skills occur during the RIA Weeks that follow the clerkship. **Prerequisite:** Pass all foundational science blocks and courses, pass Step 1, pass Clinical Skills and Reasoning, pass Diagnostic Medicine clerkship.

**MDC 7006—Psychiatry Clerkship (1 month)**

This clerkship involves a four-week, inpatient and an integrated, outpatient/subspecialty experience. Designed to help students develop clinical skills and a knowledge base in psychiatry, this clerkship includes inpatient, outpatient, consultation-liaison, substance abuse, and psychiatric emergency room experiences. The NBME Psychiatry Subject Examination and other assessments of knowledge and skills occur during the RIA Weeks that follow the clerkship. **Prerequisite:** Pass all foundational science blocks and courses, pass Step 1, pass Clinical Skills and Reasoning, pass Diagnostic Medicine clerkship.

**MDC 7006—Surgery Clerkship (2 months)**

This is an intensive clinical experience that introduces students to the basic principles of surgery, with an inpatient experience as a member of a resident team, an experience in surgical anesthesia, and experiences in outpatient clinics to learn about pre-operative and post-operative care. This clerkship equips students with the knowledge and skills relevant to surgical management that all physicians should possess. It aims to emphasize patient responsibility and professional behavior as essential qualities for new physicians to develop. The NBME Surgery Subject Examination and other assessments of knowledge and skills occur during the RIA Weeks that follow the clerkship. **Prerequisite:** Pass all foundational science blocks and courses, pass Step 1, pass Clinical Skills and Reasoning, pass Diagnostic Medicine clerkship.

**MDC 7007—Primary Care (1 month)**

The clerkship provides four weeks of experience in primary care clinics/offices emphasizing those aspects of this specialty that are most commonly managed in the outpatient setting. It supplements the learning in the inpatient clerkships and emphasizes knowledge and skills that should be understood and mastered by all physicians, regardless of ultimate career goals. **Prerequisite:** Pass all foundational science blocks and courses, pass Step 1, pass Clinical Skills and Reasoning, pass Diagnostic Medicine clerkship.

**MDC 7009—Independent Study: Step 2—Preparation**

This is an independent study course in which medical students pursue directed independent study with faculty member support and resources in preparation for the USMLE Step 2CK and CS Examinations.

**MDC 8100—8104—Year 3 Selectives**

The goal of the Year 3 Selectives is to develop medical students’ clinical skills in history, physical examination, diagnostic reasoning, and patient management, while allowing the students to choose a specific medical specialty or clinical setting for this one-month clerkship. All selectives include hands-on patient care in an inpatient and/or outpatient setting and have common learning objectives, in addition to those that are specific to the discipline. None has a prerequisite of completion of any specific Year 3 core clerkships. Planned selectives include Anesthesiology and Pain Management, Emergency Medicine, Family Medicine, Neurology, and Radiology. **Prerequisite:** Pass all foundational science blocks and courses, pass Step 1, pass Clinical Skills and Reasoning, pass Diagnostic Medicine clerkship.

**MDC 8010—Research**

The required research course, which may be taken at the beginning of Year 2 or after completion of the core required clerkships, is the hallmark of the longitudinal research thread that begins during orientation to medical school. It addresses basic principles of research, including research design, analysis and interpretation of data, biostatistics, critical reading of the biomedical literature, research ethics, and communication of basic research information about clinical care options to a patient or patient’s family. Students will be required to select a research project and mentor during the last week of the pre-clerkship phase of the curriculum and complete a project no later than Year 4. **Prerequisite:** Pass all foundational science blocks and courses.

**MDC 8011 and MDR 8012—Research Elective**

Students particularly interested in research may elect to continue their research for up to two more elective blocks. This allows more detailed experience with the principles of research, including research design, analysis and interpretation of data, biostatistics, critical reading of the biomedical literature, research ethics, and communication of basic research information about clinical care options to a patient or patient’s family. Students are able to continue work on their research project with their mentor. **Prerequisite:** Pass all foundational science blocks and courses.
Master of Biomedical Sciences (M.B.S.) Program

Accreditation
Nova Southeastern University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate’s, baccalaureate, master’s, educational specialist, doctorate, and professional degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Nova Southeastern University.

Admissions Requirements
In order to be considered for admission into the master’s degree program, the student must meet the following requirements:

• completion of a bachelor’s degree from a regionally accredited college or university
• completion of a minimum of four semester hours with a minimum of a C in both biology and chemistry (Successful completion of Organic Chemistry I and II is recommended.)
• completion of a minimum of three semester hours with a minimum of a C in English or composition
• a minimum cumulative GPA of 2.5 on a 4.0 scale.

The dean of the Dr. Kiran C. Patel College of Allopathic Medicine (NSU MD) is empowered to evaluate the total qualifications of every student and to modify requirements in unusual circumstances. The admission process to the graduate program in biomedical sciences is not related in any way to the admission process of any other program at Nova Southeastern University.

Schedule of Application for Admission Cycle
Applications will be accepted on a rolling basis, however preference will be given to completed applications received by August 1.

Tuition and Fees
1. Tuition for 2020–2021 (subject to change by the board of trustees) will be posted on our website (md.nova.edu). A Health Professions Division General Access Fee of $145 is required each year. An NSU Student Services Fee of $1,500 is also required annually. Additionally, an equipment/lab fee of $100 is required of all first-year biomedical science students.
2. Seat reservation fee is $250.

Fees paid in advance will be deducted from the tuition payment due on registration day. All fees are nontransferable and nonrefundable. The first semester’s tuition and fees, less the $250 previously paid, are due on or before registration day. Tuition for the subsequent semester is due on or before registration day for that semester. Students will not be admitted until their financial obligations have been met.

Dismissal
Grounds for dismissal from the Master of Biomedical Sciences Program include, but are not limited to

• the student fails to maintain a minimum GPA of 2.5 in overall coursework
• the student earns a letter grade of C or lower for more than 6 credit hours in any semester or overall, regardless of whether the course was repeated
• the student exceeds the five-year limit for completing all graduation requirements for the Master of Biomedical Sciences program, exclusive of any approved leave of absence or withdrawal in good standing
• the student fails the competency of professionalism and ethics

Additional information is available in the student handbook under “Due Process Procedures.” This section describes the function of the Student Progress and Advising Committee.
Suspension
A student may be suspended (removed from academic enrollment and/or revocation of all other privileges or activities and from the privilege to enter the campus for a specified period of time) if, in the opinion of the Student Progress and Advising Committee, the student has not attained satisfactory academic performance and/or has deviated significantly from the academic standards of professionalism and ethics required by the college.

Readmission Following Suspension
If a student is suspended, he or she may return to the college when, in the opinion of the program, he or she can present adequate evidence that the conditions and/or factors that caused the suspension have changed significantly so that there is a reasonable expectation that the student can perform satisfactorily if permitted to resume his or her studies. Readmission will be solely at the discretion of the program. The student’s prior academic record will remain part of his or her overall academic record and will be recorded on the permanent transcript. A suspended student will be withdrawn from all courses and receive a W on his or her transcript.

Graduation Requirements
Degrees are awarded when the faculty believes the students have attained sufficient maturity of thought and proficiency as demonstrated by satisfactory completion of a prescribed number of courses.

To receive a degree, a student must fulfill the following requirements:
- demonstrate competence in ethics and professionalism
- satisfactorily pass all required courses
- complete a minimum of 30 semester hours of coursework for the Master of Biomedical Sciences degree
- satisfactorily complete the program requirements for the degree, including all assignments, with a minimum 2.5 GPA and with no more than 6 credit hours of coursework below a B
- have satisfactorily met all financial and library obligations
- attend in person the commencement program, at which time the degree is awarded

Curriculum Outline

Total Credits: 30
Students must successfully complete all five required courses and five elective courses, for a total of 30 credits, to graduate. Of the five elective courses, a minimum of three are required to be core medical sciences courses. This curriculum is subject to change and not all courses are offered during fall and winter semesters.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Biochemistry</td>
<td>3</td>
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<tr>
<td>Histology</td>
<td>3</td>
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<tr>
<td>Physiology</td>
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<tr>
<td>Professionalism and Interview Skills</td>
<td>3</td>
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<tr>
<td>Test Preparation</td>
<td>3</td>
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<table>
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<tr>
<th>Electives</th>
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<tbody>
<tr>
<td>Core Medical Sciences Courses</td>
<td>Credit Hours</td>
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<tr>
<td>Anatomy</td>
<td>3</td>
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<tr>
<td>Disease Modeling</td>
<td>3</td>
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<tr>
<td>Fundamentals of Data Science</td>
<td>3</td>
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<tr>
<td>Course</td>
<td>Credit Hours</td>
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<tr>
<td>Genomics and Proteomics</td>
<td>3</td>
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<tr>
<td>Microbiology and Immunology</td>
<td>3</td>
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<tr>
<td>Neuroanatomy</td>
<td>3</td>
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<td>Pathophysiology</td>
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<td>Pharmacology</td>
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<tr>
<td><strong>Other Electives</strong></td>
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<tr>
<td>Bioethics</td>
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<tr>
<td>Biostatistics</td>
<td>3</td>
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<tr>
<td>Data Mining</td>
<td>3</td>
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<td>Financial Environment in Complex Health Systems</td>
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<tr>
<td>Governance in Complex Health Systems</td>
<td>3</td>
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<tr>
<td>Grant Development</td>
<td>3</td>
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<tr>
<td>Managing Organizational Behavior in a Dynamic and Complex World</td>
<td>3</td>
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<tr>
<td>Nutrition</td>
<td>3</td>
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<tr>
<td>Organic Chemistry I</td>
<td>4</td>
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<tr>
<td>Organic Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>Outcomes Management</td>
<td>3</td>
</tr>
<tr>
<td>Physics I</td>
<td>4</td>
</tr>
<tr>
<td>Physics II</td>
<td>4</td>
</tr>
<tr>
<td>Quality Management</td>
<td>3</td>
</tr>
<tr>
<td>Research Design</td>
<td>3</td>
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</tbody>
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Course Descriptions

**ANA 5713—Histology**
This course goes over the study of the microanatomy of cells, tissues, and organs of the human body, combining lecture and digital microscopic laboratory sessions. (3 credits)

**ANA 5723—Neuroanatomy**
This course deals with the study of the structure and function of the spinal cord, brain stem, and cerebrum. (3 credits)

**ANA 5727—Anatomy**
This course deals with the study of the structure and function of the human trunk, extremities, head, and neck. (3 credits)

**BCH 5735—Biochemistry**
This course introduces functions of the important carbohydrates, lipids, nucleic acids, proteins, and properties of enzymes. (3 credits)

**CHEM 2400—Organic Chemistry I/Lab**
This course, with its related lab, is the first part of a two-semester sequence that studies the chemistry of carbon compounds, including their structure, nomenclature, preparation, reactions, analysis, spectroscopy, and properties. Reaction mechanisms are stressed within a functional group framework. (4 credits)

**CHEM 2410—Organic Chemistry II/Lab**
This course, with its related lab, is the second part of a two-semester sequence that studies the chemistry of heteroatom-containing carbon compounds, including their structure, nomenclature, preparation, reactions, analysis, and properties. Reaction mechanisms within a functional group framework are stressed. Stability, nucleophilicity and electrophilicity, and structure reactivity relationships will also be examined. (4 credits)

**CHS 5000—Governance in Complex Health Systems**
This course will focus on the key stakeholders in the health care system: patients and consumers, providers, payers, and public and private employers. It is intended to introduce the stakeholders and discuss how they are impacted and influenced with regard to each other through various governance systems. (3 credits)

**CHS 5200—Financial Environment in Complex Health Systems**
Students will gain a working knowledge of and understanding of the flow of funds among the continuum of main stakeholders in complex health systems. The course addresses sustainable sources of reimbursement available to develop and maintain a variety of business models, settings, and organizational structures. (3 credits)

**HPH 7210—Bioethics: Principles of Life Science Research**
This course provides a structured approach for identifying, analyzing, and resolving ethical issues in medicine and the life sciences. Students analyze and discuss traditional philosophical theories regarding the nature of moral good. They apply these theories to critical issues and selected case studies involving experiments with human subjects, organ transplantation, in vitro fertilization, the use of animals in research, the collection and publication of research data, conflicts of interest, and other topics of current concern. Students will explore the personal values, professional standards, and institutional guidelines that define the roles and responsibilities of the health care practitioner and researcher. (3 credits)

**HPH 7320—Advanced Biostatistics I**
This course is the first of a two-course sequence focusing on inferential statistics for students interested in conducting quantitative research in the health sciences. It enables students to gather data and apply experimental design models toward solving practical problems and improving the efficiency of formulating and providing health care services. (3 credits)

**HPH 7400—Research Design**
This course prepares students to evaluate pharmaceutical procedures and practices from a scientific viewpoint. Students will learn to identify issues requiring additional investigation and to design research that efficiently and effectively addresses those issues. By the end of the course, students will prepare a first draft of a research proposal. (3 credits)

**MBS 5701—Professionalism and Interview Skills**
This course is designed to foster understanding of health professions and provide professional development and a better idea of personal identity. Through various learning styles, students will develop a core set of skills that include wellness strategies, self-awareness, leadership, verbal and written communication, cultural understanding, and self-reflection. Students will explore career specialties, practice giving feedback to themselves and others, and learn good practices in leadership and patient care. Students will also practice interview skills. (3 credits)

**MBS 5702—Test Preparation**
This course will assist students in reviewing material for graduate and professional school entrance exams. It will also provide techniques and strategies used to succeed in standardized exams. (3 credits)
MBS 5800—Disease Modeling
This course is designed to provide students with the basic tools for building and analyzing mathematical models of disease epidemics. Covered topics include model design, compartmental models, parameterizing models, validating models, contact patterns, and age-structure. Students will be prepared to build and analyze the mathematical models of disease that they will encounter in the scientific literature and use in their work in population health. (3 credits)

MBS 5801—Fundamentals of Data Science
This course focuses on data science as a unifier of data analytics, machine learning, and related methods to analyze and understand phenomena related to the health of populations. Students will learn the fundamentals of working with big population health data, including data acquisition, manipulation, analysis with statistics and machine learning, and communication with information visualization. (3 credits)

MBS 5802—Genomics and Proteomics
This course will discuss genome- and protein-related technologies. Techniques and instrumentation will be explained. Students will learn rationales underlying these technologies and how to analyze large datasets acquired through the use of these technologies. (3 credits)

MBS 5803—Outcomes Management
Population health outcomes management is a rapidly expanding, interdisciplinary field that provides evidence and guidance for understanding the endpoints of treatments, interventions, health care practices, and social determinants of health. This course examines benefits, risks, and treatments (including cost and quality of care), at the population level. The goal is to empower clinicians and patients to make informed health care decisions and for policymakers to be advocates for best practices. (3 credits)

MGT 5105—Managing Organizational Behavior in a Dynamic and Complex World
Students will gain a thorough understanding of individual, group, and organizational behavior. They will utilize this knowledge to build practical skills in leading individuals and teams to high performance. Through a variety of teaching methods, students will learn to diagnose their business environment; identify and analyze problems; and develop sound, creative, and socially responsible solutions to help their organizations thrive in a complex and uncertain world. (3 credits)

MHS 5211—Contemporary Issues in Nutrition
This course covers a variety of general concepts and contemporary discussions in the area of nutrition as it applies to personal health. (3 credits)

MIC 5727—Microbiology
This course covers the principles and core concepts of microbiology and immunology. General areas that will be covered include identity and properties of microbes, microbial metabolism, control of microbes, microbial pathogenesis, and laboratory identification. Essential principles of innate and acquired immunity, including the immune response at mucosal surfaces and immune dysfunctions, are presented. (3 credits)

PCO 5504—Pharmacology
This course will introduce students to some of the core concepts in pharmacology. It will provide them with a thorough understanding of the classes of drugs commonly used in clinical practice. Emphasis will be on the mechanism of action, clinical indications, side effects, important drug interactions, and the basic pharmacokinetics of each drug class. Prerequisites: BCH 5735, PHS 5500 (3 credits)

PHS 5500—Physiology
This course reviews the physiological functions and regulation of the major human organ systems. (3 credits)

PHYS 2400—Physics I/Lab
This course covers the basic principles of kinematics, dynamics, work and energy, momentum, rotational motion, gravitation, oscillatory and wave motion, fluid mechanics, and thermodynamics. It includes laboratory sessions. (4 credits)

PHYS 2500—Physics II/Lab
This course covers the basic principles of electrostatics, magnetostatics, DC and AC circuits, electromagnetic waves, optics, and modern physics, in particular, the special theory of relativity, early quantum theory, semiconductor diodes, and transistors. It includes laboratory sessions. (4 credits)

PIM 5450—Quality Management
This course develops a manager-level understanding of the concept of quality and its utility in today’s world of business. (3 credits)

PTH 5500—Molecular Mechanisms of Disease
This course will provide a foundation in understanding the fundamental molecular and cellular mechanisms underlying defined diseases, one of the key goals of contemporary medicine. Prerequisites: BCH 5735, PHS 5500, MIC 1710 (3 credits)
PUB 5902—Grant Development in the Public and Nonprofit Sector

The content of this course provides the knowledge and skills to write grant proposals by sourcing and selecting appropriate grant resources for public and nonprofit organizations. In addition to sourcing grants, the content includes how to manage grants and build relationships with grantors to achieve maximum long-term value. (3 credits)

QNT 5485—Data Mining and Predictive Analytics Fundamentals

This course introduces analytical methods used to convert large information repositories into effective sources for decision making. Students will learn fundamentals of predictive analytics and data mining methods for business applications, gain understanding of how to use tools to mine large amounts of data and build models to predict future events, and practice using analytical techniques to make recommendations that can improve business outcomes and impact strategic decisions. (3 credits)
NSU MD Departments

CLINICAL SCIENCES
Interim Chair and Professor: **V. Rajput** | Professor: **J.W. Vieweg**

MEDICAL EDUCATION

POPULATION HEALTH SCIENCES
Professor and Chair: **J. Jacko** | Professor: **D. Mash** | Assistant Professor: **V. Beljanksi**
Health Professions Division Faculty

Emeritus Faculty

Patricia Cole  
*Emeritus Professor, Family Therapy*  
Ph.D., Nova University, 1993

Douglas Flemons  
*Emeritus Professor, Family Therapy*  
M.A., University of British Columbia, 1986  
Ph.D., Nova University, 1989

Shelley K. Green  
*Emeritus Professor, Family Therapy*  
M.S., Texas Tech University, 1985  
Ph.D., Texas Tech University, 1989

James Hibel  
*Emeritus Professor, Family Therapy*  
M.A., Syracuse University, 1978  
Ph.D., Syracuse University, 1981

Harold Kirsh  
*Emeritus Professor, Surgery*  
D.O., Philadelphia College of Osteopathic Medicine, 1946  
Fellow, American Osteopathic College of Proctology

Leonard A. Levy  
*Emeritus Professor, College of Osteopathic Medicine*  
Affiliate Professor, Medical Education  
B.A., New York University, 1956  
D.P.M., New York College of Podiatric Medicine, 1961  
M.P.H., Columbia University School of Public Health, 1967

Michael A. Longo  
*Emeritus Professor, Surgery*  
Affiliate Professor, Medical Education  
B.S., St. John's University, 1942  
D.O., University of Health Sciences College of Osteopathic Medicine, 1946  
Fellow, American College of Osteopathic Surgeons

Ferol Menks Ludwig  
*Emeritus Professor, Occupational Therapy*  
B.S., Ohio State University, 1966  
M.S., Ohio State University, 1971  
Ph.D., University of Southern California, 1995  
Fellow, American Occupational Therapy Association

Nancy Nashiro  
*Emeritus Professor, Occupational Therapy*  
B.A., University of Hawaii, 1961  
B.S., University of Puget Sound, 1963  
M.A., Southern Methodist University, 1982  
Ph.D., Southern Methodist University, 1986  
Fellow, American Occupational Therapy Association

Charles B. Radlauer  
*Emeritus Professor, Surgery*  
Adjunct Professor, Biomedical Informatics  
M.D., George Washington University College of Medicine, 1961  
Fellow, American College of Surgeons

Carol Niman Reed  
*Emeritus Professor, Occupational Therapy*  
B.S., University of Iowa, 1968  
M.S., University of Texas, 1977  
Ed.D., Nova Southeastern University, 1998  
Fellow, American Occupational Therapy Association

Anthony J. Silvagni  
*Dean Emeritus, College of Osteopathic Medicine*  
Professor, Family Medicine  
Professor, Public Health  
Clinical Professor, Pharmacy Practice  
B.S. (Pharm.), Philadelphia College of Pharmacy and Science, 1963  
M.S. (Pharm.), Philadelphia College of Pharmacy and Science, 1966  
Pharm.D., Philadelphia College of Pharmacy and Science, 1970  
D.O., Philadelphia College of Osteopathic Medicine, 1982  
Fellow, American College of Osteopathic Family Physicians  
Fellow, American Foundation for Pharmaceutical Education
Full-Time Faculty

Omair Abbasi  
Assistant Professor, Medical Education  
Gulf Medical College, United Arab Emirates  
M.D., University of Seychelles, American Institute of Medicine, 2009

Mariem Abdou  
Assistant Professor, Optometry  
B.A., University of Delaware, 2009  
O.D., Salus University, 2013  
M.S., Nova Southeastern University, 2019

Rucha Acharya  
Assistant Professor, Pharmacy Practice  
Pharm.D., St. John’s University, 2017

Ahmad K. Ahmadi  
Associate Professor, Anatomy  
Assistant Professor, Medical Education  
Division of Anatomy  
B.S., Florida International University, 1996  
D.M.D., Nova Southeastern University, 2003

Anna Airy  
Assistant Professor  
B.S., Florida International University, 1985  
B.S.N., Florida International University, 1992  
M.S.N., Florida International University, 1996  
D.N.P., Florida International University, 2008

Josiah Alamu  
Associate Professor, Public Health  
Dip.P.H., School of Health Technology, 1987  
B.S., Obafemi Awolowo University, 1994  
M.P.H., University of Hawaii—Manoa, 2003  
Ph.D., University of Iowa, 2009

Nardia Aldridge  
Assistant Professor, Department of Occupational Therapy  
B.S., CUNY—York College, 2002  
M.S., Hofstra University, 2007

Aisy Aleu  
Clinical Assistant Professor, Pharmacist  
Pharm.D., Nova Southeastern University, 1998  
M.B.A., Nova Southeastern University, 2003  
R.Ph., Florida

Renee B. Alexis  
Associate Professor, Obstetrics and Gynecology  
B.S., Jacksonville University, 1989  
M.D., University of Maryland School of Medicine, 1996  
M.P.H., Nova Southeastern University, 2011

Winston L. Alexis  
Assistant Professor, Obstetrics and Gynecology  
B.S., Howard University, 1965  
M.D., Howard University College of Medicine, 1969

Raed Al Hazme  
Associate Professor, Health Informatics  
B.S., King Saud University, 2001  
M.S., Nova Southeastern University, 2012  
Ph.D., Rutgers Biomedical and Health Sciences University, 2015

Hady Al Masri  
Assistant Professor, Geriatrics  
B.S., University of Miami, 1999  
M.S., Nova Southeastern University, 2001  
D.O., Nova Southeastern University, 2005

Noel Alonso  
Assistant Professor, Pediatrics  
B.A., University of Miami, 1992  
M.S., Barry University, 1994  
M.D., St. George’s University School of Medicine, 1998

Jamie Althoff  
Assistant Professor, Optometry  
B.S., Ferris State University, 2007  
O.D., Michigan College of Optometry, 2007

Yarelis Alvarado  
Assistant Professor, Pharmacy Practice  
Pharm.D., Nova Southeastern University, 2009

Goar Alvarez  
Assistant Dean, Pharmacy Services and Assistant Professor, Sociobehavioral and Administrative Pharmacy  
B.S., Florida A&M University, 1975  
Pharm.D., Nova Southeastern University, 1994

Husny Amerih  
Dr.O.T. Program Director and Professor  
OT Dip., Jordan, 1983  
M.O.T., UCA, 2002  
Ph.D., T.W.U., 2007

Aryia Amini  
Postgraduate Program Director and Assistant Professor, Cariology and Restorative Dentistry  
D.M.D., Temple University, 1994

Stephanie Anderson  
Assistant Professor, Physician Assistant Program—Fort Myers  
B.S., The Ohio State University, 1979  
M.D., Case Western Reserve University School of Medicine, 1983  
J.D., University of Miami School of Law, 1999

Paula L. Anderson-Worts  
Assistant Dean, Faculty and Alumni Affairs  
Associate Professor, Family Medicine  
Assistant Professor, Public Health  
B.S., University of Miami, 1988  
M.S., Nova Southeastern University, 2001

Stephen Andreades  
Clinical Director  
Assistant Professor, Physician Assistant Studies  
B.S., Appalachian State University, 2004  
M.S., Appalachian State University, 2005  
M.M.S., Nova Southeastern University, 2008  
Fellow, American Academy of Physician Assistants
Julia P. Andrews  
Associate Professor, Audiology  
B.A., University of Florida, 2004  
Au.D., Nova Southeastern University, 2008

Miriam Anglo  
Instructor, Optometry  
B.S., Florida International University  
O.D., Nova Southeastern University, 2015

Rais A. Ansari  
Associate Professor, Pharmaceutical Sciences  
B.S., Lucknow University, 1976  
M.S., Lucknow University, 1978  
Ph.D., Kanpur University, 1985

John Antonelli  
Codirector of Predoctoral Clinic  
Professor, Prosthodontics  
D.D.S., New York University College of Dentistry, 1976  
Diplomate, American Board of Special Care Dentistry, 2004  
M.S., Nova Southeastern University, 2005  
Fellow, American Association of Hospital Dentistry

Jose Antonio  
Assistant Professor, Exercise and Sport Science  
B.S., The American University, 1984  
M.S., Kent State University, 1987  
Ph.D., The University of Texas Southwestern Medical Center, 1993

Sibel Antonson  
Assistant Dean of Research  
Professor, Cariology and Restorative Dentistry  
D.D.S., Hacettepe University, 1992  
Ph.D., Hacettepe University, 1999  
M.B.A., Nova Southeastern University, 2007

Diego Araujo Della-Bona  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S., Federal University of Rio Grande do Sul, 2001  
Ph.D., 2007  
Certificate—Prosthodontics Specialist, Sao Leopoldo  
Mandic University, 2012  
Staff Selection—Orofacial Pain, University of Southern California, 2013

Barbara Arcos  
Chair and Associate Professor, Family Medicine  
B.S., University of Florida, 1980  
D.O., Nova Southeastern University, 1994

Nicolas Arcos  
Assistant Professor, Family Medicine  
B.S., Nova Southeastern University, 2011  
M.B.A., Nova Southeastern University, 2012  
D.O., Nova Southeastern University, 2016

Graciela M. Armayor  
Assistant Professor, Sociobehavioral and Administrative Pharmacy  
Pharm.D., University of Florida, 1987  
M.S., Nova Southeastern University, 2006

Cheryl G. Atherley-Todd  
Assistant Professor, Family Medicine  
B.S., McGill University, 1971  
M.D., University of the West Indies School of Medicine, 1976  
Certified Medical Director, Long-Term Care, 2013  
Fellow, American Academy of Family Physicians, 2016

Michael Au  
Assistant Professor, Optometry  
B.S., Nova Southeastern University, 2008  
O.D., Nova Southeastern University, 2012

Barbara Austen  
Assistant Professor, Physician Assistant Program—Orlando  
B.S., University of Nebraska Medical Center, 1994  
M.S./M.P.A.S., University of Nebraska Medical Center, 1999  
D.H.Sc., A.T. Still University, 2018

Llalando Austin  
Program Director and Assistant Professor, Anesthesiologist Assistant  
B.S., University of Central Florida, 2004  
M.H.Sc., Nova Southeastern University, 2008  
Ed.D., Nova Southeastern University, 2013

Kevin D. Avilés Oliveras  
Academic Facilitator/Instructor, Pharmaceutical Sciences  
B.S., University of Puerto Rico—Arecibo, 2016  
Pharm.D., Nova Southeastern University, 2020

Kalumi Ayala  
Assistant Professor, Pharmacy Practice  
Pharm.D., Nova Southeastern University, 2005

Tonni Bacoat-Jones  
Assistant Professor, Surgery  
B.S., Bennett College, 1981  
D.O., Des Moines University, 1994

Annette Bade  
Associate Professor, Optometry  
B.A., Emory University, 1987  
O.D., Southeastern University of the Health Sciences, 1993  
M.S., Nova Southeastern University, 2014  
Fellow, American Academy of Optometry

Camille Baldwin  
Coordinator, Clinical Services  
Assistant Professor, College of Nursing  
B.S., West Texas A&M University, 1996  
M.S.N., Florida Atlantic University, 2006  
Ed.D., Nova Southeastern University, 2017

Tye Ed Barber  
Assistant Professor, Family Medicine  
B.A., University of South Florida, 1987  
Ph.D., University of Florida, 1992  
D.O., Nova Southeastern University, 2006

Sylwia Bareja  
Academic Director and Assistant Professor, PA Program—Fort Myers  
Bachelor of Marketing and Ecology, University of Management and Ecology Warsaw, Poland, 2000  
M.M.S., Nova Southeastern University, 2007
Patrick E. Barry  
**Assistant Professor, Osteopathic Principles and Practice**  
B.S., Kansas State University, 2006  
D.O., Kansas City University of Medicine and Biosciences, Osteopathic Medicine, 2012

Liana Basceanu-Sarbu  
**Assistant Professor, Periodontology**  
D.D.S., New York University, 1989

Kyle Bauckman  
**Assistant Professor, Medical Education**  
B.S., University of South Florida, 2006  
Ph.D., University of South Florida, 2014

Alissa Baum  
**Instructor, Nutrition**  
B.S., University of Florida, 2003  
M.S., Nova Southeastern University, 2005  
Pys.D., Nova Southeastern University, 2010

Lisa Baumbach-Reardon  
**Associate Professor, Basic Sciences**  
B.A., University of Florida, 1980  
Ph.D., University of Florida, 1986

Christine A. Beliard  
**Associate Professor, Family Therapy**  
M.S., University of Houston—Clear Lake, 2008  
Ph.D., Florida State University, 2011

Vladimir Beljanski  
**Assistant Professor, Population Health Sciences**  
B.S., University of Belgrade, 1996  
M.S., University of Belgrade, 1998  
Ph.D., Emory University, 2004

Jennifer Bencsik  
**Director, Clinical Education, Cardiopulmonary Sciences**  
Assistant Professor, Cardiopulmonary Sciences  
A.A.S., Sinclair Community College, 2003  
B.S., Bellevue University, 2011  
M.H.A., Bellevue University, 2012

Tiara Berezu  
**Assistant Professor, Optometry**  
M.A., University of Odessa—Ukraine, 1998  
B.S., Nova Southeastern University, 2016  
O.D., Nova Southeastern University, 2018  
Fellow, American Academy of Optometry, 2019

Iris Berryhill  
**Assistant Professor**  
B.S.N., Nova Southeastern University, 1996  
M.S.N., University of Phoenix, 2013  
D.N.P., Chamberlain College of Nursing, 2016

Eulogio Besada  
**Professor, Optometry**  
B.S., University of Puerto Rico, 1979  
M.S., University of Houston, 1982  
O.D., University of Houston, 1989  
Fellow, American Academy of Optometry

Alison Bested  
**Department Chair, Integrated Medicine**  
**Associate Professor, Clinical Immunology**  
**Associate Professor, Public Health**  
M.D., McMaster University, 1979  
B.S., University of Windsor, 2005

Anthony Bezerra  
**Assistant Professor, Community and Public Health Sciences**  
D.D.S., University of Mexico Americana del Norte, 2000  
Certificate—Dental Medicine, Nova Southeastern University, 2007

Anjali Bhasin  
**Assistant Professor, Family Medicine**  
M.D., Baroda Medical College, 1995

Hua Bi  
**Associate Professor, Optometry**  
M.S., Peking University, 1998  
Ph.D., University of Houston, 2006  
O.D., University of Houston, 2006

Mary Tischio Blackinton  
**Director, Professional Doctor of Physical Therapy Program—Tampa, and Associate Professor**  
B.S./P.T., University of Maryland, 1983  
M.S., Nova University, 1991  
Ed.D., Nova Southeastern University, 2001  
Geriatric Clinical Specialist, APTA, 2009  
Certified Exercise Expert for Aging Adults, 2011

Cyril Blavo  
**Assistant Dean, Preclinical Education**  
**Professor, Pediatrics**  
**Professor, Public Health**  
B.S., Abilene Christian University, 1979  
M.S., Abilene Christian University, 1980  
M.P.H. and T.M., Tulane University School of Public Health and Tropical Medicine, 1988  
Fellow, American College of Osteopathic Pediatricians

Sarah Blaylock  
**Assistant Professor, Department of Occupational Therapy**  
B.S., University of Alabama—Birmingham, 2007  
M.S., University of Alabama—Birmingham, 2009  
Ph.D., University of Alabama—Birmingham, 2017

Barry A. Bleidt  
**Professor, Sociobehavioral and Administrative Pharmacy**  
B.G.S., University of Kentucky, 1974  
B.S.(Pharm), University of Kentucky, 1974  
Research Fellowship, University of Florida, 1975  
Ph.D., University of Florida, 1982  
Pharm.D., Xavier University—Louisiana, 1994

Elise M. Bloch  
**Associate Professor, Occupational Therapy**  
B.S., New York University, 1980  
M.S., Queens College, 1990  
Ed.D., Florida International University, 2004

Robert E. Block  
**Assistant Professor, Community and Public Health Sciences**  
D.M.D. Tufts University School of Dental Medicine, 1982
Ronald E. Block
Chair, Division of Biochemistry
Professor, Medical Education
B.S., College of Charleston, 1963
M.S., Clemson University, 1966
Ph.D., Clemson University, 1969

Allan Bloom
Associate Professor, Internal Medicine
B.A., Drake University, 1970
M.D., Chicago Medical School, 1974

Elaine Bloom
Speech-Language Pathologist, Department of Speech-Language Pathology
B.S., Emerson College, 1962
M.S., Emerson College, 1968

Robert Bobilin
Assistant Professor, Physician Assistant Program—Jacksonville
B.A., University of South Florida, 1971
M.S., University of South Florida, 1976
M.P.A.S., University of Florida, 2004

Melissa Boguslawski
Assistant Professor, Public Health
B.S., Alma College, 2008
M.P.H., Nova Southeastern University, 2010
Ph.D., Indiana University, 2018

Eddie Bolanos
B.S., Florida International University
M.H.Sc., Nova Southeastern University, 2011

Charlene Bolton
Program Director and Assistant Professor, Physician Assistant Program—Jacksonville
M.S.Ed., Brooklyn College, 1991
B.A., Binghamton University, 1998
B.H.Sc. and M.M.S., Nova Southeastern University, 2004
Ed.D., Nova Southeastern University, 2018

R. Daniel Bonfil
Professor, Medical Education
Division of Pathology
B.S., University of Buenos Aires, 1981
Ph.D., University of Buenos Aires, 1986

Carmen Bonilla
Assistant Professor, Endodontics
D.D.S., Menemerita Autonomous University of Puebla, 2001
Certificate—Endodontics, Autonomous University of Tlaxcala, 2007

Dynyce Boyce
Instructor, Nutrition
B.S., Florida International University, 2010
M.S., Nova Southeastern University, 2018

Tommie V. Boyd
Professor, Family Therapy
M.Ed., The Citadel, 1985
Ph.D., Nova Southeastern University, 2000

Gabriela Bozzutti
Assistant Professor, Prosthodontics
D.D.S., University of Buenos Aires, 1994
Certificate—Prosthodontics, Nova Southeastern University, 2009

Paul Bradley
Vice Chair and Professor, Oral Medicine Diagnostic Sciences
B.D.S., University of Birmingham, 1959
M.B., B.S., University of London, 1966
M.D., University of London, 1989
F.D.S.R.C.S. (Eng), Royal College of Surgeons of England, 1985
F.D.S.R.C.S. (Edin), Royal College of Surgeons of Edinburgh, 1985
F.D.S.R.C.S. (Edin), Royal College of Surgeons of Edinburgh, 1988

Theresa Brahim
Assistant Professor, College of Nursing
B.S.N., Florida State University, 1973
M.S., Saint Thomas University, 1982
M.S.N., Barry University, 1990
D.N.P., University of Miami, 2010

Tambi Braun
Associate Professor, Department of Speech-Language Pathology
B.S., University of Witwatersrad, South Africa, 1998
M.S., Nova Southeastern University, 2002
SL.P.D., Nova Southeastern University, 2003

Laura Brennaman
Assistant Professor
M.S.N., University of New Mexico, 2006
Ph.D., University of New Mexico, 2014

Stephanie Brighton
Clinical Director, Physician Assistant Program—Jacksonville
Assistant Professor
B.S., Nova Southeastern University, 2012
M.S., Nova Southeastern University, 2014
D.H.Sc., Nova Southeastern University, 2018

Abby Brodie
Associate Professor, Cariology and Restorative Dentistry
Affiliate Associate Professor, Medical Education
B.S., University of Massachusetts, 1979
D.M.D., University of Pennsylvania, 1983
Fellow, American College of Dentists, 2007
Fellow, International College of Dentists, 2007
M.S., Nova Southeastern University, 2009

Stephen E. Bronsburg
Associate Professor, Biomedical Informatics
B.S., College of Misericordia, 1986
M.H.S.A., Florida International University, 1999
M.S., Nova Southeastern University, 2003
Ph.D., Nova Southeastern University, 2011

Thomas P. Brown
Assistant Professor, Family Medicine
D.O., Philadelphia College of Osteopathic Medicine, 1987

Christina Brown-Wujick
Assistant Professor, Medical Education
B.A., University of Florida, 2005
M.A., University of Florida, 2009
M.Ed., University of Florida, 2009
Ph.D., University of South Florida, 2018
Jonathan Bruner  
Assistant Professor, Osteopathic Principles and Practice  
B.S., University of Michigan, 2002  
D.O., Michigan State University College of Osteopathic Medicine, 2006

Christopher F. Burnett  
Associate Professor, Family Therapy  
M.A., Duquesne University, 1982  
Psy.D., Indiana University of Pennsylvania, 1992

T. Keith Burnham  
Assistant Professor, Physician Assistant Program—Jacksonville  
B.S.(Health Science), George Washington University, 1992  
B.S.(Physician Assistant), George Washington University, 1994  
M.P.A.S., University of Nebraska, 2000  
D.H.Sc., Nova Southeastern University, 2017

Karen L. Butler  
Instructor, Correctional Medicine  
B.S., University of Michigan, 1978  
J.D., Thomas M. Cooley Law School, 1983  
M.D., Ross University School of Medicine, 1999  
M.B.A., Keller Graduate School of Business Administration, 2003  
Ph.D., Kennedy Western University, 2008

Lorilee Butler  
Program Director and Assistant Professor, Physician Assistant Department—Orlando  
B.S., University of Nebraska Medical Center, 1992  
M.P.A.S., University of Nebraska Medical Center, 1997  
M.Ed., University of West Florida, 2004  

Erin Byrne  
Clinical Assistant Professor, Pharmacy Practice  
Pharm.D., Nova Southeastern University, 2007

Roberto J. Cabassa  
Assistant Professor, Pediatric Dentistry  
D.M.D., University of Puerto Rico, School of Dentistry, 1988

W. Grady Campbell  
Professor, Medical Education  
B.S., Emory University, 1991  
M.S., University of Tennessee, 1995  
Ph.D., University of Florida Medical School, 1998

Jennifer Canbek  
Program Director, D.P.T. Program—Fort Lauderdale  
Director, Postprofessional Advancement  
Associate Professor, Physical Therapy  
B.S., Maryville University—Saint Louis, 1998  
Ph.D., Nova Southeastern University, 2011

Gayl Canfield  
Associate Professor, Medical Education  
B.S., University of Central Oklahoma, 1986  
M.S., Oklahoma State University, 1987  
Ph.D., University of Alabama—Birmingham, 1995

Jonathan D. Caplan  
Assistant Professor, Physician Assistant Program—Orlando  
B.S., University of Connecticut, 1999  
M.S., University of Central Florida, 2002  
M.C.M.Sc., Barry University, 2006

Katelyn J. F. Carnevale  
Assistant Professor, Medical Education  
Division of Biochemistry  
B.S., University of North Florida, 2012  
M.S., Florida State University, 2015  
Ph.D., Florida State University, 2018

Charles Carr  
Associate Professor, Osteopathic Principles and Practice  
D.O., West Virginia School of Osteopathic Medicine, 1982

Ricardo C. Carrasco  
Program Director, Occupational Therapy Department—Tampa  
E.T.C., Pasig Catholic College, 1964  
B.S.C., San Beda College, 1968  
B.S.O.T., University of the Philippines, 1978  
M.S.Ed., University of the Philippines, 1982  
Ph.D., Union Institute and University, 1990  
Fellow, American Occupational Therapy Association, 1993

Stefanie Carter  
Director, Faculty Affairs  
Assistant Professor, Medical Education  
B.S., Nova Southeastern University, 2008  
M.S., Nova Southeastern University, 2009  
Ed.D., Nova Southeastern University, 2016

Manuel J. Carvajal  
Professor, Sociobehavioral and Administrative Pharmacy  
B.A., Florida Atlantic University, 1966  
M.S.A., University of Florida, 1969  
Ph.D., University of Florida, 1974

Ana Maria Castejon  
Associate Dean and Associate Professor, Pharmaceutical Sciences  
B.S.(Pharm), Central University of Venezuela, 1990  
Ph.D., Central University of Venezuela, 1997

Rafael Castellon  
Associate Dean of Clinical Services  
Associate Professor, Prosthodontics  
D.D.S., University of Guadalajara, 1997  
M.S., University of Minnesota, 2002

Gesulla Cavanaugh  
Assistant Professor  
M.P.H./Epidemiology, Loma Linda University, 2007  
Ph.D., Florida Atlantic University, 2014

Kathy Cerminara  
Affiliate Professor, Medical Education  
B.S., Ohio University, 1983  
J.D., University of Pittsburgh, 2002

Melissa Chamberlain  
Instructor, Medical Education  
M.B.A., Nova Southeastern University, 2007

Amanda Chase  
Associate Professor, Medical Education  
B.S., University of California—Santa Barbara, 1999  
Ph.D., Johns Hopkins University, 2007
Amanpreet K. Cheema  
Assistant Professor, Clinical Immunology  
Assistant Professor, Nutrition  
B.S., Panjab University, 2005  
M.S., Panjab University, 2007  
Ph.D., Florida International University, 2014

Ming-Shun Samuel Cheng  
Director, Ph.D. Program  
Associate Professor, Physical Therapy  
B.S., National Taiwan University, 1993  
M.S., Nova Southeastern University, 2008  
M.P.H., Nova Southeastern University, 2017  
Fellow, Florida Academy of Physician Assistants  
Fellow, American Academy of Physician Assistants

Diana Cherkiss  
Assistant Professor, Physician Assistant Studies  
B.S., University of Central Florida, 2004  
M.S., Nova Southeastern University, 2008  
M.P.H., Nova Southeastern University, 2017  
Fellow, Florida Academy of Physician Assistants  
Fellow, American Academy of Physician Assistants

Rebecca M. Cherner  
Associate Professor, Family Medicine  
B.S., University of Alabama, 1993  
D.O., Nova Southeastern University, 1997

Lance Cherry  
Assistant Professor  
B.S., University of Florida, 1985  
M.P.T., Emory University, 1990  
Certified Clinical Specialist, Orthopedics, American Board of Physical Therapy Specialties (OCS), 2003  
Ed.D., Columbia University, 2007

C. Lynn Chevalier  
Associate Professor, Health Science  
B.S., College of St. Rose, 1978  
M.S., State University of New York—Albany, 1980  
M.P.H., University of Massachusetts—Amherst, 2004  
D.H.Sc., Nova Southeastern University, 2007

Eva Chiang  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S., Havana University, Cuba, 1991

Judith Chin  
Postgraduate Director and Professor, Pediatric Dentistry  
D.D.S., Indiana University School of Dentistry, 1994

Eun Choi  
Assistant Professor, Oral Medicine Diagnostic Sciences  
M.D., Seoul National University (South Korea), 1995  
D.D.S., Nova Southeastern University, 2009

Vincent Cimmino  
Chair, Admissions Committee  
Professor, Medical Education  
B.S., University of Dayton, 1964  
M.D., New Jersey College of Medicine, 1972

Jodi Clark  
Associate Professor, Health Science  
B.S., University of Miami, 1992  
M.D., University of Miami, 1996  
M.P.H., Florida International University, 2003

Michelle A. Clark  
Dean and Professor, Pharmaceutical Sciences  
B.A., Florida Atlantic University, 1990  
M.S., University of South Florida, 1995  
Ph.D., University of South Florida, 1996

Darren J. Cohen  
Assistant Professor, Family Medicine  
Assistant Professor, Medical Education  
B.S., Emory University, 2001  
D.O., Nova Southeastern University, 2005

Devra E. Cohen  
Instructor, Public Health  
B.A., Vassar College, 1981  
M.P.H., Yale University, 1985

Jason A. Cohen  
Instructor, Disaster and Emergency Management  
B.S., Nova Southeastern University, 2006  
M.S., Nova Southeastern University, 2009  
Ed.D., Wilmington University, 2019

Peter M. Cohen  
Assistant Professor, Family Medicine  
B.A., University of South Florida, 1981  
D.O., Southeastern University of the Health Sciences, 1993

Megan Colas  
Clinical Director and Assistant Professor, Athletic Training  
B.S., Salisbury University, 2002  
M.S., Virginia Polytechnic Institute and State University, 2003  
Ph.D., Virginia Polytechnic Institute and State University, 2009

Carolyn Coleman  
Instructor, Clinical Informatics Liaison, Periodontology  
B.Ed., The Ohio State University, 1979  
Certificate, The Ohio State University, 1979  
M.S., Barry University, 1985

Petra Colindres  
Assistant Professor, Nutrition  
Dual B.A., University of Central Oklahoma, 2010  
M.A., University of Oklahoma, 2013

Susan Collingwood  
Assistant Dean, Educational Standards and Quality  
Assistant Professor, Medical Education  
B.A., Indiana University, 1980  
J.D., University of Florida, 1988

Rose M. Coión  
Associate Professor, Health Science  
B.S., Psychology, University of Houston, 1992  
M.A., Psychology, University of Houston, 1995  
Ph.D., University of Houston, 1997
Frances M. Colón-Pratts  
Clinical Assistant Professor, Pharmacy Practice  
Pharm.D., University of Puerto Rico, 2006

Mickinzee Combs  
Instructor, Optometry  
O.D., Nova Southeastern University, 2019

Luvencia Connor  
Associate Professor, College of Nursing  
B.S.N., University of the Virgin Islands, 1991  
M.S.N., University of Phoenix, 2001  
Ed.D., Nova Southeastern University, 2015

Gisela Contasti  
Assistant Professor, Orthodontics and Dentofacial Orthopedics  
D.D.S., Universidad Central de Venezuela, 1976  
M.S., University of Texas Health Science Center, 1982

Nicole J. Cook  
Associate Professor, Public Health  
Assistant Professor, Disaster and Emergency Management  
B.A., Brandeis University, 1990  
M.P.A., New York University, 1995  
Ph.D., University of Miami, Miller School of Medicine, 2008

Nancy Cornett  
Assistant Professor,  
Physician Assistant Program—Fort Myers  
B.S., Miami University, 1974  
M.S., Medical College of Ohio, 2003

Joshua Costin  
Assistant Professor, Medical Education  
Division of Microbiology  
B.S., Florida State University, 1998  
Ph.D., Tulane University, 2005

Charlene Couillard  
Assistant Professor, Physician Assistant Program—Fort Myers  
B.S., 1992  
M.P.A.S., Massachusetts College of Pharmacy and Health Science, 2001

Rachel Anastasia Coulter  
Professor, Optometry  
Assistant Professor, Medical Education  
B.A., Duke University, 1983  
O.D., Pennsylvania College of Optometry, 1991  
M.S., Nova Southeastern University, 2012  
Fellow, American Academy of Optometry  
Fellow, College of Optometrists in Vision Development  
Diplomate—Binocular Vision, Perception, and Pediatric Optometry,  
American Academy of Optometry

Natalee Covitz  
Assistant Professor, Physician Assistant Studies  
B.S., Florida Atlantic University, 2005  
B.S./M.M.S., Nova Southeastern University, 2007  
Fellow, Florida Academy of Physician Assistants  
Fellow, American Academy of Physician Assistants

Tavis Craddock  
Assistant Professor, Clinical Immunology  
Assistant Professor, Psychology and Neuroscience  
B.S., University of Guelph, 2002  
M.S., University of Alberta, 2008  
Ph.D., University of Alberta, 2012

Gary D. Cravens  
Assistant Professor, Biomedical Informatics  
Affiliate Assistant Professor, Medical Education  
B.A., Indiana University, 1975  
M.S., Indiana University, 1979  
M.S., Indiana University, 1986  
M.S., Indiana University, 1992  
M.D., Indiana University, 1997  
M.S., Indiana University, 2015

Luigi Cubeddu  
Professor, Pharmaceutical Sciences  
M.D., Central University of Venezuela, 1964  
Ph.D., University of Colorado, 1974

Nydia Cummings  
Assessment Director and Associate Professor,  
Department of Institutional Affairs  
B.S., University of Puerto Rico, 1975  
M.S., Arkansas State University, 1978  
Ph.D., University of Miami, 1996

Jolanta M. Czerwinska  
Clinical Assistant Professor, Pharmaceutical Sciences  
M.A., University of Gdansk, 1981  
M.A., Ball State University, 1984  
Ph.D., University of Gdansk, 1993

Dawn DaCosta  
Director/Instructor, College of Pharmacy  
B.S., Nova Southeastern University, 2000  
M.A., Nova Southeastern University, 2010

Mansour Dagher  
B.S., Florida Atlantic University, 1996  
M.B.A., Florida Atlantic University, 2003  
M.H.Sc., Nova Southeastern University, 2012

Thomas L. Dalesandro, Jr.  
A.S.N., College of Dupage, 2001  
B.S.N., Chamberlain College of Nursing, 2011  
M.S.N., Chamberlain College of Nursing, 2013  
D.N.P., Chamberlain College of Nursing, 2017

Mariana D’Amico  
Associate Professor, Occupational Therapy  
B.S., New York University  
M.S., Eastern Kentucky University  
Ed.D., Spalding University  
Fellow, American Occupational Therapy Association, 2016

Rick D. Davenport  
Program Director, Occupational Therapy Ph.D. Program  
Associate Professor, Occupational Therapy Department  
B.S.N., University of Florida, 1995  
M.H.S., University of Florida, 2000  
Ph.D., University of Florida, 2007
Jackie Davie
Associate Professor, Audiology
B.S., The Pennsylvania State University, 1994
M.S., The Pennsylvania State University, 1996
Ph.D., The Pennsylvania State University, 2005

Kelley L. Davis
Director and Professor, Disaster and Emergency Management
Professor, Medical Education
Chair, Division of Microbiology
B.A., University of Kansas, 1997
Ph.D., University of Missouri, 2003

Molly Davis
Speech-Language Pathologist, Department of Speech-Language Pathology
B.Ed., University of Toledo, 1996
M.Ed., University of Toledo, 1999

Richard E. Davis
Professor, Physician Assistant Studies
B.S./P.A., University of Oklahoma, 1981
M.S., Troy State University, 1984
Ed.D., Nova Southeastern University, 2001
Fellow, American Academy of Physician Assistants

Thomas J. Decker
Assistant Professor, Occupational Therapy
B.S., Iowa State University
B.S., Saint Ambrose University
O.T.D., Rocky Mountain University of Health Professions

Michael J. DeFranco
Clinical Assistant Professor, Orthopedic and Sports Medicine
B.S., Fordham University, 1993
M.D., Case Western Reserve School of Medicine, 2001

Hilda M. DeGaetano
Senior Assistant Dean, Preclinical Education
Professor, Pediatrics
B.S., New York Institute of Technology, 1988
D.O., New York College of Osteopathic Medicine, 1992

Joseph S. DeGaetano
Professor, Family Medicine
B.S., New York Institute of Technology, 1988
D.O., New York College of Osteopathic Medicine, 1992
M.S., Nova Southeastern University, 2006

Marlon Demeritt
Assistant Professor, Optometry
B.S., Florida International University, 2000
O.D., Nova Southeastern University, 2004
M.B.A., Nova Southeastern University, 2015
Fellow, American Academy of Optometry

Michelle Demory Beckler
Assistant Professor, Medical Education
Division of Microbiology
B.A., Smith College, 2000
Ph.D., University of Virginia, 2008

Marcia Derby-Davis
Associate Professor, College of Nursing
B.S.N., Florida Atlantic University, 2000
M.S.N, University of Phoenix, 2005
Ph.D., Barry University, 2010

Lori DeSorbo
Assistant Professor, Anesthesiology Assistant
B.S., Florida Atlantic University, 2001
M.M., Emory University, 2004

Albert Despaigne
Assistant Professor, Prosthodontics
D.M.D., New York University, College of Dentistry, 1977

Richard Deth
Professor, Pharmaceutical Sciences
B.S., State University of New York—Buffalo, 1970
Ph.D., University of Miami, 1975

Morton A. Diamond
Medical Director and Professor, Physician Assistant Studies
Affiliate Professor, Medical Education
A.B., Cornell University, 1959
M.D., State University of New York, 1963
Fellow, American College of Physicians
Fellow, American College of Cardiology
Fellow, American Heart Association

Frederick DiCarlo
Director of Academic and Faculty Support and Assistant Professor, Department of Speech-Language Pathology
B.S., State University of New York—Buffalo, 1982
M.S., Nova Southeastern University, 1996
Ed.D., Nova Southeastern University, 2008

Debra A. Dixon
Program Director and Associate Professor, M.H.Sc. Program
B.S., University of Maryland—Baltimore, 2000
M.S., University of Maryland—Baltimore, 2003
D.H.Sc., Nova Southeastern University, 2013

Robert J. Dobrin
Assistant Professor, Cardiology and Restorative Dentistry
B.S., Rensselaer Polytechnic Institute, 1971
D.M.D., University of Pennsylvania, 1974

Jeffrey Doeringer
Assistant Professor, Athletic Training
B.S., East Stroudsburg University, 2006
M.S., Ohio University, 2008
Ph.D., Oregon State University, 2014

Melissa Dreger
Instructor, Physical Therapy
B.S., University of Mount Union, 2012
D.P.T., University of Pittsburgh, 2015

Lori Beth Dribin
Professor, Medical Education
Division of Anatomy
B.A., Northwestern University, 1972
M.S., Northwestern University, 1973
Ph.D., Northwestern University, 1975
Damian R. Dyer  
_Instructor, Preventive Medicine_  
B.S., Prairie View A & M University, 1999  
M.D., University of Louisville, 2004

Alyssa Eason  
_Affiliate Assistant Professor, Medical Education_  
B.A., Florida Atlantic University, 2003  
M.S., Nova Southeastern University, 2013  
Ed.D., Nova Southeastern University, 2019

Diane Ede-Nichols  
_Chair and Professor, Community and Public Health Sciences_  
Associate Professor, Public Health  
D.M.D., Fairleigh Dickinson University College of Dental Medicine, 1987  
M.H.L., Nova Southeastern University, 2004  
M.P.H., Nova Southeastern University, 2010

Melissa Edrich  
_Program Director and Assistant Professor, B.S.-SLCD Program, Department of Speech-Language Pathology_  
B.A., Florida Atlantic University, 1993  
M.S., Nova Southeastern University, 1996  
Ed.D., Nova Southeastern University, 2015

Oren Elharar  
_Instructor/Academic Facilitator, Pharmacy Practice_  
Pharm.D., Nova Southeastern University, 2014

Marsha-Gaye Elson-Joseph  
_Program Director, Psychiatric-Mental Health Nurse Practitioner_  
Assistant Professor  
B.S.N., University of Miami, 2006  
M.S.N., Florida Atlantic University, 2011  
D.N.P., University of North Florida, 2018

Stephen W. Ely  
_Associate Professor, Medical Education_  
B.S., Western Michigan University, 1974  
Ph.D., Michigan State University, 1980  
M.D., University of Virginia, 1986

Kara Erolin  
_Director of Doctoral Programs and Assistant Professor, Family Therapy_  
M.A., University of Minnesota, 2000  
Ph.D., University of Minnesota, 2012

Alexandra Espejo  
_Director of Externship Programs_  
Assistant Professor, Optometry  
Optometra, Universidad de la Salle, Colombia, 1992  
O.D., Pennsylvania College of Optometry, 1996  
Fellow, American Academy of Optometry

Rebecca I. Estes  
_Chair and Interim M.O.T. Program Director, Department of Occupational Therapy_  
A.A., Kansas University, 1975  
B.S., Texas Woman's University, 1978  
M.A., Texas Woman's University, 1980  
M.O.T., Texas Woman's University, 1994  
Ph.D., University of Texas—Dallas, 2001

Rogerio S. Faillace  
_Assistant Professor, Pediatrics_  
M.D., Fluminense Federal University, 1987  
B.S.N., Barry University, 1992

Lisa Farach  
_Chair, Cardiopulmonary Sciences_  
A.S., Broward College, 1992  
B.A., Florida Atlantic University, 1999  
M.S., Florida International University, 2009

Greg Fecho  
_Associate Professor, Optometry_  
B.A., Florida Atlantic University, 1995  
D.O., Nova Southeastern University, 2001

Harvey A. Feldman  
_Professor, Physician Assistant Studies_  
Affiliate Professor, Medicine  
B.A., University of Pennsylvania, 1963  
M.D., University of Pennsylvania, 1967  
Fellow American College of Physicians American Society of Nephrology

Daniela Fernandez  
_Assistant Professor, Pharmacy Practice_  
Pharm.D., Nova Southeastern University, 2018

Eli Fernandez  
_Assistant Professor, Pediatrics_  
B.S., University of Florida  
M.S., University of South Florida  
D.O., Edward Via College of Osteopathic Medicine

M. Isabel Fernandez  
_Professor, Public Health_  
Professor, Preventive Medicine  
B.A., Florida International University, 1978  
M.A., Michigan State University, 1981  
Ph.D., Michigan State University, 1986

Sylvia E. Fernandez  
_Assistant Professor, Physician Assistant Studies_  
B.M.L.S., Florida International University, 1999  
M.M.S., Barry University, 2005

Alicia Fernandez-Fernandez  
_Associate Professor, Physical Therapy_  
Diploma, University of Oviedo—Spain, 1997  
B.S. Health Sciences, Florida International University, 2000  
M.S. P.T, Florida International University, 2002  
B.S. B.M.E, Florida International University, 2007  
D.P.T., Nova Southeastern University, 2010  
Ph.D., Florida International University, 2013

Marianna Ferraz  
_Instructor, Optometry_  
B.S., Nova Southeastern University, 2015  
O.D., Illinois College of Optometry, 2019

Phyllis Filker  
_Associate Dean, Graduate and Community Education_  
Associate Professor, Public Health  
D.M.D., University of Florida, 1980  
M.P.H., Nova Southeastern University, 2012
Megan Finck  
Assistant Professor, Physician Assistant Program—Jacksonville  
B.A., University of Delaware, 1998  
M.M.S., Nova Southeastern University, 2014

Lauren Fine  
Assistant Professor, Medical Education  
B.S., Washington University, 2001  
M.D., University of Miami, 2006

C. Richard Finley  
Program Director and Associate Professor, Physician Assistant Department—Fort Lauderdale  
B.S.P.A., University of Oklahoma, 1982  
M.P.A.S., University of Nebraska, 1998  
Ed.D., Nova Southeastern University, 2006  
Distinguished Fellow, American Academy of Physician Assistants  
Fellow, Florida Academy of Physician Assistants

Hélène Fisher  
Associate Professor, Department of Speech-Language Pathology  
B.S., University of Cape Town, South Africa, 1978  
M.A., New York University, 1983  
SLP.D., Nova Southeastern University, 2002

Paul Fleisher  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S., Northwestern University, 1965

Marie H. Florent-Carre  
Assistant Professor, Family Medicine  
Assistant Professor, Public Health  
Director, Department of Rural and Urban Underserved Medicine  
B.S., University of Florida, 1994  
M.P.H., Florida International University, 1999  
D.O., Nova Southeastern University, 2005

Gina Foster-Moumoutjis  
Assistant Professor, Family Medicine  
Affiliate Assistant Professor, Medical Education  
B.A., Harvard University, 2000  
M.D., University of Miami, 2005

Barry Frauens  
Chief, Primary Care, North Miami Beach  
Associate Professor, Optometry  
B.S., Wilkes College, 1985  
O.D., Nova Southeastern University, 1996  
Fellow, American Academy of Optometry

Elizabeth Frenzel Shepherd  
Assistant Dean, Strategic Partnerships and Program Development  
Assistant Professor, Pharmacy Practice  
B.S. (Pharm.), Long Island University 1980  
M.B.A., Florida International University, 1987  
Pharm.D., Shenandoah University, 2012  
Fellow, American Society of Consultant Pharmacists

Erica Friedland  
Chair and Associate Professor, Audiology  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.S., University of Florida, 1990  
M.S., Vanderbilt University, 1992  
Au.D., Nova Southeastern University, 2001

Mark Gabay  
Assistant Professor, Pediatrics  
B.S., University of Arizona, 1999  
D.O., Nova Southeastern University, 2005

Lori Gabric  
Facilitator of Clinical Placements and  
Instructor, Department of Speech-Language Pathology  
B.S., University of Central Florida, 2005  
M.S., University of Central Florida, 2007

Patricia A. Gaffney  
Associate Professor, Audiology  
M.S., University of Pittsburgh, 2003  
Au.D., University of Pittsburgh, 2005

Shilpa B. Gaikward  
Assistant Professor, Physical Therapy  
B.P.Th., Maharashtra University of Health Science, 2007  
M.P.Th., Maharashtra University of Health Science, 2011  
Ph.D., Loma Linda University, 2016

Rashondia E. Gaines  
Codirector of Predoctoral Clinic  
Associate Professor, Cariology and Restorative Dentistry  
Director of Faculty Practice  
B.A., Hampton University, 1994  
D.D.S., Virginia Commonwealth University/Medical College of Virginia  
School of Dentistry, 1998  
Certificate—AEGD, University of Missouri—Kansas City School of Dentistry, 1999

Sandrine Gaillard-Kenney  
Associate Dean; Interim Director, Doctor of Health Science  
Program; and Associate Professor, Dr. Pallavi Patel College of Health Care Sciences  
B.A., Universite de la Sorbonne Nouvelle, 1995  
M.A., Universite de la Sorbonne Nouvelle, 1997  
M.A., Universite de la Sorbonne Nouvelle, 1998  
Ed.D., Nova Southeastern University, 2007

Audrey Galka  
Assistant Dean of Admissions and Student Services  
D.D.S., New York University, 1980

Robin Galley  
Associate Professor, Physical Therapy  
Director of Clinical Education  
B.S., Louisiana State University, 1999  
M.S., Texas Woman’s University, 2001  
D.P.T., A.T. Still University, 2012  
Certified Clinical Specialist—Orthopedics, American Board of Physical Therapy Specialties

Joann Gallickio  
Associate Professor, Physical Therapy  
B.S., University of Scranton, 1997  
M.S., University of Scranton, 1998  
D.Sc., Rocky Mountain University of Health Professions, 2010

Tricia Gangoo-Dookhan  
Clinical Pharmacist  
B.S., St. John’s University, 1994  
Pharm.D., Nova Southeastern University, 2000
Peter M. Gannett  
Associate Dean, Research and Graduate Education  
B.S., University of Missouri—Columbia, 1977  
Ph.D., University of Wisconsin—Madison, 1982

Bibiana Garcia  
Assistant Professor, Periodontology  
B.S., Colombian Odontological College, 1995

Cristina Garcia-Godoy  
Associate Professor, Public Health  
D.D.S., Universidad Iberoamericana, 2003  
M.P.H., Nova Southeastern University, 2011

Marela Garcia  
Associate Professor, Periodontology  
D.D.S., Central University of Venezuela 1997  
D.M.D., University of Pennsylvania, 2005  
M.B.A., Villanova University, 2009

David M. Gazze  
Clinical Assistant Professor, Pharmaceutical Sciences  
B.S., University of Pittsburgh, 1980  
Ph.D., University of Pittsburgh, 1987

Gimol George  
Affiliate Assistant Professor  
M.I.B.A., Nova Southeastern University, 2003  
Ed.D., Nova Southeastern University, 2008

Michael Georgescu  
Assistant Professor, Cariology and Restorative Dentistry  
M.D., Boston University, 1987

John (Robbie) Gerke  
Clinical Director and Assistant Professor, Physician Assistant Program—Orlando  
B.A., University of Florida, 2008  
M.M.S., Nova Southeastern University, 2010

Arlene Giczkowski  
Assistant Dean, Student Affairs  
Assistant Professor, Medical Education  
B.S., State University of New York—Geneseo, 1985  
M.S., State University of New York—Cortland, 1995  
Ed.D., Nova Southeastern University, 2013

Kelly Gillespie  
Clinical Supervisor and Instructor, Department of Speech-Language Pathology  
B.S., Marquette University  
M.S., Marquette University

Elizabeth Gnagy  
Instructor, Psychiatry  
B.S., University of Maryland, 2008  
D.O., Lake Erie College of Osteopathic Medicine, 2013

Antonio Godoy  
Associate Professor, Prosthodontics  
D.D.S., Universidad de Carabobo, 1979  
M.S., University of Maryland, 1984  
Certificate—Maxillofacial Prosthodontics, University of Texas, 1990

Marvin J. Golberg  
Assistant Professor, Prosthodontics  
D.D.S., University of Maryland, 1956

Eric A. Goldsmith  
Assistant Dean, Clinical Affairs  
Chair and Assistant Professor, Surgery  
B.A., New York University, 1974  
M.S., Long Island University, 1980  
D.O., University of Osteopathic Medicine and Health Sciences, 1984

Cesar Gonzalez  
Assistant Professor, Cariology and Restorative Dentistry  
B.S., Universidad Autonoma De Sinaloa, 2003  
Certificate—Pediatric Dentistry, University of Iowa, 1999  
Diplomate of the American Board of Pediatric Dentistry, 2002

Tulia Gonzalez  
Assistant Professor, Cariology and Restorative Dentistry  
D.M.D., University Colegio Odontologico Colombiano, 1987

Arlene B. Gordon  
Clinical Associate Professor, Family Therapy  
M.S., Nova University, 1992  
Ph.D., Nova Southeastern University, 1998

Harvey Gordon  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S., George Town School of Dentistry, 1968

Marilyn S. Gordon  
Assistant Professor, Nutrition  
Adjunct Professor, Health and Human Performance  
Assistant Professor, Affiliated  
B.S., Florida International University, 1987  
M.S., Florida Atlantic University, 1998  
Ed.D., Florida International University, 2008

Mary Granoff  
Program Director and Associate Professor  
M.B.A., University of Miami, 1994  
D.B.A., Nova Southeastern University, 2002  
B.S.N., University of Phoenix, 2007  
M.S.N., University of Phoenix, 2009

Stephen G. Grant  
Professor, Public Health  
B.Sc., University of Toronto, 1979  
Ph.D., University of Toronto, 1985

Tameeka Grant  
Assistant Professor, Medical Education  
B.A., Rutgers University, 1998  
M.A., Fordham University, 2004  
M.A., Montclair State University, 2008  
Ph.D., Fordham University, 2012

Elizabeth Gray  
Assistant Professor, Medical Education  
B.A., Texas A&M University, 2003  
M.S., Texas Tech University, 2008  
M.D., Texas Tech University, 2008
Katherine Green  
Assistant Professor, Optometry  
B.A., Saint Mary's University, 2011  
O.D., Illinois College of Optometry, 2015  
Fellow, American Academy of Optometry, 2018  

Nickolas Green  
Assistant Professor, Optometry  
B.S., University of Connecticut, 2012  
Fellow, American Academy of Optometry  

Paul Greenman  
Associate Professor, Medical Education  
Division of Anatomy  
D.P.M., Pennsylvania College of Podiatric Medicine, 1992  

Daniel Griffin  
Associate Professor, Medical Education  
B.S., Rider University, 1997  
Ph.D., University of Minnesota, 2007  

Edye Elizabeth Groseclose  
Professor, Medical Education  
Division of Biochemistry  
B.S., University of Miami, 1965  
Ph.D., University of Miami School of Medicine, 1978  

Robert C. Grosz  
Professor, Physician Assistant Studies  
B.A., Adelphi University, 1964  
M.S., Adelphi University, 1966  
Ed.D., Nova University, 1974  

Mouline Guerrier  
Coordinator, Clinical Services  
Assistant Professor  
A.P.R.N.  
AGPCNP-BC  
D.N.P.  

Mauricio Guerrero  
Assistant Professor, Prosthodontics  
D.D.S., Pontifical Xavier University, 1989  

Vincent Guida  
Associate Professor, Geriatrics  
B.A. Lafayette College, 1968  
M.D., Albany Medical College, 1972  

Jyothi Gunta  
Instructor, Preventive Medicine  
M.D., Mechnikov State Medical Academy, 2007  

Martha Gutierrez Ramirez  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S., Colombian Odontological College, 1989  

José C. Gutiérrez-Rocca  
Assistant Professor, Pharmaceutical Sciences  
B.S. Pharm. (Hon.), University of Texas—Austin, 1988  
Ph.D., University of Texas—Austin, 1993  

James Gutmann  
Professor, Chair, and Postgraduate Program Director,  
Department of Endodontics  
D.D.S., Marquette University, School of Dentistry, 1970  
Resident—Endodontics, West Side V.A. Hospital, 1972  
Certificate—Advanced Specialty Training in Endodontics, University of Illinois, College of Dentistry, 1972  
Army Medical Department Officer Basic Course, Brooke Army Medical Center, 1972  

Stanley Hack  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S., University of Witwatersrand, Johannesburg, South Africa, 1974  

Farzanna Haffizulla  
Assistant Dean, Community and Global Health  
Assistant Professor, Medicine  
B.S., University of Central Florida, 1995  
M.D., University of Miami, 2000  

Kathleen Hagen  
Assistant Professor, Public Health  
B.S., Texas University, 1984  
Ed.D., Nova Southeastern University, 2016  

Genevieve Hale  
Assistant Professor, Pharmacy Practice  
B.A., Rutgers University, 2009  
Pharm.D., Nova Southeastern University, 2013  

Elizabeth M. Hames  
Assistant Professor, Geriatrics  
B.A., University of Miami, 1993  
M.A., University of Miami, 1995  
D.O., Nova Southeastern University, 2009  

Teri Hamill  
Professor, Audiology  
B.A., University of Central Florida, 1982  
M.S., Florida State University, 1983  
Ph.D., Florida State University, 1986  

James Hamstr  
Assistant Dean, Graduate Medical Education  
Associate Professor, Internal Medicine  
B.A., Calvin College, 1980  
M.S., California State University, 1987  
Ed.D., University of California—Los Angeles, 1996  

Jorge Han  
Program Director and Assistant Professor, Medical Sonography  
M.D., University Cayetano Heredia, 1981  
Ob-Gyn Specialist, University Cayetano Heredia, 1987  

Patrick Hardigan  
Executive Associate Dean, Research  
Professor, Biomedical Informatics  
Professor, Medical Education  
Professor, Public Health  
B.S., Ferris State College, 1987  
M.B.A., University of Wyoming, 1991  
Ph.D., University of Wyoming, 1996  

Health Professions Division—Full-Time Faculty Members 575
Amy Harcourt  
Assistant Professor, Physical Therapy  
B.S., Carson-Newman College, 1999  
M.S., Texas Woman’s University, 2003  
D.P.T., Regis University, 2012

Delia Harper-Celestine  
Assistant Dean, Student and Alumni Services  
Assistant Professor, Medical Education  
Assistant Professor, Public Health  
B.S., Brooklyn College City University of New York, 1991  
M.P.H., New York University School of Education, 1997  
Ed.D., Nova Southeastern University, 2011

Tomas Havranek  
Research Associate/Instructor  
B.S., Comenius University in Bratislava, 2009  
M.S., Elizabeth University of Health and Social Sciences, Bratislava, 2011  
Ph.D., Slovak Academy of Sciences, 2015

Pinar Haytac  
Director of Residency Programs  
Assistant Professor, Optometry  
B.A., Dowling College, 2005  
O.D., Nova Southeastern University, 2015

Lindsey Henson  
Associate Dean, Faculty Affairs  
Professor, Medical Education  
B.A., University of California, 1972  
M.S., Cornell University, 1974  
M.D., University of California—Los Angeles, 1980  
Ph.D., University of California—Los Angeles, 1986

Kelly Henson-Evertz  
Assistant Professor, College of Nursing  
B.S.N., Metropolitan State University, 2009  
M.A., St. Catherine University, 2011  
D.N.P., Chatham University, 2013

Maria A. Hernandez  
Assistant Dean of Academic Affairs  
Associate Professor, Periodontology  
D.D.S., University of Carabobo, Valencia-Venezuela, 1998  
Certificate—Periodontics, University of Pennsylvania, School of Medicine, 2003  
Implant Fellowship, University of Pennsylvania, School of Medicine, 2004

Heather Hettrick  
Professor, Physical Therapy  
B.S., University of Puget Sound, 1992  
M.S., Chapman University, 1995  
Ph.D., Nova Southeastern University, 2003

Brian Hierholzer  
Clinical Assistant Professor, Pharmacy Practice  
A.A., Santa Fe College, 1994  
Pharm.D., Nova Southeastern University, 2003

Cheryl J. Hill  
Professor, Physical Therapy  
B.S./P.T., Medical College of Virginia, 1973  
M.S., Nova University, 1979  
Ph.D., Nova Southeastern University, 2001  
D.P.T., A.T. Still University, 2011

Gregory Hill  
Assistant Professor, Optometry  
B.S., South Dakota State University, 1990  
O.D., Indiana University—Bloomington, 1995

Raymond L. Hilton  
Assistant Professor, Physician Assistant Program—Orlando  
B.S., University of Central Florida, 2001  
M.C.M.Sc., Barry University, 2004

Darren Hoffberger  
Medical Director and Assistant Professor, Cardiopulmonary Sciences  
B.A., Florida Atlantic University, 1999  
M.S., Florida International University, 2009

Maritzabel Hogge  
Director and Associate Professor, Oral Medicine Diagnostic Sciences  
D.D.S., Pontificia Universidad Javeriana, 1998  
M.S., University of North Carolina, 2008

Susan Holland  
Associate Dean, Academic Affairs, College of Nursing  
A.A. and A.S., Edison State College, 1980  
B.S.N., University of Central Florida, 2005  
M.S.N., University of Central Florida, 2008  
Ph.D., University of Phoenix, 2015

T. Lucas Hollar  
Associate Professor, Public Health  
B.A., Erskine College, 2000  
B.A., Erskine College, 2000  
Ph.D., Florida Atlantic University, 2008

Peter Holub  
Professor, Health Science  
B.A., University of California—Berkeley, 1979  
B.S., California College of Podiatric Medicine, 1982  
D.P.M., California College of Podiatric Medicine, 1984  
M.S., Pennsylvania State University, 2002  
Ph.D., Nova Southeastern University, 2011

Ana Maria Homs  
Director and Assistant Professor, Medical Education  
B.A., University of Puerto Rico, 1985  
M.B.A., Interamerican University, 2002  
Psy.D., Pontifical Catholic University, 2010

Chiu-jen Hsu  
Assistant Professor, Prosthodontics  
B.D.S., China Medical College, Taichung, Taiwan, 1988  
D.D.S., New York University, 1992  
Certificate—AEGD, Lutheran Medical Center, 1993  
Certificate—Postgraduate Prosthodontics Program, Columbia University, 1995  
Certificate—Maxillofacial Prosthodontics Fellowship, Bronx VA Medical College, 1996

Ana Maria Iglesias  
Instructor, Medical Education  
B.S.W., Florida Atlantic University, 2006  
M.B.A., Nova Southeastern University, 2013
Marina Ishak  
*Instructor/Academic Facilitator, Pharmacy Practice*  
B.S., Palm Beach Atlantic University, 2010  
Pharm.D., Lloyd L. Gregory School of Pharmacy, 2016

Annisah Ishmael  
*Director of Clinical Education*  
*Assistant Professor, Medical Education*  
B.A., Baruch College, 2005  
M.S., Kaplan University, 2009  
Ed.D., Nova Southeastern University, 2017

Jennie L. Ison  
*Assistant Professor, Department of Diagnostic Sciences*  
B.S., Morehead State University, 2007  
D.M.D., University of Kentucky College of Dentistry, 2012

Lailah Issac  
*Assistant Professor, Sports Medicine*  
D.O., Ohio University College of Osteopathic Medicine, 2010

Max Ito  
*Associate Professor, Occupational Therapy Program*  
B.S., University of Oklahoma, 1978  
M.S., Kansas State University, 1981  
Ph.D., University of Texas at Austin, 1994

Julie Anne Jacko  
*Chair and Professor, Population Health Sciences*  
B.S., Purdue University, 1990  
M.S., Purdue University, 1991  
Ph.D., Purdue University, 1993

Derek C. Jackson  
*Assistant Professor, Physician Assistant Program—Orlando*  
B.S., University of Nebraska—Omaha, 1989  
B.S., University of Nebraska Medical Center, 1992  
M.P.A.S., University of Nebraska Medical Center, 1998  
M.S., Arizona School of Health Sciences, 2004  
D.H.Ed., A.T. Still University, 2019

Robin J. Jacobs  
*Associate Professor, Research*  
*Adjunct Associate Professor, Biomedical Informatics*  
B.S., University of New Mexico, 1991  
M.S.W., San Diego State University, 1997  
Ph.D., Florida International University, 2006  
M.S., Nova Southeastern University, 2014  
M.P.H., Nova Southeastern University, 2016

Pamela B. Jaffey  
*Associate Professor, Physician Assistant Studies*  
A.B., Columbia University, 1981  
M.D., New York Medical College, 1986  
Fellow, American Society of Clinical Pathologists

Andrea Janoff  
*Associate Professor, Optometry*  
O.D., New England College of Optometry, 1986  
Fellow, American Academy of Optometry

Jasleen Jhajj  
*Assistant Professor, Optometry*  
B.Sc., University of Waterloo, 2011  
O.D., University of Waterloo, 2011  
Residency—Pediatrics and Binocular Vision, Illinois College of Optometry, 2015

Kenneth E. Johnson  
*Executive Associate Dean, Tampa Bay Regional Campus*  
*Professor, Obstetrics/Gynecology*  
*Professor, Public Health*  
B.S., Florida State University, 1981  
D.O., Southeastern University of the Health Sciences, 1991

Michelle Johnson  
*Assistant Professor, Family Medicine*  
B.S., Florida International University, 1989  
D.O., Midwestern University, 1996

Broderick Jones  
*Professor, Medical Education*  
*Division of Pathology*  
B.S., Tuskegee University, 1979  
M.S., Tuskegee University, 1982  
M.D., University of Miami, 1992

Jennifer Jordan  
*Assistant Dean and Department Chair, Medical Education*  
*Assistant Professor, Medical Education*  
B.S., University of South Florida, 1992  
M.S., Nova Southeastern University, 1998  
Ed.D., Nova Southeastern University, 2008

Roody Joseph  
*Assistant Professor, Sports Medicine*  
B.S., Florida International University, 2009  
D.P.T., Florida International University, 2012

Tina Joseph  
*Assistant Professor, Pharmacy Practice*  
Pharm.D., St. John's University, 2013

Valessa Joseph  
*Assistant Professor*  
B.S.N., Nova Southeastern University, 2007  
M.N., Indiana State University, 2012  
D.N.P., Chamberlain College of Nursing, 2018

Michelle Julian  
*Program Chair, Undergraduate B.S.N.*  
B.S.N., Rockhurst University Research College of Nursing, 2006  
M.S.N., Research College of Nursing, 2009  
Ph.D., Capella University, 2018

Sabena Kachwalla  
B.S., University of Alabama—Birmingham, 2003  
M.S.A., Case Western Reserve University, 2007

Steven Kaltman  
*Dean*  
*Chair and Professor, Oral and Maxillofacial Surgery*  
*Affiliate Professor, Surgery*  
D.M.D., University of Pittsburgh, 1973  
M.D., University of Health Sciences, Antigua, 2000
<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Position</th>
<th>Degrees/Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Umadevi Kandalam</td>
<td>Assistant Professor, Research</td>
<td>Ph.D., Andhra University, 1996; M.S., Annamalai University, India, 1988</td>
</tr>
<tr>
<td>Christina Kane</td>
<td>Assistant Professor and Doctoral Capstone Coordinator, Tampa Bay Regional Campus</td>
<td>B.S.,/M.S., D’Youville College, 1991; Ed.D., D’Youville College, 2011</td>
</tr>
<tr>
<td>Kelby Kaplan</td>
<td>Assistant Professor, Physical Therapy</td>
<td>B.S., University of the Sciences, 1999; M.P.T., University of the Sciences, 1999</td>
</tr>
<tr>
<td>Lea Kaploun</td>
<td>Associate Professor, Department of Speech-Language Pathology</td>
<td>B.A., City University of New York—Brooklyn College, 1991; M.S., City University of New York—Brooklyn College, 1993; Ph.D., Columbia University Teacher’s College, 2008</td>
</tr>
<tr>
<td>Toshihisa Kawai</td>
<td>Professor, Periodontology</td>
<td>D.D.S., Hiroshima University School of Dentistry, 1989; Ph.D., Osaka University Graduate School of Dentistry, 1993; Fellowship, Immunology, The Forsyth Institute, 1999; Graduate Certificate—Bioinformatics Essentials, Northeastern University, 2003</td>
</tr>
<tr>
<td>Sonia F. Kay</td>
<td>Assistant Professor, Occupational Therapy Program</td>
<td>B.S., University of Florida, 1975; M.S., University of Florida, 1976; Ph.D., Nova Southeastern University, 2002</td>
</tr>
<tr>
<td>Peter Keller</td>
<td>Associate Professor, Cariology and Restorative Dentistry</td>
<td>D.D.S., New York University College of Dentistry, 1967; Fellow, International College of Dentists; Fellow, American College of Dentists, 1998</td>
</tr>
<tr>
<td>Steven Kelsner</td>
<td>Associate Dean of Institutional Affairs; Professor</td>
<td>D.M.D., University of Pennsylvania, 1979; Certificate—Endodontics, University of Pennsylvania, 1986; M.S. Marketing, Roosevelt University, 1996</td>
</tr>
<tr>
<td>Brianna Kent</td>
<td>Chair and Assistant Professor, Health Science</td>
<td>B.S.N., University of St. Thomas, 1979; M.Ed., University of Houston, 1984; Ph.D., Nova Southeastern University, 2006</td>
</tr>
<tr>
<td>Marc Kesselman</td>
<td>Assistant Professor, Internal Medicine</td>
<td>B.A., University of Miami, 1978; D.O., University of Osteopathic Medicine and Health Sciences, 1983</td>
</tr>
<tr>
<td>Almas Khan</td>
<td>Instructor, Optometry</td>
<td>B.S., University of Miami, 2010; O.D., Nova Southeastern University, 2015</td>
</tr>
<tr>
<td>Bi Bi Khan</td>
<td>Assistant Professor</td>
<td>M.S.N., Nova Southeastern University, 2008; M.S.N., Walden University; D.N.P., Walden University, 2019</td>
</tr>
<tr>
<td>Nile M. Khanfar</td>
<td>Associate Professor, Sociobehavioral and Administrative Pharmacy</td>
<td>B.S., Northwestern State University, 1987; M.B.A., University of Louisiana, 2001; Ph.D., University of Louisiana, 2005</td>
</tr>
<tr>
<td>Deepesh Khanna</td>
<td>Assistant Professor, Anatomy</td>
<td>M.B.B.S., APS University, 2003; M.S., Texas A&amp;M University, 2011; M.P.H., Texas A&amp;M University, 2012; Ph.D., Texas A&amp;M University, 2016</td>
</tr>
<tr>
<td>Shiva Khatami</td>
<td>Associate Professor, Orthodontics and Dentofacial Orthopedics</td>
<td>D.D.S., Shahid Beheshti University of Medical Science, 2001; Certificate—Orthodontics and Dentofacial Orthopedics, University of Rochester, 2009; Ph.D., University of British Columbia, CN, 2010</td>
</tr>
<tr>
<td>Adel Khatib</td>
<td>Postgraduate Program Director and Assistant Professor, Community and Public Health Sciences</td>
<td>D.D.S., University of Jordan School of Dentistry, 2010; Certificate—AEGD, Nova Southeastern University, 2016</td>
</tr>
<tr>
<td>Evren Kilinc</td>
<td>Chair and Associate Professor, Cariology and Restorative Dentistry</td>
<td>D.D.S., Ege University, 1998; Ph.D., Ege University, 2006</td>
</tr>
<tr>
<td>Margaret Kim</td>
<td>Assistant Professor, Pediatric Dentistry</td>
<td>D.D.S., The University of Michigan, 1997; Certificate—Pediatric Dentistry, The University of Michigan, 1999; Diplomate, American Board of Dentistry, 2008</td>
</tr>
<tr>
<td>Scott L. Kjelson</td>
<td>Assistant Professor, Pharmacy Practice</td>
<td>Pharm.D., Nova Southeastern University, 2014</td>
</tr>
<tr>
<td>Jo Ann Kleier</td>
<td>Executive Associate Dean</td>
<td>A.A.S., Shelby State Community College, 1982; B.S.N., University of South Florida, 1985; M.S.N., University of Miami, 1988; Ed.D., Florida International University, 1997; Ph.D., Barry University, 2002</td>
</tr>
<tr>
<td>Nancy Klimas</td>
<td>Director, NSU-KPCOM Institute for Neuro-Immune Medicine; Chair, Department of Clinical Immunology; Professor, Internal Medicine; Professor Emeritus, University of Miami School of Medicine</td>
<td>B.S., University of South Florida, 1976; M.D., University of Miami, 1980</td>
</tr>
</tbody>
</table>
Jodi Kodish-Stav  
Associate Dean, Clinical Informatics  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S., Emory University, 1982  
Fellow, Academy of General Dentistry

Morey J. Kolber  
Professor, Physical Therapy  
B.H.S., University of Miami, 1993  
M.S.P.T., University of Miami, 1995  
Ph.D., Nova Southeastern University, 2007

George Kolos  
Assistant Professor, Cariology and Restorative Dentistry  
D.M.D., University of Alabama, 1987

Sarah Koplow  
Assistant Professor, College of Nursing  
B.S.N., University of Florida, 2005  
M.S.N., George Mason University, 2009  
Ph.D., University of Illinois—Chicago, 2013

Theofilos Koutouzis  
Postgraduate Director and Associate Professor, Periodontology  
D.D.S., Aristotle University, Greece, 1999  
Certificate—Periodontics, Gothenburg University, 2006  
M.S., University of Florida, 2011

Watfa Krayssa  
Assistant Professor, Physician Assistant Studies  
B.S., Barry University, 2002  
B.S./M.M.S., Nova Southeastern University, 2007  
Fellow, Florida Academy of Physician Assistants  
Fellow, American Academy of Physician Assistants  
Fellow, American Academy of Surgical Physician Assistants

Sajish Kurlakose  
Assistant Professor, Oral Medicine and Diagnostics Science  
B.D.S., King Abdulaziz University—Jeddah, Saudi Arabia, 1983

Young M. Kwon  
Associate Professor, Pharmaceutical Sciences  
B.S., Oregon State University, 1997  
Ph.D., University of Utah, 2003

Leslie Kyrimes  
Instructor, Department of Speech-Language Pathology  
B.S., Nova University, 1991  
M.S., Nova Southeastern University, 1995  
Ed.S., Nova Southeastern University, 2014

Stacy J. Laack  
Academic Director and Assistant Professor, Physician Assistant Program—Orlando  
B.S., Northern Illinois University, 1998  
M.S., Rosalind Franklin University, 2000

L. Leanne Lai  
Professor, Sociobehavioral and Administrative Pharmacy  
B.S. (Pharm.), Kaohsiung Medical College, Taiwan, 1990  
Ph.D., University of Maryland, 1996

Nicole Laing  
Assistant Professor, College of Nursing  
B.S.N., Howard University, 2001  
M.S.N., Yale University, 2004  
D.N.P., Florida Atlantic University, 2011

Holly Laird  
Instructor, Osteopathic Principles and Practice  
B.S., Massachusetts Institute of Technology, 2008  
M.S., University of New England, 2016  
D.O., University of New England College of Osteopathic Medicine, 2016

Stefanie La Manna  
Department Chair, Graduate Programs  
Associate Professor, College of Nursing  
A.S.N., Broward Community College, 1994  
M.S.N.—A.R.N.P., Barry University, 1999  
M.S.N.—A.R.N.P., Barry University, 2001  
Ph.D., Barry University, 2009  
M.P.H., Kaplan University, 2015

Elaine D. Lara  
Director of Curriculum Development  
Assistant Professor, Prosthodontics  
D.M.D. equivalent degree, Odontologo, Universidad Central de Venezuela, 1999  
Certificate—Prosthodontics, Nova Southeastern University, 2003

Jose Larumbe  
Assistant Director and Associate Professor, Pediatric Dentistry  
D.D.S., Universidad Tecnologica de Mexico, D.F., 1975  
Certificate—Pediatric Dentistry, University of Boston, 1979

Cynthia Last  
Professor, Behavioral Science  
Ph.D., State University of New York—Albany, 1982

Jean J. Latimer  
Associate Professor, Pharmaceutical Sciences  
Associate Professor, Affiliated, Medical Education  
B.A., Cornell University, 1982  
Ph.D., State University of New York—Buffalo, 1989

Cristina Llerena Law  
Chair, Department of Didactic Education  
Associate Professor, Optometry  
B.S., Florida International University, 1998  
O.D., Nova Southeastern University, 2006  
Ph.D., State University of New York, College of Optometry, 2017  
Fellow, American Academy of Optometry  
Diplomate, American Board of Optometry

Melissa Lazinski  
Associate Professor, Physical Therapy  
B.H.S./P.T., University of Florida, 1999  
D.P.T., Regis University, 2010  
Certified Clinical Specialist—Orthopedics, American Board of Physical Therapy Specialties (OCS), 2007  
Certificate—Vestibular Rehabilitation, American Institute of Balance, 2009  
Certificate—Vestibular Rehabilitation, American Institute of Balance, 2011
Lissette P. Lazo  
Instructor, Family Medicine  
B.S., Florida International University, 2011  
D.O., Lake Erie College of Osteopathic Medicine, 2015

Janet L. Leasher  
Professor, Optometry  
Associate Professor, Public Health  
B.S., Pacific University, 1983  
O.D., Pacific University, 1986  
M.P.H., Tulane University, 1999  
Fellow, American Academy of Optometry

Jermaine LeClerc  
Program Director and Assistant Professor, Anesthesiologist Assistant  
B.S., University of Miami, 2001  
M.S., Barry University, 2005  
M.H.Sc., Nova Southeastern University, 2008

So-Yeon Sharon Lee  
Assistant Professor, Optometry  
B.S., University of British Columbia, Vancouver, 2002  
O.D., Illinois College of Optometry, 2006  
Fellow, American Academy of Optometry

Harry Lehrer  
Associate Professor, Oral and Maxillofacial Surgery  
D.M.D., University of Florida, 1984

Roni Cohen Leiderman  
Affiliated Professor, Child Development Specialist Adjunct Professor, Pediatrics  
B.S., Boston University, 1972  
M.S., Lesley College, 1974  
Ph.D., Nova University, 1986

Evan Leonard  
Assistant Professor, Physician Assistant Program—Jacksonville  
B.A., University of Miami, 2010  
M.S., Barry University, 2011  
M.M.S., Nova Southeastern University, 2014

Andrea Levin  
Assistant Professor, Pharmacy Practice  
B.S., Nova Southeastern University, 2007  
Pharm.D., Nova Southeastern University, 2009

Arkene Levy  
Associate Professor, Medical Education Division of Pathology  
B.S., University of the West Indies, 2000  
Ph.D., University of the West Indies, 2007

Beata I. Lewandowska  
Assistant Professor, Optometry  
B.S., University of Florida, 2000  
O.D., Ohio State College of Optometry, 2004  
M.A., Nova Southeastern University, 2020  
Fellow, American Board of Optometry, 2012

Pei-Fen Li  
Assistant Professor, Family Therapy  
M.Ed., University of Oregon, 2004  
Ph.D., University of Georgia, 2013

Randy Lichtman  
Assistant Professor, Prosthodontics  
D.D.S., Northwestern University, 1984

ChinYu Lin  
Predoctoral Director and Assistant Professor, Orthodontics and Dentofacial Orthopedics  
D.D.S., National Yang-Ming University, 1987  
M.S., Oral Biology National Defense Medical Center, 1992  
Ph.D., University of California—San Francisco, 2000  
Certificate/M.S.D.—Orthodontics, Saint Louis University, 2002

Stacy A. Lindsey  
Instructor, Psychiatry  
B.S., William Carey University, 2012  
D.O., William Carey University, 2016

Janice Linton  
Assistant Professor  
ANP-BC, Florida Atlantic University, 2006  
D.N.P., University of North Florida, 2016

Fred Lippman  
Health Professions Division Chancellor, Special Projects Professor, Community Medicine Professor, Public Health  
B.S. (Pharm.), Columbia University College of Pharmacy, 1958  
Ed.D., Nova Southeastern University, 2003

Hal Lippman  
Executive Associate Dean of Operations  
D.D.S., University of New York, 1975

David S. Loshin  
Professor, College of Optometry  
B.S., Rochester Institute of Technology, 1971  
M.S., Ohio State University, 1974  
O.D., Ohio State University, 1975  
Ph.D., Ohio State University, 1977  
Fellow (Diplomate), American Academy of Optometry, 1977

Lucia Lopez  
Assistant Professor, Physician Assistant Studies  
B.S., Florida International University, 2010  
B.A., Florida International University, 2010  
M.M.S., Wake Forest University, 2013  
Fellow, Florida Academy of Physician Assistants  
Fellow, American Academy of Physician Assistants

Joseph A. Loskove  
M.D., Einstein College of Medicine, 1994

Raquel Lozada Diaz  
Clinical Assistant Professor, Pharmacy Practice  
B.S., University of Puerto Rico, 1991  
B.S., University of Puerto Rico, 1994  
Pharm.D., Nova Southeastern University, 2011

Melinda Luis  
Assistant Professor, Nutrition  
B.S., Florida International University, 1991  
M.S., Florida International University, 2000
Carla A. Luque  
*Assistant Dean and Associate Professor*  
A.A., Miami-Dade College, 1990  
Pharm.D., Nova Southeastern University, 1994

Nicholas Lutfi  
*Chair, Division of Anatomy*  
*Professor, Medical Education*  
B.S., Luis Razzetti School of Medicine, Universidad Central de Venezuela, 1981  
M.D., Luis Razzetti School of Medicine, Universidad Central de Venezuela, 1981  
M.S., Barry University, 1996  
D.P.M., Barry University, 1997

Eunice Luyegu  
*Curriculum Design Specialist and Assistant Professor,*  
*College of Health Care Sciences*  
B.Ed., Kenyatta University, 1998  
M.A., Ohio University, 2003  
Ph.D., University of South Alabama, 2009

Anastasios (Tassos) Lymperopoulos  
*Associate Professor, Pharmaceutical Sciences*  
B.S., University of Patras, 1998  
M.S., University of Patras, 2000  
Ph.D., University of Patras, 2004

Leah Lyons  
*Associate Professor, Physiology*  
B.S., Florida Atlantic University, 1997  
Ph.D., University of Miami, 2005

Thomas Macfarland  
*Associate Professor, Disaster and Emergency Management*  
B.S., Western Kentucky, 1973  
M.S., Western Kentucky, 1982  
Ed.D., Nova University, 1986

Holly Evans Madison  
*Program Director, M.S.N. Traditional, D.N.P., and Ph.D. Programs*  
*Associate Professor*  
Ph.D., Pace University, 1984

Rim Makhlouf  
*Assistant Professor, Optometry*  
B.S., McGill University, 2005  
O.D., University of Montreal, 2010  
Fellow, American Academy of Optometry, 2014

Lillian Arce-de Malavé  
*Assistant Professor, Pharmacy Practice*  
Pharm.D., Nova Southeastern University, 2001  
R.Ph., Puerto Rico  
R.Ph., Florida

Vivian Manjarres  
*Associate Professor, Endodontics*  
D.D.S., Universidad Javeriana, Colombia, 1992  
Certificate—Endodontics, Baylor College of Dentistry, Texas, 1997

Stacey Maravent  
*Assistant Professor, Pharmacy Practice*  
Pharm.D., Nova Southeastern University, 2002

Rania Margonis  
*Assistant Professor, Physical Therapy*  
B.A., University of Pennsylvania, 2001  
D.P.T., Nova Southeastern University, 2009

Andrew T. Mariassy  
*Professor, Anatomy*  
*Professor, Medical Education*  
B.S., University of California, 1969  
M.S., University of California, 1972  
Ph.D., University of California, 1980

Julie Marin  
*Assistant Professor, Pharmacy Practice*  
B.S., UPR Rio Piedras Campus, 1985  
Pharmacy Technician, National College Bayamón, 1988  
Pharm.D., Nova Southeastern University, 2006

William H. Marquardt  
*Associate Dean, Physician Assistant Education*  
*Chair, Physician Assistant Department*  
*Associate Professor, Physician Assistant Department*  
B.S., University of Nebraska, 1976  
M.A., Central Michigan University, 1979  
Distinguished Fellow, American Academy of Physician Assistants

Jacqueline Marshall  
M.S.N., Florida Atlantic University, 2011  
Ph.D., Florida Atlantic University, 2015

Blondel Martin  
*Assistant Dean, Academic Programs*  
*Associate Professor, College of Nursing*  
B.S.N., University of Phoenix, 2006  
M.S.N., University of Phoenix, 2008  
Ph.D., Barry University, 2013

Bruce Martin  
*Assistant Professor, Cardiovascular Sonography Program—Tampa*  
B.A., University of Mississippi, 1981

Ana Karina Mascarenhas  
*Professor, Community and Public Health Sciences*  
*Professor, Public Health*  
B.S., Goa Dental College and Hospital, University of Bombay, 1985  
M.P.H., University of Michigan, 1992  
D.P.H., University of Michigan, 1995

Joanne Masella  
*Assistant Dean, Community Engagement and Integration,*  
*and Associate Professor*  
Diploma, Hospital of the University of Pennsylvania, 1975  
B.S.N., Florida Atlantic University, 1990  
M.S.N., Florida Atlantic University, 1994  
Ed.D., Nova Southeastern University, 2007

Deborah Mash  
*Professor, Population Health Science*  
B.A., Florida State University, 1975  
M.S., Florida A&M University, 1980  
Ph.D., University of Miami, 1984
Anastasia Mashukova
Associate Professor, Medical Education
Division of Physiology
M.S., Novosibirsk State University, 2001
Ph.D., International Graduate School of Neuroscience, 2006

Hady Masri
Assistant Professor, Geriatrics
B.S., University of Miami, 1999
M.S., Nova Southeastern University, 2001
D.O., Nova Southeastern University, 2005

Chad Masters
Medical Director, Physician Assistant Program—Jacksonville
B.S., University of Florida, 1997
M.B.A., Auburn University, 2013
M.D., University of South Florida College of Medicine, 2004

David Mastropietro
Assistant Professor, Pharmaceutical Sciences
B.S., Massachusetts College of Pharmacy and Health Sciences, 1999
Ph.D., Nova Southeastern University, 2014

Bindu S. Mayi
Chair, Basic Sciences
Professor, Microbiology
B.Sc., University of Bombay, 1988
M.Sc., University of Bombay, 1991
Ph.D., University of Missouri, 1998

Harvey N. Mayrovitz
Professor, Medical Education
Division of Physiology
B.S., Drexel University, 1962
M.S., Drexel University, 1966
Ph.D., University of Pennsylvania, 1974

Rose McCalla-Henry
Assistant Professor, Medical Sonography
B.S., Weber State University, 2009
M.H.A., Florida Atlantic University, 2017

Odoor K. McCallum
Administrative Director, Clinical Education,
College of Health Care Sciences
Assistant Professor, Physician Assistant Studies
Adjunct Assistant Professor, Public Health
B.S., Florida International University, 2000
M.P.H., Maastricht University, 2004

Shawn A. McClure
Chair, Postgraduate Research Director, and Associate Professor,
Oral and Maxillofacial Surgery
Clinical Assistant Professor, Affiliated, Surgery
B.S., Temple University, 1995
D.M.D., Temple University, 1999
M.D., State University of New York, 2002

Gregory S. McDonald
B.S., Kennesaw State University, 1997
M.M.Sc., Emory University, 1999

Robert McGory
Associate Dean, Professional Program
Associate Professor, Pharmacy Practice
B.S., Cornell University, 1973
B.S., University of Kentucky, 1979
M.S., University of Kentucky, 1979
Pharm.D., University of Minnesota, 1981

Racheal McIlvain
Assistant Professor, Physician Assistant Program—Jacksonville
B.M.S., St. Louis University, 2000
M.P.A.S., University of Nebraska, 2001
M.S.N., University of South Alabama, 2005
D.H.Sc., Nova Southeastern University, 2018

Samantha Kimberly McIntosh
Chief, Low Vision Service
Assistant Professor, Optometry
B.S., University of Miami, 2011
O.D., Nova Southeastern University, 2016

Debra A. McNally
Instructor, Anatomy
Instructor, Medical Education
B.S., Barry University, 1988
M.S., Barry University, 2004

Brian Medlin
Instructor, Psychiatry
B.S., University of Pittsburgh, 2010
D.O., Lake Erie College of Osteopathic Medicine, 2014

Rohit Mehra
Vice Chair and Assistant Professor,
Osteopathic Principles and Practice
B.S., Lehigh University, 2006
M.S., University of Medicine and Dentistry, 2008
M.P.H., Nova Southeastern University, 2013
D.O., Nova Southeastern University, 2013

Lina Mejia
Associate Professor, Oral Medicine Diagnostic Sciences
D.D.S., CES—Medellin, Colombia, 1999
Advance Graduate Program in Oral Medicine, University of California, 2009

Deborah Mendelsohn
Associate Professor, Medical Sonography
Ed.M., Long Island University, 1982
D.H.Sc., Nova Southeastern University, 2017

Gary J. Merlino
Assistant Professor, Internal Medicine
B.A., University of South Florida, 1986
D.O., Southeastern University of the Health Sciences, 1992

Mauro Mesko
Assistant Professor, Cariology and Restorative Dentistry
Specialty—Dentofacial Orthopedics, Sobracom Brasil, 2002
Specialty—Orthodontics, Federal University of Pelotas, 2006
M.Sc., Prosthodontics, The Radboud University Nijmegen Medical Centre, Netherlands, 2013
Ph.D., Restorative Dentistry, Elsevier Publishing Campus Platform, 2015
Donna Mesler  
Assistant Dean of Bachelor Degree Programs  
Associate Professor  
B.S.N., Seton Hall University, 1979  
M.S.N., Seton Hall University, 1994  
Ph.D., Seton Hall University, 2012

Kristi Messer  
Assistant Professor, Public Health  
B.A., University of Wisconsin, 1990  
M.P.H., University of North Carolina—Chapel Hill, 1994  
M.S.W., University of North Carolina—Chapel Hill, 1995

Miriam Metzner  
Assistant Professor, Pharmacy Practice  
Pharm.D., University of Missouri, 1998

Chandra Mickles  
Associate Professor, Optometry  
B.S., University of Miami, 2002  
O.D., SUNY College of Optometry, 2009  
M.S., University of Alabama—Birmingham, 2012  
Fellow, American Academy of Optometry

Joseph Migliozzi  
Associate Professor, Pathology  
Ph.D., University of Illinois, 1974  
M.D., University of Illinois, 1982

Rafael Miguel  
Assistant Professor, Anesthesiologist Assistant  
M.D., Universidad de Cadiz, 1981

Nadine Mikati  
Associate Professor, Nutrition  
B.S., American University of Beirut, 2006  
M.S., Wayne State University, 2009  
Ph.D., Florida International University, 2016

Dmitriy Minond  
Affiliate Assistant Professor, Population Health Sciences  
M.S., Odessa State University, 1993  
Ph.D., Florida Atlantic University, 2006

Christopher Mitchell  
Assistant Professor and Director, Bachelor of Health Science Programs  
B.A., Lynchburg College, 1989  
M.S., Nova Southeastern University, 1999

Mary Ellen Mitchell-Rosen  
Associate Professor, College of Nursing  
B.S.N., University of Delaware, 1977  
M.S.N., University of Phoenix, 2001  
Ph.D., Barry University, 2013

Monique Mokha  
Program Director and Associate Professor, Exercise and Sport Science  
B.S., Ohio University, 1989  
M.S., University of Arkansas, 1992  
Ph.D., Texas Woman’s University, 1997

R. Jackeline Moljo  
Assistant Professor, Osteopathic Principles and Practice  
Assistant Professor, Family Medicine  
B.S., Florida International University, 1990  
D.O., Nova Southeastern University, 1995

Maria F. Montoya  
Assistant Professor, Public Health  
B.A., Florida Atlantic University, 2006  
M.P.H., Florida International University, 2008  
Ph.D., University of North Texas Health Science Center, 2015

Robert Moody  
Assistant Professor, Cardiovascular Sonography Program, Tampa Bay  
B.S., Penn State University, 2002  
M.S., Thomas Jefferson University, 2012

Pamela J. Moran-Walcut  
Assistant Professor, Family Medicine  
B.A., Florida Atlantic University, 1996  
D.O., Nova Southeastern University, 2009

Cynthia Moreau  
Assistant Professor, Pharmacy Practice  
B.S., University of Florida, 2010  
Pharm.D., University of Florida, 2014

Mariana Morris  
Professor, Clinical Immunology  
Ph.D., University of Texas, 1974

Liliana Mosquera  
Assistant Professor, Prosthodontics  
D.D.S., Universidad Autonoma de Manizales, 1999  
Certificate—Prosthodontics, Nova Southeastern University, 2004  
M.B.A., Nova Southeastern University, 2014

Joy L. Moulton  
Assistant Professor, Physical Therapy  
B.S., Ball State, 2004  
D.P.T., Belmont University, 2010

Alexandru Movila  
Assistant Professor, Periodontology  
B.S., Moldova State University, 2003  
Ph.D., Academy of Sciences of Moldova, 2008

Richard Mudd  
B.H.S., University of Kentucky, 1977  
M.M.Sc., Emory University, 1995

Barbara Mulholland  
Director of Dental Hygiene, Department of Periodontology  
Bachelors of Dental Hygiene, Vermont Technical College, 2009  
Master of Dental Hygiene Education, University of Bridgeport, 2012

Ellen Mularkey  
B.S.N., St. Louis University, 1985  
B.A., University of Waterloo, 1997  
M.S.N., Georgetown University, 2014  
D.N.P., Georgetown University, 2017
Deborah Mulligan  
Assistant Professor, Pediatrics  
B.S., University of San Francisco, 1977  
M.D., University of California—Los Angeles School of Medicine, 1982

Max Nahon  
Assistant Professor and Postgraduate Director, Prosthodontics  
D.D.S., State University of New York—Buffalo, 1977  
Certificate—Prosthodontics, Medical College of Georgia, 2000

Perla Najman  
Assistant Professor, Optometry  
B.A., Universidad de las Americas, 1976  
O.D., Nova Southeastern University, 1999

Rochelle S. Nappi  
Assistant Dean and Instructor, Palm Beach  
B.A., Florida State University, 1999  
M.S., Nova Southeastern University, 2007  
Ed.D., Nova Southeastern University, 2014

Gar D. Nathanson  
Assistant Professor, Clinical Immunology  
Assistant Professor, Nutrition  
M.S., Moscow State University, 1985  
Ph.D., Weizmann Institute of Science, 1998

Christi M. Navarro  
Assistant Professor, Public Health  
B.S., Florida International University, 1998  
M.S., Nova Southeastern University, 2005  
Ph.D., Florida International University, 2013

Nikette Neal  
Assistant Professor, Medical Education  
B.S., University of Central Florida, 2009  
M.D., Ross University, 2013

Alyssa R. Needleman  
Associate Professor and Clinic Director, Audiology  
B.A., University of Maryland, 1991  
M.S., University of Texas—Dallas, 1993  
Ph.D., University of Texas—Dallas, 1995

Leon Nehmad  
Professor, Optometry  
B.A., Rutgers University, 1979  
M.S.W., City University of New York, 1984  
O.D., State University of New York, 1991  
Fellow, American Academy of Optometry

Guy M. Nehrenz  
Senior Associate Dean, Administration and Collegiate Development  
Professor, Family Medicine  
Professor, Health Science  
B.S., University of St. Francis, 1989  
M.A., University of Phoenix, 1992  
Ed.D., Nova Southeastern University, 1995

Wren Newman  
Chair and Assistant Professor, Department of Speech-Language Pathology  
B.S., Ithaca College, 1975  
M.S., University of Oklahoma Health Sciences, 1977  
S.L.P.D., Nova Southeastern University, 2000

Hoang Nguyen  
Assistant Professor, Physiology  
B.S., Temple University School of Pharmacy, 2000  
M.D., University of Health Science School of Medicine, 2012  
Ph.D., The University of Medicine and Pharmacy, 2016

Thuy-Lan Nguyen  
Chief, Cornea and Contact Lens Service  
Assistant Professor, Optometry  
B.S., James Madison University, 1997  
O.D., Nova Southeastern University, 2002

Fariha M. Niazi  
Interim Chair and Assistant Professor, Family Therapy  
M.S., Nova Southeastern University, 1999  
Ph.D., Nova Southeastern University, 2009

Barry Nierenberg  
Affiliate Associate Professor, Medical Education  
B.A., State University of New York, 1973  
M.S., Queens College, 1975  
Ph.D., University of Tennessee, 1981

Enrique A. Nieves  
Clinical Assistant Professor, Pharmaceutical Sciences  
B.S.(Pharm), University of Puerto Rico, 1977  
M.S., University of Florida, 1982  
Ph.D., University of Florida, 1982

Virginia Noce  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S., West Virginia University, 1983

Leah Nof  
Professor, Physical Therapy  
M.S., University of Wisconsin, 1978  
Ph.D., Florida State University, 1994

Jennifer O’Brien  
Clinical Supervisor and Instructor, Department of Speech-Language Pathology  
B.S., The Richard Stockton College of New Jersey  
M.S., Rockhurst University

Romer A. Ocanto  
Chair and Professor, Pediatric Dentistry  
M.S.P.H., Boston University, 1984  
M.Ed., University of Florida, 1985  
D.D.S., Creighton University, 2000  
Fellow, American College of Dentists, 2007

Timothy O’Connor  
Program Director, Entry Level  
Assistant Professor, College of Nursing  
B.S.N., D’Youville College, 1986  
M.S., State University of New York—Buffalo, 1992  
Ph.D., State University of New York—Buffalo, 2015

Barbara O’Connor Wells  
Assistant Professor, Department of Speech-Language Pathology  
B.A., St. John’s University, 1994  
M.A., St. John’s University, 1996  
Ph.D., City University of New York—Graduate School and University Center, 2011
Terry Ogilby
Associate Professor, College of Nursing
B.S.N., University of South Florida, 1990
M.S.N., University of South Florida, 1994
M.P.H., University of South Florida, 1998
Ph.D., Capella University, 2004

Maureen O’Hara
Associate Professor, Health Science
B.Sc., California State Polytechnic University—Pomona, 1972
M.A., California State University—Los Angeles, 2001
D.H.Sc., Nova Southeastern University, 2007

Ovidio Olivencia
Associate Professor, Physical Therapy
B.S., University of California—Davis, 1999
M.P.T., Nova Southeastern University, 2002
D.P.T., A.T. Still University, 2011

Robert Oller
Professor, Family Medicine
Professor, Public Health
B.A., University of California, 1965
D.O., Kirksville College of Osteopathic Medicine, 1969

Christine A. Olson
Instructor, Psychiatry
B.A., University of Central Florida, 2007
B.S., University of Central Florida, 2012
D.O., West Virginia School of Medicine, 2016

Chasity O’Malley
Associate Professor, Medical Education
Division of Physiology
B.S., Heidelberg, 2001
M.S., Wright State University, 2003
Ph.D., Tulane University, 2007

Yadollah Omidi
Professor, Pharmaceutical Sciences
Pharm.D., Tabriz University of Medical Sciences, 1991
Ph.D., Cardiff University/Prifysgol Caerdydd, 2003

Hamid Omidian
Professor, Pharmaceutical Sciences
B.S., Tehran Polytechnique University, 1987
M.S., Tehran Polytechnique University, 1990
Ph.D., Brunel University, 1997

Victor Oramas
Assistant Professor, Pediatric Dentistry
Certificate—Pediatric Dentistry, University of Connecticut School of Dental Medicine, 2005
Diplomate, American Board of Pediatric Dentistry, 2014

Blanca I. Ortiz
Assistant Dean, Puerto Rico
Assistant Professor, Pharmacy Practice
B.S.(Pharm), University of Puerto Rico, 1993
Pharm.D., Nova Southeastern University, 2003

Ana M. Ospina
Associate Professor and Predoctoral Director,
Oral and Maxillofacial Surgery
Adjunct Assistant Professor, Public Health
D.D.S., Universidad de Antioquia, Colombia, 1997
M.S., Nova Southeastern University, 2013
AEGD, Nova Southeastern University 2014

Melba Ovalle
Medical Director, Assistant Program Director,
and Professor, Physician Assistant Program—Orlando
B.S., Pace University, 1978
M.D., Boston University, 1982

Elizabeth Oviawe
Director, Institutional Technology
Assistant Professor, Medical Education
Instructor, Public Health
B.S., University of Lagos, 1991
M.Sc., University of Lagos, 1997
M.M.I.S, Nova Southeastern University, 2013
M.S., Nova Southeastern University, 2009
Ed.S., Nova Southeastern University, 2015
Ph.D., Nova Southeastern University, 2018

Raymond Ownby
Chair, Psychiatry and Behavioral Medicine
Professor, Biomedical Informatics
Professor, Psychiatry
Professor, Public Health
B.A., Ohio University, 1973
M.Ed., Ohio University, 1974
Ph.D., Kent State University, 1980
M.D., Northeastern Ohio University College of Medicine, 1992
M.B.A., University of Miami, 2002

Maria Padilla
Associate Professor, Medical Education
B.S., Tufts University, 1999
M.D., University of Puerto Rico, 2003
M.S., University of New England, 2013

Oscar Padilla
Associate Professor, Pediatric Dentistry
D.D.S., Columbia University School of Dental and Oral Surgery, 1995
Fellowship, United Cerebral Palsy, Pediatric Dentistry, Columbia University School of Dental and Oral Surgery, 1998

Amber Pagani
Assistant Professor, Prosthodontics
D.D.S., Universidad Central de Venezuela, 2002
M.S., Universidad Central de Venezuela, 2007
Certificate—Prosthodontics, Nova Southeastern University, 2012

Cheng-Chang Pan
Professor, Curriculum Design Specialist, Ron and Kathy Assaf
College of Nursing
M.A., University of Central Florida, 2000
Ph.D., University of Central Florida, 2003
M.B.A., Texas A & M University, 2014

Health Professions Division—Full-Time Faculty Members

585
Thomas A. Panavelil  
Professor, Medical Education  
Division of Pharmacology  
B.S., University of Kerala, 1979  
M.Sc., National Dairy Research Institute, 1983  
Ph.D., University of Miami School of Medicine, 1998  
M.B.A., Nova Southeastern University, 2006

Naushira Pandya  
Chair and Professor, Geriatrics  
Project Director, Geriatric Education Center  
M.D., University College & Middlesex Medical School, 1979

Mamta Pansuria  
Clinical Assistant Professor, Pharmacy Practice  
Pharm.D., Nova Southeastern University, 2003

Frederick A. Paola  
Medical Director and Professor, Physician Assistant Program—Fort Myers  
B.S., Stony Brook University, 1980  
M.D., Yale University School of Medicine, 1984  
Diplomate, American Board of Internal Medicine, 1987  
J.D., New York University School of Law, 1991

Panayotis Papatzimas  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S., Virginia Commonwealth University, 1991

Michael Parker  
Chair, Division of Pharmacology  
Professor, Medical Education  
B.A., University of San Diego, 1990  
Ph.D., University of Miami School of Medicine, 1999

William Parker  
Associate Dean, Advanced Educational Programs  
Associate Professor, Periodontology  
D.D.S., Medical School of Virginia School of Dentistry, 1977  
Certificate—Periodontics, Naval Postgraduate Dental School, Maryland, 1984  
Fellow, American College of Dentists  
Diplomate, American Board of Periodontology, 1989

Mayur Parmar  
Assistant Professor, Pharmacology  
B.P., Sardar Patel University, 2004  
M.S., Long Island University, 2008  
Ph.D., Duquesne University, 2014

Marianna Pasciuta  
Assistant Director and Assistant Professor, Prosthodontics  
D.D.S., University of Venezuela, 1998

Kyrus E. Patch  
Program Director and Assistant Professor, Physician Assistant Program—Fort Myers  
B.S./P.A., Alderson-Broaddus College, 1977  
M.S., Alderson-Broaddus College, 2007  
Fellow, American Academy of Physician Assistants  
Fellow, Florida Academy of Physician Assistants

Yvonne Patten  
Assistant Professor  
A.D.N., Miami-Dade College, 1996  
B.S.N., University of Miami, 2002  
M.S.N., Barry University, 2006

Nicole Patterson  
Assistant Dean, Student Affairs  
Associate Professor, Optometry  
B.S., Loras College, 1998  
A.A.S., New York City Community College, 1977  
O.D., Southern College of Optometry, 2002  
M.S., Nova Southeastern University, 2013  
Fellow, American Academy of Optometry

Corey Peacock  
Assistant Professor, Exercise and Sport Science  
B.S., Ashland University, 2007  
M.Ed., Ashland University, 2008  
Ph.D., Kent State University, 2012

Anne Marie Pereira  
Assistant Professor, Prosthodontics  
D.D.S., Santa Maria University, 2003

Alina M. Perez  
Professor, Public Health  
B.S., Florida Memorial College, 1985  
M.S.W., Barry University, 1988  
J.D., University of Miami, 1996  
M.P.H., University of South Florida, 2008

Alexandra Perez Rivera  
Assistant Professor, Sociobehavioral and Administrative Pharmacy  
Pharm.D., Nova Southeastern University, 2005  
M.S., University of Illinois—Chicago, 2008

Bruce B. Peters  
Chair and Professor, Internal Medicine  
Professor, Pediatrics  
Professor, Public Health  
B.A., Northwestern University, 1979  
D.O., Chicago College of Osteopathic Medicine, 1984

Stephanie N. Petrosky  
Department Chair and Assistant Professor, Nutrition  
Adjunct Professor, Health and Human Performance  
B.S., Florida International University, 1987  
M.H.S.A., Capella University, 2009

Lyn Peugeot  
Interim Program Director, Entry B.S.N., and Assistant Professor  
B.S.N., Nova Southeastern University, 2012  
M.S.N., Nova Southeastern University, 2015  
D.N.P., Nova Southeastern University, 2019

Stephen Pfister  
Associate Professor, Physical Therapy  
Director, Health Care Science Clinics  
B.S., University of Wisconsin, 1993  
M.S., University of Pittsburgh, 1998  
D.P.T., A.T. Still University, 2011
Jack Piermatti  
Assistant Professor, Prosthodontics  
D.M.D., Fairleigh Dickinson University, 1979  

Luzan Philpotts  
Assistant Professor, Family Medicine  
Assistant Professor, Public Health  
B.S., Florida International University, 1999  
D.O., Nova Southeastern University, 2006  

Stacey M. Pinnock  
Assistant Professor, Public Health  
Adjunct Assistant Professor, Nutrition  
B.H.Sc., University of Western Ontario, 2005  
M.S.W., University of Toronto, 2007  
D.H.Sc., Nova Southeastern University, 2015  

Andon Placzek  
Associate Professor, Medical Education  
B.A., University of South Florida College of Arts and Sciences, 1998  
Ph.D., University of Florida School of Medicine, 2005  

Ioana Popovici  
Associate Professor, Sociobehavioral and Administrative Pharmacy  
B.Sc., Babes-Bolyai University—Romania, 1997  
M.A., Florida International University, 2003  
Ph.D., Florida International University, 2007  

Alessandra Posey  
Chair and Assistant Professor, Sports Medicine  
B.S., Florida International University, 2006  
D.O., Lake Erie College of Osteopathic Medicine, 2011  

Mariana Povea  
Faculty Member  
B.S.E., University of Ecuador—Quito, 1998  
B.S.N., University of Phoenix, 2013  
M.S.N.—ED., University of Phoenix, 2013  

Charles Powell  
Professor, Medical Education  
Division of Pharmacology  
B.S., Florida State University, 1983  
M.S., Florida A&M University, 1988  
Ph.D., Florida A&M University, 1996  

Samiksha Prasad  
Assistant Professor, Medical Education  
Division of Microbiology  
B.S., Sam Higginbottom Institute of Agriculture, Technology, and Science, 2010  
Ph.D., University of Florida, 2015  

Thyagaseely Premaraj  
Postgraduate Orthodontic Program Director and Associate Professor, Orthodontics and Dentofacial Orthopedics  
B.D.S., University of Peradeniya  
Ph.D., Gifu University School of Medicine  

Michael Provost  
B.S., University of Florida, 2006  
M.H.Sc., Nova Southeastern University, 2009  

Peter R. Pugliese  
Assistant Professor, Cariology and Restorative Dentistry  
B.S., Ohio State University, 1960  
D.D.S., Ohio State University College of Dentistry, 1964  

Cheryl Purvis  
Professor, Medical Education  
Division of Anatomy  
B.S., University of South Carolina, 1986  
Ph.D., University of Kentucky College of Medicine, 1998  

Anastasiya Quimby  
Associate Professor, Oral and Maxillofacial Surgery  
D.D.S., University of Illinois—Chicago, 2009  
M.D., University of Florida, 2013  

Victor D. Quinones  
Assistant Professor, Physician Assistant Program—Orlando  
A.S., Miami-Dade College, 2008  
M.S., A.T. Still University, 2014  

Nicole Quint  
Clinical Faculty, Occupational Therapy  
B.S., University of Missouri, 1994  
M.O.T., Nova Southeastern University, 2003  
Dr.O.T., Nova Southeastern University, 2011  

Harvey Quinton  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S., Howard University, 1978  

Yasmin Qureshi  
Associate Professor, Osteopathic Principles and Practice  
B.S., Victoria University, 2000  
M.S., Victoria University, 2002  
M.P.T., Florida International University, 2006  
D.P.T., A.T. Still University of Health Sciences, 2009  

Silvia Rabionet  
Chair and Associate Professor, Sociobehavioral and Administrative Pharmacy  
B.A., Mount Holyoke College, 1979  
Ed.M., Harvard University, 1980  
Ed.D., Harvard University, 2002  

John Rafalko  
Associate Professor, Physician Assistant Studies  
B.S., Towson State University, 1984  
A.A./P.A., Essex Community College, 1986  
M.S., Towson State University, 1992  
Ed.D., Nova Southeastern University, 2007  
Fellow, American Academy of Physician Assistants  

Vijaykumar Rajput  
Chair and Professor, Medical Education  
M.B.B.S., Bombay University, Topiwala National Medical College, 1986  
M.S., Bombay University, 1989  
Robert Woods Johnson Medical School, 1996  

Anne Rambo  
Director of M.S. and Certification Programs and Professor, Family Therapy  
M.S.W., University of Texas—Austin, 1981  
Ph.D., Nova University, 1989  
Shari Ramchal  
*Instructor, Graduate and Community Education*  
B.A., Boston University, 2014  
M.P.H., Emory University, 2016

Luis Ramos  
*Associate Professor, Physician Assistant Program—Jacksonville*  
B.S., George Washington University, 1987  
B.S., George Washington University, 1991  
M.S.S., Alderson-Broaddus College, 1997

Gerardo P. Ramos Otero  
*Clinical Assistant Professor, Pharmacy Practice*  
Pharm.D., Nova Southeastern University, 2018

Arif M. Rana  
*Associate Professor, Biomedical Informatics*  
Associate Professor, Medical Education  
B.A., Rutgers University, 1997  
M.S., Rutgers University, 2000  
M.Ed., Rutgers University, 2006  
Ph.D., Rutgers University, 2011  
Ed.S., Rutgers University, 2013  
M.S., Nova Southeastern University, 2014  
M.P.H., Nova Southeastern University, 2016  
M.A., Nova Southeastern University, 2019

Hugh G. Rappa  
*Professor, Physician Assistant Program—Jacksonville*  
B.S., Queens College, 1978  
M.D., University of Padua, Italy, 1991  
Fellow, American Association of International Physicians  
Fellow, American Educators of Radiological Sciences  
Member, Pi Alpha Honor Society  
Member, Alpha Etta Society

Appu Rathinavelu  
*Professor, Pharmaceutical Sciences*  
B.S., University of Madras, 1978  
M.S., University of Madras, 1980  
M.Phil., University of Madras, 1981  
Ph.D., University of Madras, 1985

Alfredo Rehbein  
*Instructor, Medical Education*  
B.A., Williams College, 1983  
M.B.A., Thunderbird American Graduate School, 1985

Gustavo A. Reinoso  
*Assistant Professor, Occupational Therapy*  
B.S., National University of Litoral, 1994  
Ph.D., Nova Southeastern University, 2005

Michael D. Reiter  
*Professor, Family Therapy*  
M.Ed., University of Florida, 1994  
Ph.D., Nova Southeastern University, 1999

Violetta E. Renesca  
*Assistant Professor, Clinical Immunology*  
B.S.N., Nova Southeastern University, 2008  
M.S.N., Florida International University, 2012

José A. Rey  
*Professor, Pharmacy Practice*  
Pharm.D., University of Florida College of Pharmacy, 1991  
M.S., Nova Southeastern University, 2009

Irma Rey  
*Assistant Professor, Internal Medicine*  
M.D., University of Miami, 1981

Sherrol Reynolds  
*Chief, Primary Care*  
Associate Professor, Optometry  
B.S., University of Florida, 1991  
O.D., Nova Southeastern University, 1996

Jaime Weiner Riskin  
*Clinical Assistant Professor, Pharmacy Practice*  
B.S., University of Florida, 1998  
Pharm.D., Nova Southeastern University, 2003

Suzanne Riskin  
*Assistant Professor, Internal Medicine*  
M.D., University of Miami, 2007

Sayel Rivera García  
*Clinical Assistant Professor, Pharmacy Practice*  
B.S., Interamerican University of Puerto Rico, 2015  
Pharm.D., University of Puerto Rico, 2019

Mary Elizabeth Roberts  
*Associate Professor, Department of Speech-Language Pathology*  
B.S., Henderson State University, 1973  
M.S., University of Central Arkansas, 1985  
Ph.D., University of Southern Mississippi, 1994

Kaye Robertson  
*Assistant Professor, Medical Education*  
Affiliate Assistant Professor, Medical Education  
M.S., University of Illinois, 1972

Christina Robinson  
*Postgraduate Program Director and Assistant Professor, Community and Public Health Sciences*  
D.M.D., Tufts University, 2014  
Residency—AEGD, 2015

Kathleen Rockefeller  
*Professor and Research Coordinator, Physical Therapy*  
B.A., State University College at Brockport, 1976  
M.S., Exercise Physiology, 1978  
Certificate—Physical Therapy, Columbia University, 1978  
M.P.H., University of Washington, 1990  
Sc.D., University of Massachusetts—Lowell, 2002

Jacqueline Rodena  
*Pediatric and Binocular Vision Residency Coordinator*  
*Assistant Professor, Optometry*  
B.S., Florida State University, 1999  
O.D., Nova Southeastern University, 2004  
Fellow, American Academy of Optometry
Julie Rodman  
**Chief, Primary Care Broward**  
Residency Education Coordinator  
Associate Professor, Optometry  
B.A., Brandeis University, 1994  
O.D., New England College of Optometry, 1998  
M.S., Nova Southeastern University, 2014  
Fellow, American Academy of Optometry

Jeanette Rodriguez  
**Instructor, Family Medicine**  
B.S., Stetson University, 2011  
D.O., Nova Southeastern University, 2015

Jorgelin Rodriguez  
**Assistant Professor, Cariology and Restorative Dentistry**  
D.M.D., Nova Southeastern University, 2006

Ricardo Rodriguez-Millan  
**Academic Facilitator/Instructor, Pharmaceutical Sciences**  
B.S., University of Puerto Rico, 1998  
M.D., Universidad Autonoma de Guadalajara, 2007

Shari Rone-Adams  
**Chair and Professor, Physical Therapy**  
Adjunct Associate Professor, Public Health  
B.S./P.T., University of Miami, 1985  
M.S., Nova University, 1988  
D.B.A., Nova Southeastern University, 2002

Irving Rosenbaum  
**Executive Dean for Administration,**  
**Health Professions Division**  
Professor, Medical Education  
Professor, Public Health  
B.A., State University of New York—Buffalo, 1971  
M.P.A., City University of New York, 1974  
D.P.A., Nova University, 1984  
Ed.D., Nova Southeastern University, 2006

Rebecca Rosenthal  
**Director of Legal Services**  
Associate Professor, Physical Therapy  
B.S. PT, Sargent College, 1976  
M.S., University of Michigan, 1978  
J.D., Nova University, 1990  
D.P.T., A.T. Still University, 2011

Mark Roth  
**Assistant Professor, Periodontology**  
D.D.S., New York University, 1967  
Certificate—Periodontics, New York University, 1975

Linda S. Rouse  
**Interim Dean, Optometry**  
Assistant Dean, Finance and Operations  
Assistant Professor, Optometry  
B.S., Stetson University, 1988  
O.D., Illinois College of Optometry, 1992  
M.B.A., Nova Southeastern University, 2016  
Fellow, American Academy of Optometry

Leticia Rousso  
**Assistant Professor, Optometry**  
B.H.S., University of Florida, 2011  
O.D., Nova Southeastern University, 2015

Irina R. Rozenfeld  
**Assistant Professor, Clinical Immunology**  
Adjunct Faculty Member, Ron and Kathy Assaf College of Nursing  
B.S.N., Nova Southeastern University, 2008  
M.S.N., Florida International University, 2012

Cynthia Ruppel  
**Affiliate Assistant Professor, Medical Education**  
B.A., University of Akron, 1975  
M.B.A., Cleveland State University, 1982  
Ph.D., Kent State University, 1995

Brian Russ  
**Associate Professor, Physical Therapy**  
B.S. P.T., State University of New York—Buffalo, 1999  
FAAOMPT, Kaiser Permanente, 2005  
D.P.T., A.T. Still University, 2013

Marcella Rutherford  
**Dean, Ron and Kathy Assaf College of Nursing**  
B.H.S., Florida Atlantic University, 1990  
M.B.A., Florida Atlantic University, 1997  
M.S., Florida Atlantic University, 2003  
Ph.D., Florida Atlantic University, 2007

Liliya Ryschak  
**Assistant Professor, Medical Sonography**  
Affiliate Assistant Professor, Medical Education  
B.A., University of Akron, 1975  
M.B.A., Cleveland State University, 1982  
M.D., Lviv National Medical University—Ukraine, 1986

Terry Rzepkowski  
**Assistant Professor, Basic Science**  
B.S., Ithaca College, 1982  
M.S., Rocky Mountain University of Health Professions, 2000  
D.P.T., Rocky Mountain University of Health Professions, 2005

Francois Sainfort  
**Affiliate Professor, Population Health Sciences**  
Diploma, Ecole Centrale Paris, 1982  
DEA, Ecole Centrale Paris, 1984  
Doctorate, Ecole Centrale Paris, 1987

Luis Salgueiro  
**Assistant Professor, Clinical Immunology**  
D.V.M., Universidad del Zulia, 1990  
Ph.D., Universidad Central de Venezuela, 2004

Jesus Sanchez  
**Associate Professor, Sociobehavioral and Administrative Pharmacy**  
B.A., Universidad de Granada (Spain), 1993  
M.A., University of Miami, 1995  
Ph.D., University of Miami, 2001  
Ph.D., Universidad de Granada (Spain), 2014

Kimberly A. Sand  
B.S.N., Cedarville University, 1980  
M.S.N., Rutgers State University, 1997  
D.N.P., University of South Florida, 2017
Mark Sandhouse  
Associate Dean, Osteopathic Medical Education  
Professor, Osteopathic Principles and Practice  
B.S., University of Miami, 1981  
D.O., Southeastern University of the Health Sciences, 1988  
M.S., Nova Southeastern University, 2013  

Karen Sando  
Assistant Dean, Assessment and Accreditation  
Associate Professor, Pharmacy Practice  
A.A., St. Petersburg College, 2004  
Pharm.D., University of Florida, 2008  

Julia Sarpy  
Affiliate Assistant Professor, Medical Education  
B.A., University of California—Los Angeles  
M.S., University of North Texas, 2010  
M.A., Southern Methodist University, 2012  
Ph.D., University of Houston, 2016  

Sahar Sarrami Amini  
Assistant Professor, Internal Medicine  
B.S., University of Central Florida, 2007  
M.B.S., Nova Southeastern University  
D.O., Nova Southeastern University, 2012  

Amar Sayani  
Assistant Professor, Optometry  
B.A., University of Western Ontario, 2006  
O.D., Pennsylvania College of Optometry at Salus University, 2010  

Michelle Saydar  
Assistant Professor, Anesthesiologist Assistant  
B.S., Georgia Institute of Technology  
M.M.Sc., Emory University  

Sharmayn Sayers-Erfourth  
Instructor, Psychiatry  
B.S., University of Florida, 1993  
M.Ed., University of Maryland, 1996  
D.O., William Carey College of Osteopathic Medicine, 2014  

Judith P. Schaffer  
Assistant Professor, Family Medicine  
B.A., Boston University, 1976  
D.O., West Virginia School of Osteopathic Medicine, 1985  

Debbie Glasser Schenk  
Affiliated Professor, Child Development Specialist  
B.A., Wellesley College, 1987  
M.S., Nova University, 1991  
Ph.D., Nova Southeastern University, 1996  

Zoeanne Schinas  
Assistant Professor, Optometry  
B.S., Florida International University, 1999  
O.D., Nova Southeastern University, 2004  

Sharon A. Schmidt  
Clinical Assistant Professor, Medical Education  
M.S., State University of New York, 1984  

Ellen Schneider  
A.S.N., Edison State College, 2005  
B.S.N., Chamberlain College of Nursing, 2010  
D.N.P., Chamberlain College of Nursing, 2020  

Catharine Scholl  
Assistant Professor, Cardiovascular Sonography Program—Tampa  
B.S., Oregon Institute of Technology, 2007  
M.H.S., Chatham University, 2009  

Wayne A. Schreier  
Chair, Division of Physiology  
Professor, Medical Education  
B.S., Southern Illinois University, 1977  
M.S., University of California—Los Angeles, 1987  
Ph.D., University of California—Los Angeles, 1991  

Mark Schweizer  
Director of Infection Prevention Programs  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S., University of Maryland, 1982  
M.P.H., Nova Southeastern University, 2010  

Sanid D. Scott-Holman  
Assistant Professor, Family Medicine  
B.S., Barry University, 1989  
D.O., Southeastern University of the Health Sciences, 1993  

Ioana Scripa  
Assistant Professor, Nutrition  
B.S., University of North Carolina—Chapel Hill, 2005  
M.S., University of North Carolina—Greensboro, 2008  
Ph.D., University of North Carolina—Greensboro, 2012  

Matthew J. Seamon  
Chair and Associate Professor, Pharmacy Practice  
A.S., Nassau Community College, 1992  
B.A., Florida Atlantic University, 1994  
Pharm.D., University of Michigan, 1998  
J.D., Nova Southeastern University, 2006  

Kenneth Seger  
Chair, Department of Clinical Education  
Associate Professor, Optometry  
B.S., University of California—Berkeley, 1973  
O.D., University of California—Berkley, 1975  
M.Sc., University of Manchester, 1982  
Fellow, American Academy of Optometry  

Juan L. Segura  
Program Director, Adult-Gerontology Acute Care  
Nurse Practitioner Program  
M.S.N., Barry University, 2014  
D.N.P., Barry University, 2017  

Robert Seltzer  
Predoctoral Director and Professor, Endodontics  
D.M.D., University of Pennsylvania, 1972  
Certificate—Endodontics, University of Pennsylvania, 1976  

Ellen Schneider  
A.S.N., Edison State College, 2005  
B.S.N., Chamberlain College of Nursing, 2010  
D.N.P., Chamberlain College of Nursing, 2020  

Catharine Scholl  
Assistant Professor, Cardiovascular Sonography Program—Tampa  
B.S., Oregon Institute of Technology, 2007  
M.H.S., Chatham University, 2009  

Wayne A. Schreier  
Chair, Division of Physiology  
Professor, Medical Education  
B.S., Southern Illinois University, 1977  
M.S., University of California—Los Angeles, 1987  
Ph.D., University of California—Los Angeles, 1991  

Mark Schweizer  
Director of Infection Prevention Programs  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S., University of Maryland, 1982  
M.P.H., Nova Southeastern University, 2010  

Sanid D. Scott-Holman  
Assistant Professor, Family Medicine  
B.S., Barry University, 1989  
D.O., Southeastern University of the Health Sciences, 1993  

Ioana Scripa  
Assistant Professor, Nutrition  
B.S., University of North Carolina—Chapel Hill, 2005  
M.S., University of North Carolina—Greensboro, 2008  
Ph.D., University of North Carolina—Greensboro, 2012  

Matthew J. Seamon  
Chair and Associate Professor, Pharmacy Practice  
A.S., Nassau Community College, 1992  
B.A., Florida Atlantic University, 1994  
Pharm.D., University of Michigan, 1998  
J.D., Nova Southeastern University, 2006  

Kenneth Seger  
Chair, Department of Clinical Education  
Associate Professor, Optometry  
B.S., University of California—Berkeley, 1973  
O.D., University of California—Berkley, 1975  
M.Sc., University of Manchester, 1982  
Fellow, American Academy of Optometry  

Juan L. Segura  
Program Director, Adult-Gerontology Acute Care  
Nurse Practitioner Program  
M.S.N., Barry University, 2014  
D.N.P., Barry University, 2017  

Robert Seltzer  
Predoctoral Director and Professor, Endodontics  
D.M.D., University of Pennsylvania, 1972  
Certificate—Endodontics, University of Pennsylvania, 1976
Claudia A. Serna  
Director, Master of Public Health Program  
Assistant Professor, Public Health  
D.D.S., Javeriana University, 1998  
M.P.H., Florida International University, 2009  
Ph.D., Florida International University, 2014  
Diplomate, American Board of Dental Public Health, 2017  

Josephine Shallo-Hoffmann  
Director, HPD Ph.D. Core Course Component  
Professor, Optometry  
B.A., Columbia University, 1975  
M.A., Rutgers University, 1978  
Ph.D., Rutgers University, 1984  
Fellow, American Academy of Optometry  

Daniel E. Shaw  
Professor, Psychiatry  
Associate Professor, Biomedical Informatics  
B.S., University of Florida, 1974  
M.Ed., University of Florida, 1975  
Ed.D., University of Florida, 1978  
Ph.D., University of Florida, 1981  

Donna Shaw  
Assistant Professor, College of Nursing  
B.S.N., University of Miami  
M.S.N., University of Phoenix  
Ed.D., Nova Southeastern University, 2018  

Keiba L. Shaw  
Associate Professor, Physical Therapy  
B.S., Syracuse University, 1990  
M.P.T., Slippery Rock University, 1995  
M.A., West Virginia University, 2002  
Ed.D., West Virginia University, 2001  
Certificate—Gerontology, University of South Florida, 2010  
D.P.T., A.T. Still University, 2015  

Elizabeth Sherman  
Associate Professor, Pharmacy Practice  
Pharm.D., Nova Southeastern University, 2007  

Jeffrey Shiffman  
Assistant Professor, Cariology and Restorative Dentistry  
D.P.D., Nova Southeastern University, 2016  

Sharon Sholiton  
Learning Community Mentor  
Associate Professor, Medical Education  
B.A., Stern College, 1982  
M.D., Albert Einstein College of Medicine, 1987  

John Shook  
Associate Professor, Internal Medicine  
B.S., Ohio State University, 1971  
M.D., Medical College of Ohio, 1974  

Joy Siegel  
Instructor, Public Health  
Ed.D., Nova Southeastern University, 2012  

Marc Siegel  
Assistant Professor, Pediatric Dentistry  
B.A., Florida Atlantic University, 1999  
D.D.S., Howard University, 1999  

Michael Siegel  
Assistant Dean of Faculties  
Professor and Chair, Diagnostic Sciences  
D.D.S., Baltimore College of Dental Surgery, 1979  
Certificate—Prosthodontics, Baltimore College of Dental Surgery, 1992  
M.S., University of Maryland, 1995  
Fellow, Academy of General Dentistry, 1986  
Fellow, American College of Dentists, 2000  
Fellow, Pierre Fauchard Academy, 2001  
Fellow, International College of Dentists, 2006  

Sharon Siegel  
Chair and Professor, Prosthodontics  
D.D.S., Baltimore College of Dental Surgery, 1979  
Certificate—Prosthodontics, Baltimore College of Dental Surgery, 1992  
M.S., University of Maryland, 1995  
Fellow, Academy of General Dentistry, 1986  
Fellow, American College of Dentists, 2000  
Fellow, Pierre Fauchard Academy, 2001  
Fellow, International College of Dentists, 2006  

Georgina Silva-Suarez  
Assistant Professor, Sociobehavioral and Administrative Pharmacy  
B.A., University of Puerto Rico, 2000  
M.P.H.E., University of Puerto Rico, 2006  
Ph.D., Florida International University, 2014  

Tobin Silver  
Practicum Director and Associate Professor,Exercise and Sport Science  
Associate Professor, Nutrition  
B.S., University of Wisconsin—Eau Claire, 2003  
M.S., Barry University, 2005  
Ph.D., Purdue University, 2010  

Richard Singer  
Chair and Associate Professor, Orthodontics and Dentofacial Orthopedics  
D.M.D., Washington University  
M.S., Orthodontics, St. Louis University  

Devada Singh-Franco  
Associate Professor, Pharmacy Practice  
B.S. (Pharm.), Arnold and Marie Schwartz College of Pharmacy, 1995  
Pharm.D., Arnold and Marie Schwartz College of Pharmacy, 2000  
R.Ph., New York  
R.Ph., Florida  

Suzette Siviter  
Instructor, Student Services  
B.A., Siena Heights University, 1983  
M.P.A., University of Toledo, 1985  

Elliot Sklar  
Associate Professor, Health Science  
B.A., Concordia University, 2002  
M.Sc., Florida International University, 2006  
Ph.D., Florida International University, 2008  

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Jocelyn Slater  
*Clinical Supervisor and Instructor, Department of Speech-Language Pathology*  
B.A., Florida Atlantic University, 1998  
B.S., Florida Atlantic University, 1998  
M.S., Nova Southeastern University, 2006

Joel Slingbaum  
*Assistant Professor*  
*Director of Continuing Education*  
*Director of Instructional and Informational Technologies*  
D.M.D., Tufts University, 1998  
Certificate—Endodontics, Nova Southeastern University, 2000

Caroline E. Smikle  
*Clinical Coordinator/Assistant Professor*  
A.A.S., Queensborough Community College, 1997  
B.S.N., University of Phoenix, 2008  
Ph.D., Barry University, 2013

Kim Smith  
*Associate Professor, Physical Therapy*  
B.S., Texas Christian University, 1988  
M.S.P.T., University of Miami, 1990  
D.P.T., A.T. Still University, 2013

Laura Smith  
*Assistant Professor*  
B.S.N., Loyola University, 1983  
M.S.N., University of South Florida, 1997  
Ph.D., University of Florida, 2012

Samuel K. Snyder  
*Chair, Internal Medicine*  
*Professor, Nephrology*  
A.B., Princeton University, 1973  
D.O., Philadelphia College of Osteopathic Medicine, 1980

Stavros Sofos  
*Assistant Professor, Periodontology*  
D.D.S., University of Carabobo, 2011  
M.S., University of Barcelona, 2016  
Certificate—Periodontics, Nova Southeastern University, 2020

Donald Sokolik  
*Assistant Professor and Medical Director, Anesthesiologist Assistant*  
B.A., Washington University, 1968  
M.D., Emory University, 1971

Lynn Solomon  
*Professor, Oral Medicine, Diagnostic Sciences*  
D.D.S., State University of New York—Buffalo, 1995  
M.S., State University of New York—Buffalo, 2005

Angel Solorzano  
*Assistant Professor*  
M.S.N., San Francisco University  
D.N.P., University of San Francisco  
M.B.A., Dominican University of California  
B.S.N., San Francisco State University

Lisa B. Soontupe  
*Associate Professor, College of Nursing*  
B.S., State University of New York—Downstate Medical Center, 1975  
M.A., New York University, 1977  
Ed.D., Nova Southeastern University, 2010

Oyindamola Akinso Soremekun  
*Assistant Professor, Public Health*  
B.S., Babcock University, 2006  
PGD Public Health, University of Birmingham—United Kingdom, 2009  
M.P.H., Birmingham City University—United Kingdom, 2011  
Dr.P.H., Georgia Southern University, 2020

Janet Sparker  
*Assistant Professor, Physician Assistant Program—Fort Myers*  
B.A./P.A., Lake Erie College, 1979  
B.S., College of Nursing Ursuline College, 1991  
Ed.D., Nova Southeastern University, 2017  
Fellow, American Academy of Physician Assistants  
Fellow, Florida Academy of Physician Assistants

Lonette Spence  
*Assistant Professor, Medical Sonography*  
B.A., Oakland University, 1994  
M.A.S., Fairleigh Dickinson University, 2005  
D.H.Sc., Nova Southeastern University, 2014

Robert C. Speth  
*Professor, Pharmaceutical Sciences*  
B.A., Western Maryland College, 1968  
M.A., Connecticut College, 1972  
Ph.D., Vanderbilt University, 1976

Francine Spigel  
*Internship Supervisor and Instructor, Department of Speech-Language Pathology*  
B.A., Montclair State University, 1966  
M.A., Montclair State University, 1975

Sally Jo Spooner  
*Assistant Professor, College of Nursing*  
B.S.N., Florida State University, 2001  
M.S.N., University of Phoenix, 2004  
D.H.Sc., Nova Southeastern University, 2008

Wendy Stav  
*Professor, Occupational Therapy Department*  
B.S., Quinnipiac University, 1991  
Ph.D., Nova Southeastern University, 2002  
Fellow, American Occupational Therapy Association

Jessica Steen  
*Assistant Professor, Optometry*  
O.D., University of Waterloo, 2014  
Fellow, American Academy of Optometry

Jennifer Steinberg  
*Assistant Professor, Pharmacy Practice*  
Pharm.D., University of Florida, 2005
Debra C. Steinkohl  
Assistant Professor, Family Medicine 
Assistant Professor, Public Health 
B.S./B.A., University of Florida, 1984 
M.H.S.A., Florida International University, 1985

Eric Stelnicki  
Assistant Professor, Oral Surgery 
M.D., University of Florida, 1991

Debra Feingold Stern  
Director, Clinical Education 
Associate Professor, Physical Therapy 
Adjunct Associate Professor, Public Health 
B.S./P.T., State University of New York—Buffalo, 1974 
M.S.M., Rollins College, 1977 
D.B.A., Nova Southeastern University, 2003 
D.P.T., A.T. Still University, 2011

Sarah Stevens  
Interim Program Director, Family Nurse Practitioner, Palm Beach 
Assistant Professor 
B.S.N., St. Francis Medical Center College, 2009 
M.S.N., Palm Beach Atlantic University, 2017 
D.N.P., Palm Beach Atlantic University, 2018

Manelle St. Hilaire  
Director, Preclinical Education 
Instructor, Public Health 
A.A., Miami Dade College, 2004 
B.A., University of Miami, 2007 
M.P.H., Nova Southeastern University, 2018

April Stidham  
Program Director, Family Nurse Practitioner, Tampa Bay 
Associate Professor 
A.D.N., Mountain Empire Community College, 1982 
B.S.N., University of Virginia, 1995 
M.S.N., University of Virginia, 1997 
D.N.P., University of Virginia, 2011

Hien Le (Kimmi) Stultz  
Clinical Assistant Professor, Pharmacy Practice 
A.A., Rollins College, 2004 
Pharm.D., Nova Southeastern University, 2007

Elizabeth Swann  
Professor, Department of Health and Human Performance 
Affiliate Professor, Medical Education 
B.S./ESS, Texas State University, 1997 
M.A., University of Texas, 1999 
Ph.D., University of Southern Mississippi, 2001

Kinjal Talati  
Clinical Coordinator 
B.S.N., Madonna University, 2012 
D.N.P., Wayne State University, 2017

Peter Taylor  
Associate Dean of Academic Affairs and Assistant Professor, College of Health Care Sciences 
B.A., University of Maryland, 1991 
M.A., Georgetown University, 1993 
Ph.D., Brandeis University, 2000

Sherrica Taylor  
Assistant Professor, Medical Education 
B.A., University of South Florida, 2005 
M.S., Kaplan University, 2013 
Ph.D., Northcentral University, 2018

Yin Tea  
Chief, Pediatrics and Binocular Vision 
Associate Professor, Optometry 
B.S., University of California—Los Angeles, 1995 
O.D., Southern California College of Optometry, 1999 
Fellow, American Academy of Optometry

Harry T. Temple  
Executive Associate Dean for Research 
Professor, Surgery 
B.A., Harvard University, 1980 
M.D., Jefferson Medical College, 1986

Suzanne Templer  
Learning Community Mentor 
Associate Professor, Medical Education 
B.S., Pennsylvania State University, 1998 
D.O., Philadelphia College of Osteopathic Medicine, 2002

Sweta Tewary  
Assistant Professor, Geriatrics 
B.S., Delhi University, 1998 
M.S.W., Tata Institute of Social Sciences, 2000 
Ph.D., University of South Carolina, 2008

Kamilah Thomas-Purcell  
Associate Professor, Health Science 
B.S., University of Florida, 2001 
M.P.H., University of North Carolina, 2003 
Ph.D., University of South Florida, 2010

Jeffrey Thompson  
Professor, Prosthodontics 
Ph.D., University of Florida, 1995

Felicia Timmermann  
Assistant Professor, Optometry 
B.A., St. Louis University, 2010 
O.D., Illinois College of Optometry, 2014 
M.S., Northwestern University, 2020 
Fellow, American Academy of Optometry, 2015

Stanislav Timofeev  
Assistant Professor, Cardiovascular Sonography Program—Tampa 
M.D., St. Petersburg State University Medical School, 1972 
Cardiology Specialist—St. Petersburg State University Medical School, 1975

Caryl Ann Tolchinsky  
Director, Student Success and Learning Excellence 
Assistant Professor, Medical Education 
B.S., Kutztown University 
M.Ed., Georgia State University 
Ed.D., Nova Southeastern University
Melissa Tovin  
Professor, Physical Therapy  
B.S., New York University, 1988  
M.A., Columbia University, 1993  
Ph.D., Georgia State University, 1999

Malav S. Trivedi  
Assistant Professor, Pharmaceutical Sciences  
B.S., North Gujarat University, 2008  
M.S., Northeastern University, 2010  
Ph.D., Northeastern University, 2013

Akiva Turner  
Chair and Professor, Department of Health Science  
Interim Director, Ph.D. in Health Science Program  
B.A., California State University, 1989  
M.A., University of California—Los Angeles, 1991  
M.P.H., University of California—Los Angeles, 1992  
Ph.D., University of California—Los Angeles, 1994  
J.D., Benjamin Cardozo School of Law, Yeshiva University, 1999

Marilyn L. Uzdavines  
Assistant Professor, Affiliated, Medical Education  
B.A., University of Florida, 1999  
J.D., University of Florida, 2003

Kim Valenti  
Director, Medical Education Program  
Director, Interprofessional Education  
Instructor, Medical Education  
M.Ed., Nova Southeastern University, 2015

Pradeep R. Vanguri  
Program Director and Associate Professor, Athletic Training  
B.S., East Carolina University, 1998  
M.S., North Carolina State University, 2000  
Ph.D., University of Alabama, 2005

Saynur Vardar  
Chair and Associate Professor, Periodontology  
D.D.S., Ege University, 1995  
Ph.D., Ege University, 2000  
Certificate—Periodontology, Boston University, 2010

Jorge Varela  
Academic Facilitator/Instructor, Pharmaceutical Sciences  
B.S., University of Florida, 1983  
B.S.A., University of Florida, 1985  
Pharm.D., University of Florida, 1989

Patricia Vargas  
Associate Professor, Medical Sonography  
B.H.Sc., Nova Southeastern University, 2006  
M.H.Sc., Nova Southeastern University, 2007  
D.H.Sc., Nova Southeastern University, 2017

Archana Vatwani  
Assistant Professor, Physical Therapy  
B.A., University of St. Catherine, 2002  
D.P.T., Temple University, 2006  
M.B.A., Holy Family University, 2012

Juan Velasco  
Instructor, Cariology and Restorative Dentistry  
Certificate—AEGD, Nova Southeastern University, 2007

Kallidaikurichi. V. Venkatachalam  
Professor, Medical Education  
Division of Biochemistry  
B.S., Washington State University, 1983  
M.S., Washington State University, 1985  
Ph.D., Texas A&M University, 1991

Maria Vera-Nunez  
Assistant Professor, Integrative Medicine  
M.D., Universidad Nacional del Salta, 2004

Steven Vertz  
Associate Director and Instructor, Department of Speech-Language Pathology  
B.S., Abilene Christian University, 1982  
M.S., University of Mississippi, 1986

Tameria Vickerson  
Director, Graduate Medical Education  
Assistant Professor, Medical Education  
B.A., State University of New York—Potsdam, 1983  
M.A., Webster University, 1984  
Ph.D., Old Dominion University, 2003

Chitra Paul Victor  
Program Director, Entry B.S.N. and Accelerated B.S.N. Programs  
Assistant Professor, College of Nursing  
B.S.N., Christian Medical College, 1992  
M.S.N., Christian Medical College, 1998  
M.D., Indian Board of Alternative Medicines, 2005  
Ph.D., University of Phoenix, 2016

Johannes Vieweg  
Dean, Dr. Kiran C. Patel College of Allopathic Medicine  
Professor, Surgery  
Pre-Med, University of Regensburg, School of Medicine, 1984  
M.D., Technical University of Munich, School of Medicine, 1988

Mani Vindhya  
Assistant Professor, Anesthesiologist Assistant  
M.D., Yale University 2007

John Virag  
Predoctoral Program Director and Associate Professor, Periodontology  
D.M.D., University of Kentucky, 1984  
Certificate—Periodontics, University of Minnesota, 1988

Rick Vogel  
Assistant Professor, Cariology and Restorative Dentistry  
D.D.S, New York University, 1979

Robert Wagner  
Chair and Assistant Professor, Anesthesiologist Assistant  
B.S., Florida A&M University, 1987  
M.M.Sc., Emory University, 1991  
M.P.H., University of Massachusetts, 2004
Sarah Wakefield  
Assistant Professor, Audiology  
B.S., The Pennsylvania State University, 2004  
Au.D., Nova Southeastern University, 2008

Paula S. Wales  
Executive Associate Dean for Academic and Student Affairs  
Professor, Medical Education  
B.A., Franklin College, 1990  
M.Ed. Auburn University, 1994  
Ed.D., Auburn University, 1996

Elaine M. Wallace  
Dean, Dr. Kiran C. Patel College of Osteopathic Medicine  
Professor, Osteopathic Principles and Practice  
Professor, Public Health  
Professor, Sports Medicine  
B.S., University of Mississippi, 1976  
D.O., University of Health Sciences College of Osteopathic Medicine, 1980  
M.S., University of Kansas, 2003  
M.S., Nova Southeastern University, 2008  
M.S., Nova Southeastern University, 2011  
M.S., Nova Southeastern University, 2018

Jill A. Wallace-Ross  
Assistant Dean, Osteopathic Clinical Education  
Assistant Professor, Family Medicine  
Assistant Professor, Osteopathic Principles and Practice  
B.A., Florida Atlantic University, 1999  
D.O., Nova Southeastern University, 2007

Jacqueline Reese Walter  
Assistant Professor, Occupational Therapy Program  
B.S., Keuka College, 1997  
Ph.D., Nova Southeastern University, 2010

Paula A. Faria Waziry  
Assistant Professor, Clinical Immunology  
B.S., City College, 1997  
M.A., City College, 2002  
Ph.D., University of Miami, 2005

Nathan Weirich  
Assistant Professor, Anesthesiologist Assistant  
B.S., University of South Florida, 2005  
M.H.Sc., Nova Southeastern University, 2008

Albert I. Wertheimer  
Professor, Sociobehavioral and Administrative Pharmacy  
B.S., University of Buffalo, 1965  
M.B.A., State University of New York—Buffalo, 1967  
Ph.D., Purdue University, 1969  
Postdoctoral Fellow—University of London, St. Thomas Medical School, 1973

Wendy Weston  
Assistant Professor, Population Health Sciences  
B.S., California State Polytechnic University, 2000  
M.B.S., California State Polytechnic University, 2005  
Ph.D., University of Miami, 2013

Nathan P. Widboom  
Assistant Professor, Osteopathic Principles and Practice  
B.S., University of Wisconsin—Madison, 2006  
D.O., Touro University College of Osteopathic Medicine—California, 2012

Kevin Willeford  
Assistant Professor, Optometry  
B.S., University of Miami, 2010  
M.S., SUNY State College of Optometry, 2013  
O.D., SUNY State College of Optometry, 2014  
Ph.D., SUNY State College of Optometry, 2018  
Fellow, American Academy of Optometry, 2015

Margaret L. Wilkinson  
Associate Dean, Preclinical Education  
Assistant Professor, Community Medicine  
Assistant Professor, Public Health  
M.A., Michigan State University, 1967  
Ph.D., Kent State University, 1989

J. Keith Williams  
Assistant Professor, Physician Assistant Studies  
B.A., Western Connecticut State University, 1976  
B.S., University of Florida, 1983  
M.P.A.S., University of Nebraska, 2005  
Fellow, American Academy of Physician Assistants

Rachel Williams  
Program Director, SLP.D. Program, and Associate Professor, Department of Speech-Language Pathology  
B.A., University of Florida, 1992  
M.A., University of Central Florida, 1996  
Ph.D., Howard University, 2006

Shane Williams  
Instructor, Family Medicine  
B.S., Florida Atlantic University, 2011  
D.O., Nova Southeastern University, 2015

Donna Williams-Newman  
Assistant Professor, College of Nursing  
M.S.N., University of the West Indies, 2004  
D.N.P., University of Miami, 2011

Stanley H. Wilson  
Dean, Dr. Pallavi Patel College of Health Care Sciences  
Associate Professor, Physical Therapy  
B.S. PT, Howard University, 1981  
M.S., St. Thomas University, 1984  
Ed.D., Florida International University, 2000

Sonia Wisdom  
Nursing Diploma, 1983  
B.S.N., University of West Indies, 1994  
M.S.N., Barry University, 2007  
Ph.D., University of Phoenix, 2020

Suzanne Wolf  
Assistant Professor, Physician Assistant—Jacksonville  
B.S., University of Wisconsin, 2007  
B.S., Pace University, 2009  
M.S., Pace University, 2010
William R. Wolowich  
**Associate Professor, Pharmacy Practice**  
B.Sc. (Pharm.), University of Manitoba, 1988  
Pharm.D., State University of New York—Buffalo, 1993

Adam L. Wood  
**Assistant Professor, Physician Assistant Program—Orlando**  
A.A., University of Northern Florida, 2006  
Doctor of Pharmacy, University of Florida, 2010  
Clinical Toxicology/Emergency Medicine Fellowship, 2012

Albert D. Woods  
**Associate Professor, Optometry**  
B.A., Western Washington University, 1982  
M.S., Florida Institute of Technology, 1986  
B.S., Pennsylvania College of Optometry, 1987  
O.D., Pennsylvania College of Optometry, 1990  
Fellow, American Academy of Optometry

Marylee Worley  
**Assistant Professor, Pharmacy Practice**  
B.S., Virginia Polytechnic Institute and State University, 2007  
Pharm.D., Temple University School of Pharmacy, 2012

Algevis Wrench  
**Assistant Professor, Medical Education**  
**Assistant Professor, Microbiology**  
B.S., University of Florida, 2008  
Ph.D., University of Florida, 2011

Kim Yetman  
**Assistant Professor and Academic Fieldwork Coordinator**  
B.S., University of Central Florida, 2010  
O.T.D., Nova Southeastern University, 2016

Rick K. Yip  
**Professor, Medical Education**  
**Division of Anatomy**  
B.S., Southern Illinois University, 1975  
M.S., University of Arkansas, 1980  
Ph.D., Medical College of Wisconsin, 1985  
M.B.A., Nova Southeastern University, 2005

Samuel Yoders  
**Director, Cardiovascular Sonography Program—Tampa**  
B.S., University of Akron, 1985  
B.H.Sc., Nova Southeastern University, 2006  
M.H.Sc., Nova Southeastern University, 2008  
Ed.S., Nova Southeastern University, 2014  
Ph.D., Nova Southeastern University, 2017

Yuri Zagvazdin  
**Professor, Medical Education**  
**Division of Physiology**  
B.S., Tyumen State University, 1982  
Ph.D., Sechenov Institute of Evolutionary Physiology & Biochemistry, National Academy of Sciences, 1989

Carole Zangari  
**Associate Professor, Department of Speech-Language Pathology**  
B.A., University of Pittsburgh, 1972  
M.Ed., College of New Jersey, 1983  
Ph.D., Purdue University—West Lafayette, 1992

Jason Zeim  
**Associate Professor, Endodontics**  
D.M.D., Boston University Goldman School of Dental Medicine, 1995  
Certificate—Endodontics, Boston University Goldman School of Dental Medicine, 2009

Xiaojing (Crystal) Yu  
**Assistant Professor, Optometry**  
O.D., New England College of Optometry, 2014  
Ph.D., Kunming Institute of Zoology, Chinese Academy of Sciences  
B.S., Yunnan Normal University

Yuri Zagvazdin  
**Professor, Medical Education**  
**Division of Physiology**  
B.S., Tyumen State University, 1982  
Ph.D., Sechenov Institute of Evolutionary Physiology & Biochemistry, National Academy of Sciences, 1989

Carole Zangari  
**Associate Professor, Department of Speech-Language Pathology**  
B.A., University of Pittsburgh, 1972  
M.Ed., College of New Jersey, 1983  
Ph.D., Purdue University—West Lafayette, 1992

Jason Zeim  
**Associate Professor, Endodontics**  
D.M.D., Boston University Goldman School of Dental Medicine, 1995  
Certificate—Endodontics, Boston University Goldman School of Dental Medicine, 2009

Xiaojing (Crystal) Yu  
**Assistant Professor, Optometry**  
O.D., New England College of Optometry, 2014  
Ph.D., Kunming Institute of Zoology, Chinese Academy of Sciences  
B.S., Yunnan Normal University

Bin Zhang  
**Director of Graduate Programs and Research**  
**Professor, Optometry**  
M.D., Nanjing University, 1995  
M.S., Nanjing University, 1997  
Ph.D., University of Houston, 2003

Stacy Zubkousky  
**Assistant Professor, Optometry**  
B.S., University of Central Florida, 2010  
O.D., New England College of Optometry, 2015  
Fellow, Scleral Lens Society, 2018

Steven B. Zucker  
**Assistant Dean, Community Affairs**  
**Director, NSU AHEC Program**  
**Professor, Family Medicine**  
**Professor, Public Health**  
B.A., University of Pennsylvania, 1969  
D.M.D., University of Connecticut School of Dental Medicine, 1973  
M.Ed., University of Hartford, 1973
Adjunct/Affiliated/Clinical /Visiting Faculty

Mick Abae
Clinical Assistant Professor, Obstetrics and Gynecology
B.S., Fairleigh Dickinson University, 1977
M.S., Fairleigh Dickinson University, 1979
M.D., New York Medical College, 1984

Alia Abdulla
Clinical Assistant Professor, Surgery
B.S., University of Miami, 2002
D.O., Nova Southeastern University, 2007

Marina Abdalla
Adjunct Faculty, Optometry

Ibrahim Abi-Rafeh
Clinical Assistant Professor, Psychiatry
B.S., American University of Beirut, 1983
M.D., Universidad Tecnologica de Santiago, 1986

Gil Abramovici
Clinical Assistant Professor, Psychiatry
M.D., The Warren Alpert Medical School of Brown University, 2010

Susan Abramson
Visiting Assistant Professor, Research
Ph.D., University of Miami, 1994

Lauren Abratt
Clinical Assistant Professor,
Physical Medicine and Rehabilitation
B.S., Nova Southeastern University, 2003
D.O., Nova Southeastern University, 2008

Jose J. Abreu
Clinical Assistant Professor, Obstetrics and Gynecology
B.S., University of Miami, 1984
M.D., Thomas Jefferson Medical College, 1988

Melissa Abreu
Clinical Assistant Professor
M.S.N., Nova Southeastern University, 2016

John L. Abt
Clinical Associate Professor, Family Medicine
B.A., Boston University, 1979
D.O., New York College of Osteopathic Medicine, 1983

Yaw O. Abu
Clinical Assistant Professor, Pulmonary Medicine
M.D., University of Ghana Medical School, 1988

Ana Abugazaleh
Instructor, Optometry
A.S., Miami-Dade Community College, 1985
ABO-NCLE Certified, 1985

Robyn M. Ache
Clinical Assistant Professor, Surgery
B.S., University of South Florida, 2000
D.O., Nova Southeastern University, 2006

Rodolfo Acosta-Ortiz
Adjunct Faculty Member, Prosthodontics
D.D.S., University of Valle, 1992

Marijke H. Adams
Adjunct Faculty Member, Pharmaceutical Sciences
B.S., University of Florida, 1979
Pharm.D., Virginia Commonwealth University, 1991
Ph.D., Virginia Commonwealth University, 1991
Fellow of the American Foundation for Pharmaceutical Education (AFPE)

Nailah Adams
Clinical Assistant Professor, Family Medicine
M.D., Duke University School of Medicine, 2012

Alka Aggarwal
Clinical Assistant Professor, Family Medicine
M.D., University of Illinois at Chicago—College of Medicine, 2011

Ashik N. Ahmad
Clinical Assistant Professor, Pediatrics
B.S., Vassar College, 1997
M.D., State University of New York, 2001

Leila Ahmadian
Adjunct Assistant Professor, Prosthodontics
D.D.S., Hamadan University of Medical Science, 2002
Certificate—Prosthodontics, Tehran University of Medical Science, 2006
Certificate—Prosthodontics, College of Dental Medicine, 2016

Sultan S. Ahmed
Clinical Associate Professor, Family Medicine
M.D., Dacca University, Bangladesh, 1978
P.A., Bayley Seton Hospital, 1988

Paul Ajamian
Adjunct Clinical Associate Professor, Optometry
B.S., University of Vermont, 1976
O.D., New England College of Optometry, 1980

Alan B. Aker
Adjunct Clinical Associate Professor, Optometry
M.D., New York Medical College, 1976
Ophthalmology, North Shore University Hospital, 1980

Asfa S. Akhtar
Clinical Associate Professor, Family Medicine
B.S., University of Alabama, 1994
D.O., Nova Southeastern University, 2000

Mehmet Akif Eskan
Adjunct Faculty Member, Department of Periodontology
D.D.S., Hacettepe University, 1997
Ph.D., University of Louisville, 2011

Salah F. Al-Andary
Clinical Assistant Professor, Internal Medicine
B.S., American University of Beirut, 1987
M.D., American University of Beirut, 1991

Sherene P. Alexander
Clinical Assistant Professor, Internal Medicine
M.D., University of Miami, 1997
Tasha Alexis  
_Instructor, Preventive Medicine_  
M.D., American University of Antigua, 2012

Samantha Alford  
_Clinical Assistant Professor, Preventive Medicine_  
B.S., Union College, 1991  
D.O., State University of New York Health Science, 1998  
M.P.H., Nova Southeastern University, 2010

Raed AlHazme  
_Adjunct Assistant Professor, Biomedical Informatics_  
Ph.D., Rutgers Biomedical and Health Sciences University, 2015

Abed Alhomsi  
_Clinical Assistant Professor, Affiliated, Medicine_  
M.D., Damascus University School of Medicine, 1996

Evren Alici  
_Clinical Professor, Surgery_  
M.D., Ege University Faculty of Medicine, 1999  
Ph.D., Karolinska Institutet, 2006

Andrea Ali-Panzarella  
_Clinical Assistant Professor, Pediatrics_  
D.O., Nova Southeastern University, 2006

Mohammed F. Allahraha  
_Clinical Assistant Professor, Affiliated, Family Medicine_  
B.S., Loyola University, School of Arts and Sciences, 1993  
M.S., American University of Caribbean School of Medicine, 1993  
M.D., Instituto de Ciencias de la Salud, 1994

Riad Almasri  
_Adjunct Faculty Member, Prosthodontics_  
D.D.S., University of Aleppo, School of Dentistry, 2003

Alina M. Alonso  
_Adjunct Instructor, Preventive Medicine_  
B.S., Barry University, 1978  
M.D., Universidad Autonoma de Ciudad Juarez, 1984

Carol Alterman  
_Adjunct Faculty Member, Periodontology_  
A.S., Santa Fe Community College, 1982

Scott E. Altschuler  
_Clinical Assistant Professor, Internal Medicine_  
B.S., Carnegie Mellon University, 1997  
M.D., University of Boston, 2002  
M.S., University of Virginia, 2007

Devon Alvarez  
_Adjunct Assistant Professor, Pediatrics_  
B.S., University of Central Florida, 2004  
M.S.N., Florida Atlantic University, 2012

Harold Alvarez  
_Clinical Assistant Professor, Pathology_  
M.D., Instituto de Ciencias de la Salud, 1994

Israel D. Alvarez  
_Clinical Assistant Professor, Pediatrics_  
M.D., La Universidad Nacional Pedro Henriquez Urena, 1983

Jose Alvarez  
_Clinical Assistant Professor, Pulmonary Medicine_  
M.D., Universidad De Costa Rica, 1980

Aytana Alvarez-Ambas  
_Clinical Instructor, Emergency Medicine_  
M.D., Meharry Medical College, 2015

Clara Alvarez-Villalba  
_Clinical Assistant Professor, Affiliated, Psychiatry_  
M.D., Colegio Mayor de Nuestra Senora del Rosario Medical School, 1994

Eric Amaro  
_Clinical Assistant Professor, Affiliated, Surgery_  
B.S., University of Miami, 2006  
M.D., University of Miami, 2012

Beatriz E. Amendola  
_Clinical Associate Professor, Surgery_  
B.S., Institute Battle y Oedonez, 1967  
M.D., Universidad De La Republica, 1974

Dhruv Amin  
_Clinical Assistant Professor, Internal Medicine_  
B.S., Tufts University, 2004  
D.O., New York College of Osteopathic Medicine, 2010

Kayvan Amini  
_Clinical Assistant Professor, Internal Medicine_  
B.S., University of Miami, 1996  
D.O., Nova Southeastern University, 2001

Rotem Amir  
_Clinical Assistant Professor, Affiliated, Medicine_  
B.S., Florida Atlantic University, 1998  
M.D., Sackler School of Medicine, 2002

St. Anthony Amofah  
_Clinical Assistant Professor, Internal Medicine_  
M.D., University of Ghana Medical School, 1990

Laura M. Amon  
_A djunct Assistant Professor, Physician Assistant Studies_  
B.S./P.A., Saint Francis College, 1989  
M.S., Alderson-Broaddus College, 1995  
Fellow, American Academy of Physician Assistants

Pran Andhee  
_Clinical Assistant Professor, Affiliated, Surgery_  
B.M.B.S., University of Natal, 1985  
M.B.A., Bond University, 1997

Michael P. Angellillo  
_Clinical Instructor, Internal Medicine_  
M.D., La Universidad Tecnologica De Santiago, 1983

Eugenio Angueira-Serrano  
_Clinical Assistant Professor, Internal Medicine_  
B.S., Oral Roberts University, 1988  
M.D., Universidad Portoricensa, 1992

Vibhuti A. Ansar  
_Clinical Assistant Professor, Family Medicine_  
M.D., American University of the Caribbean School of Medicine, 2001
Robert Antoine
Clinical Assistant Professor, Psychiatry
M.D., Ross University, 1983

Maryellen Antonetti
Adjunct Assistant Professor, Physician Assistant Studies
B.S./P.A., Nova Southeastern University, 1996
M.P.H., Nova Southeastern University, 1996
Fellow, American Academy of Physician Assistants

Frances J. Aquino
Clinical Instructor, Internal Medicine
M.D., Cadiz University, 1984

Alberto Aran
Adjunct Clinical Associate Professor, Optometry
B.S., Spring Hill College, 1976
M.D., Tulane University, 1982

Lisa Ard
Adjunct Faculty Member, Department of Speech-Language Pathology
B.S., University of South Alabama, 1999
Ph.D., University of South Alabama, 2004

Marc A. Arel
Clinical Associate Professor, Pediatrics
B.A., University of Miami, 1992
M.D., University of Miami School of Medicine, 1997

Jorge A. Arenas
Adjunct Faculty Member, Diagnostic Sciences
D.M.D., Nova Southeastern University, 2006

Juan Dario Arenas
Clinical Professor, Surgery
M.D., Escuela Colombiana de Medicina, 1987

Jason Argiro
Clinical Assistant Professor, Internal Medicine
B.A., University of Delaware, 2006
D.O., New York College of Osteopathic Medicine, 2010

Soledad Arguelles-Borge
Adjunct Faculty Member, Department of Speech-Language Pathology
M.S., Nova Southeastern University, 1992
Ph.D., Nova Southeastern University, 1996

Heidar Arjomand
Clinical Assistant Professor, Internal Medicine
M.D., Pecs University, 1994

Charles A. Arkin
Clinical Assistant Professor, Internal Medicine
M.D., University of Tennessee School of Medicine, 1964

Thomas P. Arnold
Adjunct Professor, Basic Science
A.A., Palm Beach State College, 1978
B.S., University of Florida, 1982
Ph.D., University of South Florida, 1989

Dan Arnold
Adjunct Faculty Member, Pediatric Dentistry,
Division of Developmental Sciences
D.D.S., University of Kentucky College of Dentistry, 1968
M.S., University of Nebraska, 1970

Judith D. Aronson-Ramos
Clinical Assistant Professor, Pediatrics
B.A., Dartmouth College, 1982
M.D., University of Miami School of Medicine, 1990

Jose F. Arrasque
Clinical Assistant Professor, Nephrology
M.D., Cayetano Medical University, 1973

Rosa Artoia
Clinical Assistant Professor, Internal Medicine
B.S., Florida International University, 2002
D.O., Nova Southeastern University, 2008

Julia Aucoin
Adjunct Faculty Member, College of Nursing
B.S.N., Louisiana State University Health Sciences Center, 1979
M.N., Louisiana State University Health Sciences Center, 1988
D.N.S., Louisiana State University Health Sciences Center, 1997

Alberto Augsten
Adjunct Faculty Member, Department of Speech-Language Pathology
D.P.T., Nova Southeastern University, 2009

Melissa Aversa
Adjunct Faculty Member, Physical Therapy
M.S., Nova Southeastern University, 2009
D.P.T., Nova Southeastern University, 2011

Maria Avila
Clinical Assistant Professor, Affiliated, Cardiology
M.D., Colegio Mayor de Nuestra Señora del Rosario, 2005

Glen K. Axelson
Clinical Instructor, Pathology
B.S., Michigan State University, 1997
M.S., Barry University, 1999
D.O., Chicago College of Osteopathic Medicine, 2003

Hanan Azer
Adjunct Faculty, Physician Assistant Studies
A.A., Lehigh Carbon Community College, 1996
Pharm.D., Temple University, 2000
Consultant Pharm Degree, University of Florida, 2001

Kara Bacchus-Sidman
Adjunct Clinical Associate Professor, Optometry
B.S., Stetson University, 1991
O.D., Southern College of Optometry, 1995

Annalee Baker
Clinical Assistant Professor, Affiliated, Emergency Medicine
B.S., University of Wisconsin—Madison, 2001
M.D., Penn State University College of Medicine, 2010

Gregory Baker
Clinical Assistant Professor, Family Medicine
M.D., Meharry Medical College, 1998
Japheth J. Baker  
Clinical Assistant Professor, Internal Medicine  
D.O., Lake Erie College of Osteopathic Medicine, 2008

Margaret H. Baker  
Clinical Instructor, Internal Medicine  
B.S., Stanford University, 2007  
M.D., University of Mississippi, 2012

Matt Dane Baker  
Adjunct Faculty Member, Health Science  
B.S., Drexel University, 1983  
Certificate—Physician Assistant, Drexel University, 1983  
B.A., Richard Stockton College, 1983  
M.S., St. Joseph's University  
D.H.Sc., Nova Southeastern University, 2007

Gilda Baldwin  
Adjunct Assistant Professor, Health Science  
M.M.S., Nova Southeastern University, 2002  
D.H.Sc., Nova Southeastern University, 2006

Emilio Balius  
Adjunct Clinical Associate Professor, Optometry  
O.D., University of Houston College of Optometry, 1991

Anaisys M. Ballesteros  
Clinical Assistant Professor, Family Medicine  
B.S., Florida International University, 1994  
D.O., Texas College of Osteopathic Medicine, 1999

Pami L. Ball-Pella  
Adjunct Assistant Professor, Family Medicine  
B.S., Worcester State College, 1995  
B.S.N., Pace University, 2000  
M.S.N., Pace University, 2001

Thomas Balshi  
Adjunct Faculty Member, Prosthodontics  
D.D.S., Temple University, 1972

Meher H. Banajee  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.S., Topiwala National Medical College, India, 1975  
M.S., All India Institute of Speech and Hearing, India, 1977  
Ph.D., Louisiana State University, 2007

James Banks  
Clinical Assistant Professor, Affiliated, Radiology  
B.A., University of California—Berkeley, 2005  
M.D., University of Cincinnati College of Medicine, 2012

Nancy Banks  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.S., University of Central Missouri, 1976  
M.S., University of Central Missouri, 1978

Mohit Bansal  
Clinical Assistant Professor, Surgery  
B.S., Boston University, 2000  
M.D., St. George's University, 2004

Jennifer Barker  
Clinical Assistant Professor, Pathology  
B.S., University of Miami, 2001  
M.D., University of Miami, 2004

James Barna  
Clinical Assistant Professor, Surgery  
B.A., Manhattanville College, 1979  
M.D., Yeshiva University, 1985

Celia Barreiro-Blanco  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., Arizona State University, 1992  
M.S., Nova Southeastern University, 1994

Luis Barreras  
Clinical Assistant Professor, Hematology/Oncology  
B.S., University of Florida, 1976  
M.D., University of Miami, 1981

Jacqueline E. Barrett  
Clinical Assistant Professor, Psychiatry  
B.S., Florida International University, 1987  
M.D., Wayne State University, 1993

Jose E. Barros  
Clinical Assistant Professor, Internal Medicine  
M.D., Universidad De Chile, 1999

Nabil A. Barsoum  
Clinical Associate Professor, Family Medicine  
M.D., Cairo University, 1972

Melissa Barthold  
Adjunct Faculty Member, College of Nursing  
B.A., Illinois Masonic Medical Center School of Nursing, 1970  
M.S.N., Loyola University of Chicago, 1999  
D.N.P., Loyola University of Chicago, 2015

Hal J. Bashein  
Clinical Assistant Professor, Urology  
B.S., University of Georgia, 1981  
D.O., Southeastern University of the Health Sciences, 1986

Paul D. Batson  
Adjunct Clinical Assistant Professor, Optometry  
O.D., University of Alabama, School of Optometry, 1998

Patricia A. Baumann  
Clinical Assistant Professor, Surgery  
B.S., Cornell University, 1987  
M.S., University of Miami, 1990  
D.O., Nova Southeastern University, 1994

Ashley C. Bayer  
Clinical Assistant Professor, Pediatrics  
B.S., University of Florida, 2002  
D.O., Nova Southeastern University, 2008

Michael W. Bays  
Clinical Assistant Professor, Internal Medicine  
B.S., Ferris State University, 1978  
D.O., Michigan State University, 1986
Annette D. Beasley
Clinical Assistant Professor, Family Medicine
B.A., Indiana University, 1995
M.D., Indiana University, 1999

Erin Beasley
Adjunct Faculty Member, Department of Speech-Language Pathology
B.A., Florida State University, 1994
M.S., Nova Southeastern University, 1999

Johnlee Beaton
Adjunct Clinical Assistant Professor
B.A., Smith College, 2002
O.D., Nova Southeastern University, 2008

Linda Beaulieu
Adjunct Faculty Member, Cardiovascular Sonography Program—Tampa
M.S., Mountain State University, 2007

Luis Becerra
Clinical Assistant Professor, Affiliated, Neurology
M.P.H., Penn State University, 2013
M.D., Universidad Javeriana School of Medicine

Maria A. Behnam-Terneus
Clinical Instructor, Pediatrics
B.S., Nova Southeastern University, 2005
D.O., Nova Southeastern University, 2009

Katayoon Behshid
Clinical Assistant Professor, Pathology
M.D., University of Miami, 2004

Carlos Bejar
Clinical Assistant Professor, Nephrology
M.D., Universidad Central del Este, 1987

Sarah Bendel
Clinical Assistant Professor, Family Medicine
D.O., Lake Erie College of Osteopathic Medicine, 2008

Maryellen V. Benito
Clinical Assistant Professor, Family Medicine
B.S., City College of New York, 2003
D.O., New York College of Osteopathic Medicine, 2010

Latanya T. Benjamin
Clinical Associate Professor, Dermatology
B.S., University of Florida, 1996
M.D., CMP Universitas Hahnemannensis, 2001

Robert Benjamin
Clinical Assistant Professor, Surgery
M.D., University of Pittsburgh School of Medicine, 1996

Maayan Ben Shalom
Adjunct Faculty Member, Department of Community and Public Health Sciences
B.A., Florida Atlantic University, 2005
D.D.S., Columbia University College of Dental Medicine, 2009

Scarlet Benson
Clinical Assistant Professor, Emergency Medicine
M.D., University of Washington School of Medicine, 2010

Inaki G. Bent
Clinical Instructor, Internal Medicine
B.S., Florida State University, 2003
M.S., Barry University, 2005
M.B.A., Nova Southeastern University, 2010
D.O., Nova Southeastern University, 2010

Robert L. Bentz II
Clinical Associate Professor, Ophthalmology
B.S., Ohio State University, 1974
D.O., Philadelphia College of Osteopathic Medicine, 1978

Roberto Beraja
Clinical Assistant Professor, Ophthalmology
M.D., Universidad de Costa Rica, 1980

Victor Beraja
Clinical Assistant Professor, Surgery
M.D., Escuela Autonoma de Ciencias Medicas, 1982

Don H. Bercuson
Clinical Assistant Professor, Internal Medicine
B.S., Northwestern University, 1971
M.D., University of Miami School of Medicine, 1975

Abby Berens
Clinical Assistant Professor, Clinical Medicine
B.S., University of Miami, 1977
M.D., University of Miami, 1982

Amanda Berg
Clinical Assistant Professor, Affiliated, Medicine
B.S., Michigan State University, 2000
M.D., Wayne State University School of Medicine, 2005

Marie Berg
Clinical Assistant Professor, Pediatrics
M.D., Einstein College of Medicine, 2004

Stephen Berger
Adjunct Faculty Member, Cariology and Restorative Dentistry
D.D.S., Georgetown University, 1973

Steven A. Berley
Clinical Assistant Professor, Family Medicine
D.O., University of Health Sciences, 1982

Charles Berlin
Adjunct Professor, Audiology
B.A., City University of New York—Brooklyn College
M.S., City University of New York—Brooklyn College
Ph.D., City University of New York—Brooklyn College

Arthur L. Berman
Clinical Instructor, Internal Medicine
D.O., Kirksville College of Osteopathic Medicine, 1981

Cesar Bertolotti
Clinical Assistant Professor, Internal Medicine
M.D., Ross University, School of Medicine, 2010
Stephen A. Besh
Clinical Assistant Professor, Hematology/Oncology
B.S., Louisiana State University, 1986
M.D., Louisiana State University Medical School, 1990

Liliana Betancourt-McIver
Adjunct Faculty Member, Optometry

Daphnie Bharadwa
Adjunct Faculty Member, College of Nursing
B.S.N., University of Puerto Rico, 1997
M.Ed., University of Phoenix, 1999
M.S.N., University of Phoenix, 2006
D.N.P., University of Massachusetts, 2012

Fernando J. Bianco
Clinical Assistant Professor, Surgery
B.S., Santiago de Leon College, 1987
M.D., Universidad de Puerto Rico, 1995

Tony Bien-Aime
Clinical Assistant Professor, Family Medicine
M.D., State University of Haiti, 1983

David N. Bimston
Clinical Associate Professor, Surgery
B.A., Washington University, 1988
M.D., New York University School of Medicine, 1992

Randold Binns
Adjunct Faculty Member, Prosthodontics
D.D.S., University of Panama, 2001
Certificate—Oral and Maxillofacial Surgery, University of Puerto Rico, 2009
D.M.D., Nova Southeastern University, 2014
Certificate—Prosthodontics, University of Illinois—Chicago, 2017

Shark M. Bird
Clinical Instructor, Geriatrics
M.D., Marshall University, 1996
B.S., Ball State University, 1990

Benham Birgani
Clinical Assistant Professor, Family Medicine
B.A., The Union Institute, 1988
D.O., Southeastern University of the Health Sciences, 1993

Leigh Bittner
Adjunct Faculty Member, Ron and Kathy Assaf College of Nursing
B.S.N./M.S.N., Barry University, 1995
D.N.P., Florida Atlantic University, 2016

Brian J. Bixler
Clinical Assistant Professor, Family Medicine
B.S., Western Kentucky University, 1996
M.D., University of Cincinnati, 2000

Nicole H. Bixler
Clinical Assistant Professor, Family Medicine
B.S., Ball State University, 1996
M.B.A., Saint Joseph University, 2000
D.O., Philadelphia College of Osteopathic Medicine, 2002

Wayne Bizer
Clinical Professor, Ophthalmology
B.A., University of Louisville, 1966
D.O., Chicago College of Osteopathic Medicine, 1972
Fellow, American Osteopathic College of Ophthalmology

Gregory Black
Chief, Primary Care Service Broward
Assistant Professor, Optometry
B.S., University of Southern Indiana, 1989
D.O., Indiana University School of Optometry, 1996

Arnoux Blanchard
Clinical Assistant Professor, Internal Medicine
M.D., Universidad de Montemorelos Facultad de Medicina, 1989

Raphael Bloch
Clinical Assistant Professor, Clinical Medicine
B.A., Yeshiva University, 1963
M.D., Albert Einstein College of Medicine, 1967

Michael Blum
Adjunct Faculty Member, Department of Prosthodontics
B.S., Brooklyn College, 1976
M.S., Adelphi University, 1979
D.M.D., University of Medicine and Dentistry of New Jersey, 1987

Gershwin Blyden
Clinical Associate Professor, Internal Medicine
Ph.D., Yale University, 1976

Laura Bobolts
Adjunct Faculty Member, Pharmacy Practice
Pharm.D., Nova Southeastern University, 2006

Mini Boby
Adjunct Faculty Member, Ron and Kathy Assaf College of Nursing
B.S.N., 2005
M.S.N., Nova Southeastern University, 2018

Jaline Boccuzzi
Adjunct Faculty Member, Prosthodontics
D.M.D., Tufts University School of Dental Medicine, 1995

David Boden
Adjunct Faculty Member, Periodontology
D.D.S., University of Michigan, 1981
M.S., University of Michigan, 1985

Kevin Boehm
Clinical Assistant Professor, Emergency Medicine
D.O., Nova Southeastern University, 2005

Cathy Bogar
Adjunct Faculty Member
B.S., Ohio State University
B.S.N., University of Akron, 2003
M.S.N., University of Akron, 2003
Post-Master’s Certificate—Nursing Education, 2009

David Bohorquez
Clinical Assistant Professor, Family Medicine
B.S., Fairleigh Dickinson University, 1990
D.O., Philadelphia College of Osteopathic Medicine, 1997
Iouri Boiko  
**Clinical Assistant Professor, Pathology**  
M.D., Voroshilovgrad State Medical Institute, 1983  
Ph.D., R. E. Kavetsy Institute for Oncology Problems, 1990

Deborah Boland  
**Clinical Assistant Professor, Neurology**  
D.O., Des Moines University, 2008

Branson B. Bolden  
**Clinical Assistant Professor, Pediatrics**  
B.S., University of Louisiana, 2004  
M.D., Louisiana State University, 2008

Edgar Bolton  
**Clinical Professor, Pulmonary Medicine**  
B.S., Central Michigan University, 1965  
D.O., Philadelphia College of Osteopathic Medicine, 1969

Katina Bonaparte  
**Clinical Instructor, Family Medicine**  
B.S., University of Florida, 1996  
M.P.H., Florida International University, 1999  
M.D., University of Saint Eustatius, 2005

Osbel Borges  
**Adjunct Faculty Member, Oral and Maxillofacial Surgery**  
D.M.D., Nova Southeastern University, 2010  
Certificate—Oral Surgery, Nova Southeastern University, 2014

Tatyana S. Borisik  
**Clinical Assistant Professor, Affiliated, Medicine**  
M.D., Ivanovo-Frankinsk State Medical Academy, 2000

Fortuna Borrego  
**Adjunct Faculty Member, College of Nursing**  
B.S.N., Florida International University, 1997  
M.S.N., University of Phoenix, 2000

Steven Borzak  
**Clinical Professor, Cardiology**  
A.B., Oberlin College, 1980  
M.D., University of Illinois College of Medicine, 1984

Edwin Bosa-Osorio  
**Clinical Assistant Professor, Family Medicine**  
M.D., University of Miami School of Medicine, 1983

Marc Bosom  
**Clinical Assistant Professor, Ophthalmology**  
B.A., Emory University, 1986  
M.D., University of Miami School of Medicine, 1990

Jacqueline D. Boutrouille  
**Clinical Assistant Professor, Psychiatry**  
M.D., Caen Medical University, 1979

Michael J. Boyle  
**Clinical Professor, Surgery**  
M.D., National University of Ireland, 1984  
B.S., University College of Ireland, 1986

Bradley J. Bradford  
**Clinical Professor, Pediatrics**  
B.S., Fordham University, 1968  
M.D., University of Maryland School of Medicine, 1972

Tara Brannen  
**Clinical Assistant Professor, Family Medicine**  
B.S.N., University of Central Florida, 2005  
M.S.N., University of Central Florida, 2010

Howard Braverman  
**Adjunct Clinical Associate Professor, Optometry**  
B.S., University of Miami, 1968  
O.D., University of Houston, 1972

Stanley Braverman  
**Adjunct Clinical Associate Professor, Optometry**  
B.S., University of Miami, 1968  
M.D., University of Miami School of Medicine, 1972

Juan Bravo  
**Clinical Assistant Professor, Family Medicine**  
M.D., Ponce School of Medicine, 1996

Katherine L. Brazzale  
**Clinical Assistant Professor, Family Medicine**  
B.S., University College London, 1996  
M.D., University College London, 2003

Isabel J. Brea  
**Clinical Assistant Professor, Affiliated, Emergency Medicine**  
M.D., Universidad Nacional Pedro Henriquez Uereña School of Medicine, 2005  
M.P.H., Penn State University, 2013

Jason Brenes  
**Clinical Instructor, Surgery**  
M.D., San Juan Bautista, 2003

Cecilia Brenner  
**Adjunct Faculty Member, Pediatric Dentistry**  
D.D.S., University of Buenos Aires, 1974

Richard A. Brezing  
**Clinical Assistant Professor, Surgery**  
M.D., New York Medical College, 1975  
B.A., Thiel College, 1986

Richard J. Brietstein  
**Adjunct Professor, Geriatrics**  
B.S., Long Island University, 1967  
D.P.M., Ohio College of Podiatric Medicine, 1971

Gordon Broderick  
**Adjunct Professor, Clinical Immunology**  
M.Eng., McGill University, 1989  
Ph.D., Universite de Montreal, 1994

Diana Bronstein  
**Adjunct Faculty Member, Community and Public Health Sciences**  
D.D.S., University of Saarland, 2000  
M.S., Temple University, 2007  
Certificate—Periodontology, Temple University, 2007
Judith C. Brooks
Clinical Assistant Professor, Family Medicine
B.A., City College of New York, 1997
M.D., University of Medicine and Dentistry of New York, 2008

Glennon A. Brown
Clinical Assistant Professor, Anesthesiology
B.S., University of Florida, 1991
M.D., State University of New York Health Science Center, 1995

Jacquelyn S. Brown
Adjunct Faculty Member, Department of Speech-Language Pathology
B.A., Barnard College, 1973
M.A., New York University, 1973
Ph.D., Union Institute and University, 2003

Katina Y. Brown-Burgess
Clinical Assistant Professor, OB/GYN
B.S., Emory University, 1995
D.O., Nova Southeastern University, 2002

Norman Browner
Adjunct Faculty Member, Community and Public Health Sciences
D.D.S., University of Pennsylvania, 1964

Brian Browning
Clinical Assistant Professor, Family Medicine
B.S., Cameron University, 1998
D.O., Nova Southeastern University, 2004

William E. Bruno, Jr.
Clinical Associate Professor, Pediatrics
B.S., University of Miami, 1964
M.D., University of Miami School of Medicine, 1968

John R. Bucholtz
Clinical Assistant Professor, Family Medicine
D.O., Philadelphia College of Osteopathic Medicine, 1982

Christopher M. Buckley
Clinical Assistant Professor, Dermatology
B.S., University of Kentucky, 1995
D.O., Pikeville College of Osteopathic Medicine, 2003

Efren Buitrago
Clinical Assistant Professor, Surgery
M.D., Universidad Nacional de Colombia, 1989

Wilma Bulkin-Siegel
Adjunct Assistant Professor, Medical Education
M.D., University of Pennsylvania, 1958

Allan Burch
Adjunct Faculty Member, Community and Public Health Sciences
D.D.S., Medical College of Virginia, 1967

Jon P. Burdzy
Clinical Assistant Professor, Family Medicine
B.A., Purdue University, 1993
D.O., Nova Southeastern University, 1998

Ana Cabrera
Adjunct Faculty Member, College of Nursing
B.S.N., Florida International University, 1999
M.S.N., Barry University, 2007
D.N.P., Barry University, 2010

Lynda Cabrero
Clinical Assistant Professor, Surgery
B.A., Florida International University, 2000
D.O., Nova Southeastern University, 2008

Francoeur Cadet
Clinical Assistant Professor, Internal Medicine
B.A., University of Florida, 1997
M.P.H., University of Florida, 2000
D.O., Nova Southeastern University, 2005

Angel R. Cadiz
Clinical Assistant Professor, Pediatrics
B.S., The Ohio State University, 1972
M.D., University of Zaragoza, 1979

Wayne Cai
Clinical Assistant Professor, Pathology
M.D., Shanghai Jiao Tong University, 1985
M.S., Shanghai Jiao Tong University, 1988
Ph.D., Oregon Health Sciences University, 1993

Matthew Caines
Adjunct Faculty, Health Science
B.A., Wilkes University, 2005
M.P.H., A.T. Still University, 2010

Kevin D. Cairns
Clinical Assistant Professor, Physical Medicine and Rehabilitation
M.D., New York Medical College, 1999

George L. Caldwell, Jr.
Clinical Assistant Professor, Surgery
M.D., Bowman Gray School of Medicine, Wake Forest University, 1988

Richard Callahan
Clinical Assistant Professor, Affiliated, Psychiatry
B.S., Arizona State University, 2002
M.D., American University of Antigua College of Medicine, 2010

Richard Callari
Clinical Assistant Professor, Surgery
M.D., Medical College of Virginia, 1985

Sandy R. Calle
Clinical Assistant Professor, Pediatrics
B.S., Florida State University, 2001
M.D., Florida State University College of Medicine, 2007

Pablo J. Calzada
Clinical Associate Professor, Family Medicine
D.O., Southeastern University of the Health Sciences, 1993
M.P.H., University of South Florida, 2001

Eric S. Cameron
Clinical Assistant Professor, Pediatrics
B.A., Washington Square College, 1967
M.D., State University of New York, 1971
Julian Cameron  
Clinical Assistant Professor, Orthopedic Surgery  
B.A., Morehouse College, 1996  
M.D., University of Miami, 2000

Maureen Campbell  
Clinical Associate Professor, Family Medicine  
B.A., University of South Florida, 1985  
D.O., Southeastern University of the Health Sciences, 1986

Shawn P. Cannon  
Clinical Associate Professor, Internal Medicine  
B.S., New York Institute of Technology, 1988  
D.O., New York College of Osteopathic Medicine, 1992

Jeffrey B. Cantor  
Clinical Assistant Professor, Orthopedic Surgery  
B.S., Muhlenberg College, 1983  
M.D., University of Medicine and Dentistry of New Jersey, 1987

Michael Caplan  
Program Director, Emergency Medicine Certificate Program  
B.S., Florida Atlantic University, 2002  
M.C.M.Sc., Barry University, 2004

Edward Capone  
Clinical Assistant Professor, Family Medicine  
D.O., Chicago College of Osteopathic Medicine, 1976

Mariaelena P. Caraballo  
Clinical Associate Professor, Family Medicine  
B.S., University of Miami, 1981  
D.O., Nova Southeastern University, 1998

Eric Carbonell  
Clinical Assistant Professor, Psychiatry  
M.D., Medical University of South Carolina, 1996

Aliuska Carmenate  
Clinical Assistant Professor, Internal Medicine  
M.D., Superior de Ciencias Medicas, 1995

Dominic Carreira  
Clinical Assistant Professor, Orthopedic Surgery  
B.A., University of Notre Dame, 1995  
M.D., University of Illinois, 2000

Maria J. Carreon  
Clinical Assistant Professor, Infectious Disease  
B.S., University of the Philippines, 1979  
M.D., University of the Philippines College of Medicine, 1983

Eddy H. Carrillo  
Clinical Assistant Professor, Surgery  
M.D., La Universidad de San Carlos, 1977

Roger Carrillo  
Clinical Professor, Surgery  
M.D., Universidad de Panama, 1980

Danielle M. Carter  
Clinical Assistant Professor, Family Medicine  
B.S., University of Illinois, 2006  
M.D., Southern Illinois University, 2010

Ingrid D. Carter  
Clinical Assistant Professor, Osteopathic Principles and Practice  
B.S., Florida State University, 1995  
D.O., Western University Health Sciences College of Osteopathic Medicine, 2002

Damian Casadesus  
Clinical Assistant Professor, Internal Medicine  
M.D., Instituto Superior de Ciencias Medicas, 1994  
Ph.D., Niigata University, 2007

Alberto A. Casaretto  
Clinical Assistant Professor, Internal Medicine  
B.A., Tufts University, 1991  
M.D., Tufts University School of Medicine, 1995

James H. Caschette  
Clinical Associate Professor, Otorhinolaryngology  
B.A., University of Buffalo, 1959  
D.O., Philadelphia College of Osteopathic Medicine, 1963

Corinne N. Casey  
Adjunct Clinical Assistant Professor, Optometry  
B.S., Lafayette College, 2007  
O.D., The New England College of Optometry, 2011

Edward Casey  
Clinical Associate Professor, Internal Medicine  
D.O., Philadelphia College of Osteopathic Medicine, 2000

Daniel Cassis  
Clinical Assistant Professor, Internal Medicine/Cardiology  
M.D., West Virginia University, 1974

Boyand B. Chakalov  
Adjunct Faculty Member, Cariology and Restorative Dentistry  
D.M.D., Nova Southeastern University, 2008

Nader Chadda  
Clinical Assistant Professor, Cardiology  
M.D., SUNY—Downstate Medical Center, 2002

Kerry E. Chamberlain  
Clinical Assistant Professor, Hematology/Oncology  
B.S., Oral Roberts University, 1979  
D.O., Kirksville College of Osteopathic Medicine, 1983

Carisa Champion  
Adjunct Faculty, Medical Education  
B.S., Florida State University, 2008  
M.P.H., Nova Southeastern University, 2016  
J.D., Nova Southeastern University, 2016  
D.O., Nova Southeastern University, 2016

Joseph C. Chan  
Clinical Associate Professor, Infectious Disease  
B.A., University of California College of Letters and Sciences, 1973  
M.D., University of California School of Medicine, 1977

Kutty K. Chandran  
Clinical Assistant Professor, Affiliated, Medicine  
M.D., Ross University School of Medicine, 1983
Igor Chaplik  
Clinical Assistant Professor, Dermatology  
B.S., University of Miami, 1994  
D.O., Nova Southeastern University, 2000

Glenn S. Chapman III  
Clinical Assistant Professor, Neuromusculoskeletal  
B.S., University of Central Florida, 1944  
D.O., Des Moines University Osteopathic Medical Center, 2002

Ronnie Charin  
Adjunct Faculty Member, Periodontology  
R.D.H., Fairleigh Dickinson University, 1967

Hakan S. Charles-Harris  
Clinical Assistant Professor, Surgery  
M.D., University of the West Indies, 1989

Nelson Charlie  
Clinical Assistant Professor, Dermatology  
B.S., Tulane University, 1992  
M.D., Universitas Taliani, 1996

Brad Chayet  
Clinical Assistant Professor, Surgery  
B.S., State University of New York, 1978  
M.S., Georgetown University, 1980  
M.D., State University of New York, 1984

Alejandro Chediak  
Clinical Associate Professor, Pulmonary Medicine  
B.S., University of Miami, 1978  
M.D., University of Dominica, 1981

Christopher Chen  
Clinical Assistant Professor, Affiliated, Surgery  
M.D., Jefferson Medical School, 1998

Eric Chenven  
Clinical Assistant Professor, Surgery  
M.D., Albert Einstein College of Medicine, 1996

C. Lynn Chevalier  
Adjunct Faculty Member, Health Science  
B.S., College of St. Rose, 1977  
M.S., The State University at Albany, 1980  
Certificate—Public Health, University of North Carolina—Chapel Hill, 2001  
M.P.H., University of Massachusetts—Amherst, 2004  
D.H.Sc., Nova Southeastern University, 2007

Andrea Chih  
Adjunct Clinical Assistant Professor, Optometry  
B.S., University of Michigan, 2001  
O.D., Michigan College of Optometry, 2005

John Childress  
Clinical Assistant Professor, Affiliated, Emergency Medicine  
B.S., University of Central Arkansas, 1992  
M.D., Northeastern Ohio University College of Medicine, 2002

Michael A. Chizner  
Clinical Professor, Cardiology  
B.A., New York University, 1970  
M.D., Cornell University Medical College, 1974

Ryan Chizner  
Clinical Assistant Professor, Cardiology  
D.O., Nova Southeastern University, 2012

Allen Chudzinski  
Clinical Professor, OB/GYN and Surgery  
M.D., Wright State University School of Medicine, 2004

Bryan Ciervo  
Adjunct Faculty Member, Pharmacy Practice  
Pharm.D., Nova Southeastern University, 2002  
M.B.A., Nova Southeastern University, 2015

Ari Ciment  
Clinical Assistant Professor, Pulmonary Medicine  
M.D., Rush University Medical College, 2001

Matthew G. Clarke  
Clinical Assistant Professor, Surgery  
B.S., University of Michigan, 1999  
M.D., Universitas Brunensis, 2004

Kevin Clauson  
Adjunct Associate Professor, Biomedical Informatics  
B.S., University of Tennessee, 1995  
Pharm.D., University of Tennessee, 2000

Cynthia C. Clayton  
Clinical Associate Professor, Pediatrics  
B.A., Smith College, 1964  
M.D., New York University, 1967

Joshua Cleland  
Adjunct Faculty, Ph.D. Program, Physical Therapy  
B.S., Notre Dame College, 1998  
M.P.T., Notre Dame College, 2000  
Ph.D., Nova Southeastern University, 2006

Gary Coelho  
Adjunct Faculty Member, Prosthodontics  
D.D.S., New York University College of Dentistry, 1967

Daniel L. Cohen  
Clinical Associate Professor, Gastroenterology  
B.A., Columbia University, 2000  
M.D., New York University School of Medicine, 2004

Ellen Cohen  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.S., Nova Southeastern, 1988  
M.S., Nova University, 1990

Jason A. Cohen  
Adjunct Instructor, Disaster and Emergency Management  
B.S., Nova Southeastern University, 2006  
M.S., Nova Southeastern University, 2009  
Ed.D., Wilmington University, 2019

Jules J. Cohen  
Clinical Assistant Professor, Family Medicine  
B.A., Temple University, 1961  
D.O., Philadelphia College of Osteopathic Medicine, 1965
Leonard Cohen  
Clinical Assistant Professor, Affiliated, Neurology  
M.D., University of Withersrand Medical School, 1978

Mitchell Bradley Cohen  
Clinical Assistant Professor, Affiliated, Electrophysiology  
B.S., State University of New York, 1985  
M.D., Georgetown University School of Medicine, 1989

Robert A. Cohen  
Clinical Assistant Professor, Affiliated, Gastroenterology  
B.A., Washington & Jefferson College  
M.D., Ohio State University

Marion Colas-Lacombe  
Clinical Assistant Professor, Affiliated, Obstetrics/Gynecology  
B.S.L.L., George Washington University School of Medicine, 1998  
M.P.H., George Washington University School of Medicine, 2002  
M.D., George Washington University School of Medicine, 2002

Victoria Coleman-Miller  
Adjunct Assistant Professor, Preventive Medicine  
B.A., Marymount College, 1973  
J.D., Nova University, 1987

Peter Coletti  
Adjunct Faculty Member, Oral and Maxillofacial Surgery  
D.D.S., University of Maryland, 1997

Douglas Colman  
Clinical Assistant Professor, Family Medicine  
B.S., Michigan State University, 1975  
D.O., Des Moines College of Osteopathic Medicine & Surgery, 1978

Viviana Colmegna  
Clinical Assistant Professor, Psychiatry  
M.D., National University of La Plata, 1982

Maria Colon  
Adjunct Assistant Professor, Family Medicine  
B.A., Universidad Del Turabo, 2002  
M.S.W., Florida State University, 2011

Mirylsa Colon-Martinez  
Clinical Assistant Professor, Affiliated, Surgery  
B.S., University of Puerto Rico, 1998  
M.D., University of Puerto Rico, 2002

Eileen M. Conaway  
Clinical Assistant Professor, Family Medicine  
B.A., University of Virginia, 2004  
D.O., Edward Via Virginia College of Osteopathic Medicine, 2010

Livasky Concepcion-Perez  
Clinical Assistant Professor, Affiliated, Medicine  
M.D., Instituto Superior de Ciencias Medicas, 2005

Carey A. Connolly  
Clinical Assistant Professor, Internal Medicine  
B.S., University of Florida, 2000  
D.O., Nova Southeastern University, 2005

Gene M. Connolly  
Adjunct Instructor, Medical Education  
B.S., State University of New York, 2003

Pamela Conrad  
Adjunct Clinical Assistant Professor, Optometry  
O.D., Pennsylvania College of Optometry, 1993

Sharyn Conrad  
Adjunct Faculty Member, College of Nursing  
B.S.N., University of Pittsburgh, 1976  
M.N., University of South Carolina, 1997  
D.N.P., University of South Carolina, 2010

Alex R. Constantinescu  
Clinical Professor, Clinical Medicine  
Clinical Professor, Pediatrics  
M.D., Victor Babes University of Medicine and Pharmacy, 1985

Mariela Contreras  
Adjunct Faculty Member, Periodontology  
D.D.S., National University of La Plata, 1990

Robert B. Contrucci  
Chair, Ear, Nose, and Throat Clinical Professor, Otorhinolaryngology  
B.S., St. John’s University, 1976  
D.O., Philadelphia College of Osteopathic Medicine, 1980

Laura Conway  
Adjunct Faculty Member, Occupational Therapy  
B.S., Misericordia University, 1996  
M.S.O.T., Misericordia University, 1998

Melanie A. Coombs-Bynum  
Clinical Assistant Professor, Pediatrics  
B.A., Cornell University, 1992  
M.D., University of Miami, 1996

Robert J. Cooper  
Clinical Assistant Professor, Pediatrics  
B.A., University of Florida, 1976  
M.D., University of Miami, 1987

Robert Coppola  
Adjunct Clinical Assistant Professor, Optometry  
O.D., Southern College of Optometry, 1984

Joseph P. Corallo  
Clinical Assistant Professor, Surgery  
M.D., University of Medicine and Dentistry of New York, 2004

Cecilia Corbascio  
Clinical Assistant Professor, Biomedical Sciences  
M.Sc, Gothenburg University, 2001  
Ph.D., Lund University, 2005

Frederick A. Corder  
Clinical Assistant Professor, Internal Medicine  
B.S., Henderson State University, 1989  
M.D., University of Arkansas College of Medical Sciences, 1994

Judith Cornely  
Clinical Assistant Professor, Pediatrics  
B.S., Nova Southeastern University, 2003  
D.O., Nova Southeastern University, 2007
George Cornette  
Adjunct Faculty Member, Pharmaceutical Sciences  
B.S., University of Florida, 1986  
Pharm.D., Nova Southeastern University, 1999

Matthew T. Cornforth  
Clinical Assistant Professor, Family Medicine  
B.A., Southern Adventist University, 1999  
M.D., Loma Linda University, 2003

Jorge C. Coro  
Adjunct Faculty Member, Orthodontics and Dentofacial Orthopedics  
B.S., University of Miami, 1975  
D.M.D., University of Florida, 1979  
M.S., University of Tennessee, 1981  
Diplomate, American Board of Orthodontics

Anais B. Cortes  
Clinical Assistant Professor, Internal Medicine  
B.S., Florida International University, 1997  
M.D., Universidad Central del Est, 2001

Cristian Corzo  
Adjunct Faculty Member, Optometry  
B.A., Florida International University, 2013  
O.D., Illinois College of Optometry, 2018  
Fellow, American Academy of Optometry, 2020

Lorena Corzo  
Adjunct Faculty Member, Periodontology  
D.D.S., Central University of Venezuela, 2009

Loreta Costa  
Adjunct Faculty, Health Science  
B.A., Florida Atlantic University, 2001  
M.S., Nova Southeastern University, 2003

Richard Cottrell  
Clinical Assistant Professor, Psychiatry  
D.O., Nova Southeastern University, 1990

Jane Cox  
Adjunct Faculty Member, College of Nursing  
B.S.N., Saint Mary’s College, 1982  
M.S.N., Andrews University, 1988  
Ph.D., The Catholic University of America, 2011

Linda S. Cox  
Clinical Associate Professor, Internal Medicine  
B.A., Boston University College of Liberal Arts, 1978  
M.D., Northwestern University School of Medicine, 1985

Lillian Craggs-Dino  
Adjunct Associate Professor  
B.S., Stony Book University of New York, 1989  
M.S., Florida International University, 2002  
D.H.A., University of Phoenix, 2013

Rosemarie Cropper  
Clinical Assistant Professor, Psychiatry  
D.O., New York College of Osteopathic Medicine, 2000

Francis Crosby, Jr.  
Adjunct Faculty, Health Science  
B.S., University of Oklahoma, 1982  
M.P.A., University of Nebraska, 1997  
D.H.Sc., Nova Southeastern University, 2013

Brian J. Cross  
Clinical Associate Professor, Orthopedic Surgery  
B.S., Westminster College, 1992  
D.O., Ohio University College of Osteopathic Medicine, 1996

Marissa O. Cruz  
Clinical Assistant Professor, Internal Medicine  
B.S., University of Wisconsin, 1999  
M.P.H., University of Illinois, 2001  
D.O., Arizona College of Osteopathic Medicine, 2005

John Cucalon  
Clinical Assistant Professor, Surgery  
M.D., University of El Rosario, 1994

Mario S. Cuervo  
Clinical Assistant Professor, Psychiatry  
M.D., Universidad de Zaragoza, 1976

Ramon Cuevas-Trisan  
Clinical Assistant Professor, Physical Medicine and Rehabilitation  
B.S., Tulane University School of Engineering, 1988  
M.D., University of Puerto Rico School of Medicine, 1992

Kelly Culbertson  
Clinical Assistant Professor, Family Medicine  
B.S., University of South Florida, 2003  
M.D., Medical College of Georgia, 2008

Nydia Cummings  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.S., University of Puerto Rico, 1975  
M.S., Arkansas State University, 1978  
Ph.D., University of Miami, 1996

Beatriz Cunill-DeSautu  
Clinical Assistant Professor, Pediatrics  
B.S., Florida International University, 1996  
M.D., University of Medicine and Dentistry of New Jersey, 2001

Bryan Curry  
Clinical Assistant Professor, Affiliated, Medicine  
B.A., Hampton University, 1991  
M.D., Howard University College of Medicine, 1995

Jeffrey Curry  
Adjunct Clinical Assistant Professor  
B.S., Freed-Hardeman University, 2007  
O.D., Southern College of Optometry, 2011

Henry Cusmir  
Clinical Assistant Professor, Cardiology  
M.D., Pontificia Universidad Javeriana, 1993

Adam Cutler  
Clinical Assistant Professor, Pediatrics  
M.D., Tel-Aviv University, 1989
Albert Dabbah  
**Clinical Assistant Professor, Surgery**  
B.A., University of Maryland, 1982  
M.S., University of Maryland, 1984  
M.D., University of Maryland School of Medicine, 1987  

Julie L. Dahl-Smith  
**Clinical Associate Professor, Family Medicine**  
B.A., Augusta College, 1991  
D.O., West Virginia School of Osteopathic Medicine, 1999  

Nilesh Dalal  
**Adjunct Faculty Member, Periodontology**  
D.M.D., Nova Southeastern University, 2000  

Matthew J. D’Alessio  
**Clinical Assistant Professor, Surgery**  
B.S., College of Agriculture & Life Sciences, 1992  
M.D., University of Florida College of Medicine, 1996  

Harold L. Dalton  
**Clinical Associate Professor, Physical Medicine and Rehabilitation**  
B.S., University of Florida, 1986  
M.S., University of Florida, 1988  
D.O., Nova Southeastern University, 1996  

Margarette Damas  
**Clinical Assistant Professor, Family Medicine**  
B.A., New York University, 1990  
D.O., Georgetown University School of Medicine, 1995  

Robert D’Amico  
**Clinical Assistant Professor, Family Medicine**  
D.O., Southeastern University, 1987  

Mauricio Danckers  
**Clinical Assistant Professor, Affiliated, Pulmonary/Critical Care**  
M.D., Universidad Nacional Mayor de San Marcos, 2005  

Randy Danielsen  
**Adjunct Faculty, Health Science**  
B.S., University of Utah, 1978  
M.P.A.S., University of Nebraska, 1997  
Ph.D., The Union Institute, 2002  

Brad L. Dansky  
**Clinical Assistant Professor, Psychiatry**  
B.S., University of Connecticut, 1980  
M.D., University of the Health Sciences School of Medicine, 1984  

Sonia Daryanani  
**Clinical Assistant Professor, Internal Medicine**  
B.S., University of Miami, 2005  
M.S., Florida Atlantic University, 2007  
D.O., Nova Southeastern University, 2011  

Lynnette M. D’Avico  
**Adjunct Faculty Member, Sociobehavioral and Administrative Pharmacy**  
Pharm.D., Nova Southeastern University, 1998  

Douglas W. David  
**Clinical Assistant Professor, Family Medicine**  
B.S., Ohio State University, 1977  
M.S., Ohio State University, 1980  
D.O., Ohio University College of Osteopathic Medicine, 1987  

Jacqueline David  
**Clinical Assistant Professor, Internal Medicine**  
B.A., Boston College, 1982  
D.O., Nova Southeastern University, 2008  

Amy Davis  
**Clinical Assistant Professor, Emergency Medicine**  
M.D., University of Tennessee, 2000  

Jean W. Davis  
**Adjunct Faculty, Health Science**  
B.S., Rutgers University, 1992  
M.S., Rutgers University, 1994  
Ed.D., Nova Southeastern University, 1996  

Jennifer A. Davis  
**Clinical Assistant Professor, Pediatrics**  
B.A., Wellesley College, 1988  
M.D., New York Medical College, 1997  

Margaret Davis  
**Adjunct Faculty, Health Science**  
B.S., Troy University, 1982  
M.A., University of Phoenix, 1996  
M.S., University of Phoenix, 2002  
D.H.Sc., Nova Southeastern University, 2008  

Robert Davis  
**Adjunct Clinical Associate Professor, Optometry**  
O.D., Pennsylvania College of Optometry, 1970  

Nadeeka Dawes  
**Adjunct Faculty Member, Prosthodontics**  
D.D.S., Howard University, 2009  

Mark H. Dawson  
**Clinical Associate Professor, Family Medicine**  
M.D., Louisiana State University School of Medicine, 1976  
M.B.A., Louisiana State University, 1995  

Juan M. D’Brot  
**Clinical Assistant Professor, Pulmonary Medicine**  
M.D., Cayetano Heredia University Medical School, 1980  

Osmany DeAngelo  
**Clinical Assistant Professor, Radiology**  
B.A., University of North Texas, 1995  
D.O., Texas College of Osteopathic Medicine, 1999  

Paul A. Deci  
**Clinical Professor, Psychiatry**  
B.A., Florida State University, 1983  
M.D., University of Florida, 1986  

John DeCosmo  
**Clinical Assistant Professor, Family Medicine**  
B.S., Eckerd College, 1987  
D.O., Southeastern University of the Health Sciences, 1987
Fareeda Baksh Deen  
Clinical Assistant Professor, Family Medicine  
B.S., University of Western Ontario, 2007  
M.D., Medical University of the Americas, 2013

Antonio F. DeFilippo  
Clinical Associate Professor, Psychiatry  
B.S., University of Miami, 1987  
M.D., University of South Florida College of Medicine, 1991

Charles J. DeFraia  
Clinical Assistant Professor, Internal Medicine  
B.S., Palm Beach Atlantic University, 2006  
D.O., West Virginia School of Osteopathic Medicine, 2010

Michael J. DeFranco  
Clinical Assistant Professor, Sports Medicine  
B.S., Fordham University, 1993  
D.O., Case Western Reserve University, 2001

Abbye Degan  
Clinical Assistant Professor, Pediatrics  
M.D., University of Miami, 2015

Gaetan J. Delcroix  
Adjunct Associate Professor, Research  
Clinical Assistant Professor, Biomedical Sciences  
B.S., Lycee Francois Bazin, 2001  
M.S., Universite of Technology of Compiègne, 2006  
Ph.D., University of Angers, 2009

Hector M. Delgado  
Clinical Assistant Professor, Family Medicine  
B.S., Florida International University, 1985  
D.O., Southeastern University of the Health Sciences, 1990

Pallavi B. Deliwala  
Clinical Assistant Professor, Pediatrics  
M.D., Seth G.S. Medical College, 1969

Roosevelt de los Santos Florian  
Clinical Assistant Professor, Pediatrics  
M.B.A., University of Florida, 2019

Kyle Deluca  
Adjunct Faculty Member, Periodontology  
D.M.D., Nova Southeastern University, 2014  
Certificate—Periodontics, Nova Southeastern University, 2017

Michael De Luca  
Community Assistant Professor, Public Health  
Volunteer Professor, Medical Education  
B.A., Florida International University  
M.H.M., St. Thomas University, 1988

Alejandro Del Valle  
Clinical Associate Professor, Internal Medicine  
B.S., Boston University Sargent College of Allied Health Profession, 1997  
D.O., New York College of Osteopathic Medicine, 2001

William Denton  
Adjunct Clinical Assistant Professor, Optometry  
O.D., Michigan College of Optometry, Ferris State University, 2000

Vladimir Derenoncourt  
Clinical Assistant Professor, Family Medicine  
B.S., University of Miami, 1989  
D.O., Nova Southeastern University, 1996

Duclos Dessalines  
Clinical Instructor, Pediatrics  
M.D., National School of Medicine and Homeopathy, 1977

Venu G. Devabhaktuni  
Clinical Assistant Professor, Pediatrics  
M.D., Nagarjuna University, 1981

Volkert C. De Weijer  
Adjunct Faculty Member, Diagnostic Sciences  
B.Sc.P.T., Hogeschool Van Amsterdam Afdeling Fysiotherapie, 1991  
M.Sc.P.T., University of St. Augustine for Health Sciences, 2000  
D.P.T., University of St. Augustine for Health Sciences, 2002

Karl Marx Dhana  
Clinical Assistant Professor, Internal Medicine  
B.S., Florida International University, 1993  
M.D., University of Miami School of Medicine, 1998

Kabbinamane V. Dharmappa  
Clinical Assistant Professor, Pediatrics  
M.D., Bangalore University, 1972

Maria A. Diaz  
Clinical Instructor, Internal Medicine  
B.S., Barry University, 1988  
Pharm.D., University of Florida, 1992  
D.O., Nova Southeastern University, 1998

Miguel A. Diaz  
Clinical Assistant Professor, Cardiology  
B.S., University of Miami, 1997  
M.D., University of Miami, 2001

Nelson Javier Diaz  
Adjunct Faculty Member, Orthodontics  
B.Sc., Florida International University, 1997  
D.D.M., Tufts University, 2001

Tony Diaz  
Clinical Instructor, Orthopedic Surgery  
B.A., University of Miami, 1988  
D.O., Southeastern University of the Health Sciences, 1992

Paul Di Capua  
Clinical Assistant Professor, Affiliated, Medicine  
B.A., Harvard University, 2002  
M.D., Yale University School of Medicine, 2009

Frank R. Don Diego  
Clinical Professor, Family Medicine  
B.A., Rutgers University, 1972  
M.D., Jefferson Medical College, 1981

Jessie Dieguez-Arsenault  
Clinical Assistant Professor, Pediatrics  
B.S., Florida International University, 2004  
M.D., St. George’s University, 2008
Robert L. DiGiovanni  
*Clinical Professor, Internal Medicine*
B.A., The Johns Hopkins University, 1978  
D.O., Kirksville College of Osteopathic Medicine, 1982

Jeanette Dilan-Koetje  
*Clinical Instructor, Internal Medicine*
B.S., Loyola University, 1993  
D.O., Midwestern University, 2005

Oliver R. DiPietro  
*Clinical Assistant Professor, Internal Medicine*
B.S., McGill University, 1976  
M.D., University of Sherbrooke Medical School, 1980

Sandra Discala  
*Adjunct Faculty Member, Pharmacy Practice*
Pharm.D., Nova Southeastern University, 2007

Jordan J. Ditchek  
*Clinical Associate Professor, Radiology*
B.S., Massachusetts Institute of Technology, 1991  
M.D., Cornell University Medical College, 1995

David J. Dittman  
*Adjunct Assistant Professor, Biomedical Informatics*
Ph.D., Florida Atlantic University, 2015

Robert Dobrin  
*Adjunct Faculty Member, Department of Cariology and Restorative Dentistry*
D.M.D., University of Pennsylvania, 1974

Michael Dolberg  
*Clinical Assistant Professor, Surgery*
M.D., University of Miami Miller School of Medicine, 2007

Audeanne Donaldson  
*Adjunct Faculty Member, College of Nursing*
B.S.N., Florida Atlantic University, 2002  
M.S.N., Florida Atlantic University, 2005  
Ph.D., Barry University, 2010

Marlene Dookhan  
*Clinical Assistant Professor, OB/GYN*
M.D., Virginia Commonwealth University, 1991

Theresa Doolittle  
*Adjunct Assistant Professor, Physician Assistant Studies*
B.A., University of California, 1982  
M.P.H., Northeastern University, 1996  
D.H.Sc., Nova Southeastern University, 2008

Jennifer Dorce-Medard  
*Clinical Assistant Professor, Family Medicine*
D.O., Touro College of Osteopathic Medicine, 2013

Malcolm Dorman  
*Clinical Professor, Surgery*
B.S., Fairleigh Dickinson University, 1963  
M.D., Chicago Medical School, 1967

David W. Dorton  
*Clinical Assistant Professor, Dermatology*
B.S., University of South Florida, 1986  
D.O., Southeastern University of the Health Sciences, 1991

James Doty  
*Clinical Assistant Professor, Surgery*
M.D., Boston University School of Medicine, 1996

Barry Doublestein  
*Adjunct Associate Professor, Family Medicine*
Southeast Regional Coordinator, Nova Southeastern University  
*College of Osteopathic Medicine*
B.A., Albion College, 1976  
M.A., Northeast Missouri State University, 1986  
D.S.L., Regent University, 2009

Marilyn Douglas  
*Clinical Instructor, Occupational Therapy*
B.S., University of Florida, 1990

Gregory Dreszer  
*Clinical Assistant Professor, Surgery/Plastic Surgery*
M.D., Drexel University College of Medicine, 2003

Martin J. Drost  
*Clinical Assistant Professor, Internal Medicine*
B.S., Iowa State University, 1990  
M.D., Southern Illinois University School of Medicine, 1994

Joanna Drowos  
*Clinical Assistant Professor, Preventive Medicine*
Community Assistant Professor, Public Health  
B.S., University of Miami, 1999  
M.P.H., Nova Southeastern University, 2002  
D.O., Nova Southeastern University, 2004

Ana M. Duarte  
*Clinical Professor, Internal Medicine*
B.S., University of Miami, 1983  
M.D., University of Miami School of Medicine, 1988

Laurence Dubensky  
*Clinical Assistant Professor, Affiliated, Emergency Medicine*
B.A., Hampshire College, 2006  
M.D., New York Medical College, 2010

Ritchelle Dubrovskiy  
*Clinical Assistant Professor, Pediatrics*
D.O., Nova Southeastern University, 2010

Pablo Duluc-Vega  
*Adjunct Faculty Member, Endodontics*
D.D.S., Pontificia Universidad Catolica Madre y Maestra, 2006  
Certificate—Advanced Education in General Dentistry, 2012  
Certificate—Endodontics, Boston University Henry M. Goldman School of Dental Medicine, 2014

Leon J. Dumas  
*Clinical Assistant Professor, Affiliated, Surgery*
M.B.Ch.B., University of the Free State, 1984

Rhaisa Dumenigo  
*Clinical Assistant Professor, Psychiatry*
M.D., Universidad Central del Este, 1983
Mark Dunbar  
Adjunct Clinical Associate Professor, Optometry  
O.D., Michigan College of Optometry, Ferris State University, 1986

George T. Duncan  
Adjunct Faculty, Health Science  
B.S., University of Miami, 1970  
M.S., Florida Atlantic University, 1983  
Ph.D., Florida International University, 1996

Stephanie Duncan-Garcia  
Clinical Assistant Professor, Family Medicine  
B.A., Immaculata College, 1995  
D.O., Philadelphia College of Osteopathic Medicine, 1999

Gladys Dupuy  
Clinical Assistant Professor, Obstetrics and Gynecology  
D.O., Nova Southeastern University, 1997

Ryan Durfee  
Clinical Assistant Professor, Surgery  
B.S., University of Notre Dame, 2006  
M.D., University of Miami, 2010

Debora Duro  
Clinical Associate Professor, Pediatrics  
M.D., Pontificia Universidade Catolica do Rio Grande do Sul, 1996  
M.S., Florida International University, 2000

Richard Dycus II  
Adjunct Assistant Professor, Physician Assistant Studies  
B.S., Stetson University, 1993  
M.B.S., Barry University, 1995  
D.O., Nova Southeastern University, 2000

Aason C. Earles  
Clinical Assistant Professor, Internal Medicine  
B.S., Marshall University, 2000  
M.S., Marshall University, 2002  
D.O., Pikeville College, 2008

Robert Easton  
Adjunct Clinical Assistant Professor, Optometry  
O.D., University of Houston, 1982

Albert H. Eaton  
Adjunct Assistant Professor, Family Medicine  
B.S., Oregon College of Education, 1979  
M.Div., Bethel Theological Seminary, 1984  
Ph.D., Scholae Psychologicae Fullerianae, 1995

Pamela Ebmeier  
Adjunct Clinical Assistant Professor, Optometry  
O.D., University of Missouri at St. Louis, 1992  
Pharm.D., University of Puerto Rico College of Pharmacy, 1998

Simon Edelstein  
Clinical Assistant Professor, Affiliated, Medicine  
M.D., Central University of Venezuela, Jose Vargas Medical School, 1975

Melissa M. Edwards  
Adjunct Faculty Member  
B.S.N., Seattle Pacific University, 2002  
M.S.N., University of Washington, 2007  
D.N.P., University of Washington, 2008

Afsahneh Eframian  
Clinical Assistant Professor, Psychiatry  
M.D., Creighton University School of Medicine, 2001

Parham Eftekhari  
Clinical Assistant Professor, Nephrology  
B.A., Emory University, 2000  
MS., Nova Southeastern University, 2002  
D.O., Nova Southeastern University, 2006

Stella Elberg  
Clinical Assistant Professor, Family Medicine  
B.S., University of Miami, 2007  
D.O., Nova Southeastern University, 2011

Nicole B. Elharar  
Adjunct Faculty Member, Pharmacy Practice  
Pharm.D., Nova Southeastern University, 2012

Margarita El-Ramey  
Clinical Assistant Professor, Neurology  
D.O., Nova Southeastern University, 2005

Elham H. Elzind  
Clinical Assistant Professor, OB/GYN  
M.D., Cairo University, 1979

Andres Endara-Bravo  
Clinical Assistant Professor, Internal Medicine  
M.D., Pontificia Universidad Catolica del Ecuador, 2001

Norbert N. Engelman III  
Clinical Assistant Professor, Family Medicine  
B.S., Ohio State University, 1984  
D.O., Ohio University College of Osteopathic Medicine, 1990

Bradley Engle  
Adjunct Faculty Member, Department of Periodontology  
D.M.D., Medical University of South Carolina, 1996  
Certificate—Periodontology, Medical University of South Carolina, 1999

Christine Englestad  
Adjunct Instructor, Preventive Medicine  
B.S., University of Maryland, 1973  
M.S., Florida Atlantic University, 2001

Ingrid Epelman De Dora  
Adjunct Faculty Member, Endodontics  
D.D.S., University of Buenos Aires, 1993  
Certificate—Endodontics, University of Buenos Aires, 2002  
Certificate—Endodontics, Nova Southeastern University, 2009

Mark Epstein  
Clinical Associate Professor, Pediatrics  
A.B., Harvard University, 1980  
M.D., Mt. Sinai School of Medicine, 1984

Rudy Escarri  
Clinical Assistant Professor, Internal Medicine  
M.D., University of Miami School of Medicine, 1993
Su-Nui Escobar  
Adjunct Assistant Professor, Nutrition  
B.S., University of Wisconsin—Stout, 1999  
M.S., Florida International University, 2005  
D.C.N., University of North Florida, 2020

David Esguerra  
Clinical Assistant Professor, Dermatology  
B.A., Emory University, 1992  
D.O., University of New England College of Osteopathic Medicine, 1997

Mehmet Eskan  
Adjunct Faculty Member, Oral Medicine  
D.D.S., Hacettepe University School of Dentistry, 1997  
Ph.D., University of Louisville, 2011  
Certificate—Periodontics, University of Louisville School of Dentistry, 2011

Juan B. Espinosa  
Clinical Assistant Professor, Affiliated, Psychiatry  
M.D., University of Cartagena, 1972

Yanick P. Eugene-Dauphin  
Clinical Assistant Professor, Infectious Disease  
M.D., National University of Haiti School of Medicine, 1979

Linda A. Evans  
Adjunct Faculty Member, Ron and Kathy Assaf College of Nursing  
M.S.N., Salem State University, 2007  
Ph.D., University of Massachusetts, 2012

Helen Ewing  
Adjunct Associate Professor, Health Science  
B.S.N., University of Calgary, 1990  
M.S.N., University of Calgary, 1995  
D.H.Sc., Nova Southeastern University, 2004

Julia Faashner  
Clinical Associate Professor, Family Medicine  
M.D., Wright State University, 1997

James Fabian  
Adjunct Clinical Assistant Professor, Optometry  
O.D., New England College of Optometry, 2005

Richard F. Fansler  
Clinical Assistant Professor, Surgery  
B.S., Duke University, 1964  
M.D., University of Florida, 1988

Stuart P. Farber  
Clinical Assistant Professor, Surgery  
B.A., George Washington University, 1971  
M.D., George Washington University, 1975

David Farcy  
Clinical Associate Professor, Emergency Medicine  
M.D., Universidad Autonoma de Guadalajara, 2000

Naaz Fatteh  
Clinical Assistant Professor, Medicine  
B.A., Lehigh University, 1992  
M.D., Medical College of Pennsylvania, 1992  
Clinical Assistant Professor, Internal Medicine  
B.A., Emory University, 1987  
M.D., Medical College of Georgia, 1991

Hamid R. Feiz  
Founding Chair  
Clinical Professor, Medicine  
Clinical Assistant Professor, Internal Medicine  
M.D., Universidad Iberoamericana School of Medicine, 1999  
M.B.A., Florida International University, 2015

Edward Fellows  
Adjunct Faculty Member, Cariology and Restorative Dentistry  
D.D.S., McGill University, 1962

Martin F. Feo  
Adjunct Faculty Member, Department of Periodontology  
D.D.S., Universidad Central de Venezuela, 1979  
Certificate—Advanced Graduate Studies (Periodontics), 1984

Maciej Ferenc  
Clinical Assistant Professor, Family Medicine  
B.S., University of Scranton, 1994  
M.D., University of Medicine and Dentistry of New Jersey, 1998

Lisa A. Ferreira  
Clinical Assistant Professor, Pediatrics  
B.A., College of Holy Cross, 1984  
D.O, Philadelphia College of Osteopathic Medicine, 1989

Michelle Ferreira  
Clinical Assistant Professor, Neurology  
B.S., Nova Southeastern University, 2002  
D.O., Nova Southeastern University, 2006  
M.P.H., Nova Southeastern University, 2006

Gustavo Ferrer-Gonzalez  
Clinical Assistant Professor, Pulmonary Medicine  
M.D., Superior de Ciencias Medicas de Santiago de Cuba, 1994

Bradley S. Feuer  
Clinical Professor, Family Medicine  
B.S., University of Miami, 1980  
D.O., New York College of Osteopathic Medicine, 1986  
J.D., University of Miami School of Law, 1990

Mariano Fiallos  
Clinical Assistant Professor, Pediatrics  
M.D., University of Nicaragua, 1980

Carolina E. Fiamengo  
Clinical Assistant Professor, Pediatrics  
M.D., La Pontificia Universidad Catolica del Ecuador, 2006

Steven Fields  
Clinical Associate Professor, Internal Medicine  
B.A., Brown University, 1978  
M.D., Hahnemann University, 1982
Augusto Figuereido Neto  
Adjunct Faculty Member, Department of Cariology and Restorative Dentistry  
D.D.S., Universidade de Uberaba School of Dentistry, 1994  
Certificate—Operative Dentistry, ABO, Associação Brasileira de Odontologia, 1998  
Certificate—Prosthodontics, ABO, Associação Brasileira de Odontologia, 2008  

Fabrienne Figueroa  
Adjunct Faculty Member, Periodontology  
D.D.S., Universidad Central de Venezuela  

Karem I. Figueroa  
Clinical Assistant Professor, Internal Medicine  
M.D., Universidad Nacional De Trujillo, 2005  

Nathalie Findlater  
Adjunct Faculty, Optometry  
B.S., University of Florida, 2010  
O.D., Nova Southeastern University, 2015  

Howell Findley  
Adjunct Clinical Associate Professor, Optometry  
O.D., University of Alabama College of Optometry, 1981  

Jaime Fine  
Adjunct Professor, Occupational Therapy  
B.S., University of Florida, 1994  
M.S., University of Florida, 1996  

Matthew Fine  
Clinical Assistant Professor, Affiliated, Surgery  
B.A., Washington University in St. Louis, 2002  
M.D., University of Miami Miller School of Medicine, 2006  

Allen Finkelstein  
Clinical Assistant Professor, Family Medicine  
D.O., West Virginia College of Osteopathic Medicine, 1981  

Mark S. Finkelstein  
Clinical Associate Professor, Radiology  
B.A., University of Miami, 1976  
D.O., Philadelphia College of Osteopathic Medicine, 1980  

Armanda Finley  
Clinical Instructor, Internal Medicine  
D.O., West Virginia School of Osteopathic Medicine, 2010  

Ana I. Fins  
Visiting Assistant Professor, Behavioral Science  
M.S., University of Miami, 1990  
Ph.D., University of Miami, 1994  

Marco Fiore Urizar  
Clinical Assistant Professor, Internal Medicine  
M.D., Instituto Superior de Ciencias Medicas, 2003  

Scott Fisch  
Clinical Assistant Professor, Pediatrics  
D.O., Philadelphia College of Osteopathic Medicine, 2000  

Brian D. Fisher  
Adjunct Clinical Assistant Professor, Optometry  
O.D., Midwestern University Arizona College of Optometry, 2013  

Katharine Lynn Fitzharris  
Assistant Professor, Affiliated, Audiology  
B.S., University of Illinois, 2004  
Ph.D., University of Texas—Dallas, 2009  
M.S., University of Texas, 2015  

Douglas E. Flemons  
Adjunct Professor, Family Medicine  
M.A., University of British Columbia, 1986  
Ph.D., Nova University, 1989  

James Fletcher  
Clinical Assistant Professor, Surgery  
M.D., St. Louis University School of Medicine, 1995  

Barbara Florentine  
Clinical Associate Professor, Surgery  
B.S.N., Johns Hopkins University, 1979  
M.D., Tel Aviv University, 1988  

Leslie Flores  
Clinical Assistant Professor, Affiliated, Cardiology  
B.S., University of Puerto Rico, 1994  
M.D., University of Puerto Rico School of Medicine, 1998  

Kerwyn L. Flowers  
Clinical Assistant Professor, Family Medicine  
D.O., Ohio University, 2007  

Frank Foderaro  
Adjunct Faculty, Health Science  
B.S., Marietta College, 1985  
D.C., Southern California University of Health Science, 1989  
M.S., National University, 1999  

Ramon Fonseca  
Clinical Instructor, Pediatrics  
M.D., Autonomous University of Honduras, 1993  

Julie Formoso-Onofrio  
Clinical Assistant Professor, Internal Medicine  
M.D., Universidad Central del Este, 1980  

Larry Forness  
Adjunct Faculty, Health Science  
A.B., University of Notre Dame, 1968  
B.A., LaSalle Extension University, 1974  
M.A., Duke University, 1972  
M.B.A., LaSalle University, 1989  
LL.M., Washington University School of Law, 1997  

Mark Forrest  
Adjunct Faculty Member, Periodontology, Division of Surgical Sciences  
D.M.D., New York University College of Dentistry, 1967  

Daniel Fortier  
Clinical Assistant Professor, Internal Medicine  
B.S., Brooklyn College, 1977  
M.D., State University of New York, 1981  

Amanda Foster  
Adjunct Faculty Member, Pharmacy Practice  
Pharm.D., Nova Southeastern University, 2012
Gregory A. Foster  
**Clinical Assistant Professor, Family Medicine**  
B.A., Haverford College, 1980  
M.D., Emory University, 1986

Jean Foucauld  
**Clinical Assistant Professor, Cardiology**  
B.S., University of Puerto Rico, 1978  
M.D., University of Puerto Rico, 1982

Sarah Fowles  
**Clinical Assistant Professor, Emergency Medicine**  
D.O., Nova Southeastern University, 2010

Edward Frankoski  
**Adjunct Assistant Professor, Surgery**  
D.O., Southeastern College of Osteopathic Medicine, 1987

Rosalyn R. Frazier  
**Community Instructor, Public Health**  
B.S., DePaul University, 1991

Ira Freedman  
**Adjunct Faculty Member, Periodontology**  
D.M.D., University of Pennsylvania College of Dental Medicine, 1982

Barry Freeman  
**Adjunct Faculty, Audiology**  
Ph.D., Michigan State University, 1975  
M.S., Emerson College, 1970  
B.S., Boston University, 1967

Elane Friedel  
**Adjunct Faculty Member, Department of Speech-Language Pathology**  
B.S., Emory University, 1974  
M.S., Emory University, 1976  
M.S., Nova Southeastern University, 1998

Sabrina Friedman  
**Adjunct Faculty Member, College of Nursing**  
B.S.N., University of Phoenix, 1994  
M.S.N.—A.P.R.N., University of Southern California, 1996  
Ed.D., Nova Southeastern University, 2005  
D.N.P., Rocky Mountain University of Health Professions, 2013

Jason H. Frost  
**Clinical Professor, Surgery**  
D.O., New York College of Osteopathic Medicine, 1987

Michael L. Funk  
**Adjunct Assistant Professor, Physician Assistant Studies**  
B.S./P.A., Nova Southeastern University, 1996  
M.P.H., Nova Southeastern University, 1996  
Fellow, American Academy of Physician Assistants

Michelle D. Gagnon-Blodgett  
**Adjunct Assistant Professor, Geriatrics**  
B.A., Florida International University, 1992  
M.S., Nova Southeastern University, 1995  
Psy.D., Nova Southeastern University, 1998

Robin S. Gall  
**Adjunct Faculty, Health Science**  
B.S., University of Central Florida, 1991  
Ph.D., Emory University, 1996

Megan Gallager  
**Clinical Assistant Professor, Internal Medicine**  
D.O., Lake Erie College of Osteopathic Medicine, 2013

Steven Gallas  
**Clinical Assistant Professor, Family Medicine**  
B.S., University of South Alabama, 2001  
D.O., Nova Southeastern University, 2007

Lisa Galluzzo  
**Adjunct Clinical Associate Professor, Optometry**  
B.S., Adelphi University, 1990  
O.D., State University of New York, 1993

Jason Gaister  
**Adjunct Faculty, Audiology**  
B.S., Purdue University, 1999  
M.S., Purdue University, 2001  
Ph.D., Vanderbilt University, 2007

Nestor Galvez-Jimenez  
**Clinical Professor, Neurology**  
M.D., Universidad de San Carlos, 1983

Richard Gammon  
**Clinical Associate Professor, Pathology**  
B.S., Gannon University, 1988  
M.D., Hahnemann (Drexel) University, 1997

Alice Gandell  
**Adjunct Faculty, Occupational Therapy**  
B.S., University of Illinois at Chicago, 1964

Jeffrey Ganeles  
**Adjunct Faculty Member, Periodontology**  
D.M.D., Boston University, 1983  
Certificate—Periodontics, University of Pennsylvania, 1987

Timothy Ganey  
**Visiting Research Professor, Biomedical Sciences**  
B.S., University of Illinois  
Ph.D., University of South Florida

Richard Gans  
**Adjunct Professor, Audiology**  
B.A., University of Tampa, 1972  
M.S., University of South Florida, 1978  
Ph.D., Ohio State University, 1983

Melvin Ganz  
**Adjunct Faculty Member, Prosthodontics**  
D.D.S., New York University College of Dentistry, 1995

Isaac Garazi  
**Adjunct Faculty Member, Periodontology**  
D.M.D., Boston University Goldman School of Graduate Dentistry, 1983

Manuel A. Garcia  
**Clinical Assistant Professor, Psychiatry**  
B.S., Antonio Betancourt Flores, 1987  
M.D., Higher Institute of Medical Sciences, Santiago de Cuba, 1993

Jocelyn Garcia de Viera  
**Clinical Assistant Professor, Pediatrics**  
M.D., Universidad Central Del Este, 1992
Robert A. Gardner  
Clinical Assistant Professor, Surgery  
M.D., State University of New York Medical Center, 1962  
B.A., University of Rochester, 1966  

Mylaie Garofalo  
Clinical Assistant Professor, Pediatrics  
M.D., Instituto Superior de Ciencias de Habana, 1996  

Judith Gartner  
Adjunct Faculty Member, Prosthodontics  
D.D.S., Universidad Central de Venezuela, 1993  
Certificate—Prosthodontics, Harvard University, 1997  
M.M.Sc., Harvard University, 1997  
D.M.D., Nova Southeastern University, 2001  

Gabrielle Gavriléscu  
Clinical Assistant Professor, Clinical Medicine  
M.D., Carol Davila University of Medicine and Pharmacy, 1997  

Kamini Geer  
Clinical Associate Professor, Family Medicine  
B.S., Sophie Davis School, 1999  
M.D., Albany Medical College, 2001  
M.P.H., Mailman School of Public Health, 2006  

Joseph Geffen  
Clinical Assistant Professor, Internal Medicine  
D.O., Nova Southeastern University, 2014  

Jeffrey Gelblum  
Clinical Assistant Professor, Affiliated, Neurology  
B.S., University of Maryland, 1981  
M.D., University of Maryland School of Medicine, 1985  

Harris Gelman  
Clinical Professor, Surgery  
M.D., Temple University Medical School, 1979  

Barry Gelman  
Clinical Associate Professor, Pediatrics  
B.S., University of Miami, 1984  
M.D., University of Florida College of Medicine, 1988  

Nikerson Geneve  
Clinical Assistant Professor, Family Medicine  
B.A., Florida International University, 2002  
D.O., Nova Southeastern University, 2006  

Rani S. Gereige  
Clinical Professor, Pediatrics  
B.S., American University of Beirut, 1985  
M.D., American University of Beirut, 1989  
M.P.H., University of South Florida, 1998  

Michael F. Gervasi  
Clinical Professor, Family Medicine  
B.A., Florida Atlantic University, 1983  
D.O., Southeastern University of the Health Sciences, 1987  

Edward L. Gheiler  
Clinical Assistant Professor, Surgery  
B.A., Yeshiva University, 1964  
M.D., Albert Einstein College of Medicine, 1992  

Marco Ghignone  
Clinical Associate Professor, Anesthesiology  
M.D., University of Torino, 1973  
M.B.A., University of Miami, 1990  

Arnoldo Ghitsis  
Clinical Assistant Professor, Cardiology  
M.D., La Universidad del Valle, 1982  

Fateme Gholami  
Adjunct Faculty Member, Department of Periodontology  
D.D.S., Tehran University of Medical Sciences, 2003  
M.S.D. and Certificate (Periodontics), Shahid Beheshti Medical University Dental School, 2006  
Certificate—Periodontology, Nova Southeastern University, 2016  

Joseph A. Giaino  
Clinical Associate Professor, Internal Medicine  
B.S., Ursinus College, 1983  
D.O., Philadelphia College of Osteopathic Medicine, 1987  

F. Gary Gieseke  
Clinical Assistant Professor, Surgery  
A.B., Vanderbilt University, 1957  
M.D., University of Indiana Medical School, 1961  

Jerry M. Gilles  
Clinical Associate Professor, Obstetrics and Gynecology  
M.D., State University of New York, 1990  

Richard Clark Gillett  
Clinical Associate Professor, Family Medicine  
B.A., University of Virginia, 1971  
M.D., University of Virginia School of Medicine, 1977  

Ira Ginsberg  
Adjunct Faculty Member, Periodontology  
D.D.S., New York University, 1971  
Certificate—Periodontology, New York University, 1974  

James Ginzler  
Adjunct Faculty Member, Orthodontics and Dentofacial Orthopedics, Division of Developmental Sciences  
D.D.S., University of Detroit Dental School, 1972  
M.S., Orthodontics University of Michigan Rackham Graduate Program, 1976  

Sandra Giraldo Perez  
Adjunct Faculty Member, College of Nursing  
B.A., Barry University, 2004  
B.S.N., Barry University, 2008  
M.S.N., Barry University, 2013  
D.N.P., Barry University, 2013  

Geeta Girdher  
Adjunct Clinical Assistant Professor, Optometry  
O.D., University of Houston College, 2006  

Nadine Girgis Hanna  
Adjunct Assistant Professor, Optometry  
B.A., Washington University of Saint Louis, 1999  
O.D., Indiana University, 2003
David Glassman  
*Adjunct Faculty Member, Periodontology*  
D.D.S., Medical College of Virginia School of Dentistry, 1966

Paul S. Glassman  
*Clinical Assistant Professor, Family Medicine*  
D.O., Des Moines College of Osteopathic Medicine and Surgery, 1961

Todd Glassman  
*Clinical Assistant Professor, Family Medicine*  
B.A., Florida International University, 1991  
D.O., Nova Southeastern University, 1996

John M. Goad  
*Clinical Assistant, Internal Medicine*  
B.S., Virginia Technical, 2003  
D.O., Edward Via Virginia College of Osteopathic Medicine, 2007

Wagih W. Gobriel  
*Clinical Assistant Professor, Anesthesiology, Pain Medicine*  
M.D., Ain Shams University, 1975

Sangita A. Gogate  
*Clinical Associate Professor, Family Medicine*  
B.S., Otterbein College, 1986  
D.O., University of Osteopathic Medicine and Surgery, 1993

Francis A. Goiran  
*Adjunct Instructor, Pediatrics*  
B.S., University of Arizona, 1988  
B.S., University of Florida, 1996  
M.P.A., University of Nebraska, 2005

Aaron Gold  
*Adjunct Clinical Instructor, Optometry*  
O.D., Nova Southeastern University, 2008

Robert G. Gold  
*Clinical Assistant Professor, Urology*  
B.S., Tulane University College of Arts and Sciences, 1977  
M.D., Tulane University School of Medicine, 1981

Alison Goldberg  
*Adjunct Faculty Member, Department of Speech-Language Pathology*  
B.S., University of South Florida, 1993  
M.S., Nova Southeastern University, 1997

Howell Goldberg  
*Adjunct Faculty Member, Cariology and Restorative Dentistry*  
D.D.S., New York University, 1974

Lee D. Goldberg  
*Clinical Professor, Internal Medicine*  
B.S., Yale University, 1959  
M.D., Yale University, 1963

Antoinette Golden  
*Clinical Assistant Professor, Affiliated, Emergency Medicine*  
B.A., Augustana College, 2008  
M.D., Rush Medical College, 2012

Alan Goldenberg  
*Clinical Assistant Professor, Internal Medicine*  
B.S., State University of New York  
M.D., State University of New York, 1993

Jason Goldman  
*Clinical Assistant Professor, Affiliated, Medicine*  
B.S., University of Miami, 1996  
M.D., University of Miami, 1998

David Goldsberry  
*Clinical Assistant Professor, Surgery*  
M.D., The University of Connecticut, 1983

Avrum Goldstein  
*Adjunct Faculty Member, Periodontology*  
D.M.D., University of Manitoba, 1971  
Certificate—Periodontics, University of Pennsylvania School of Dental Medicine, 1975  
Fellow, Royal College of Dentists, Canada, 1979  
Diplomate, American Board of Periodontology, 1982

Matthias Goldstein  
*Adjunct Assistant Professor, Health Science*  
B.A., University of Maryland, 1989  
B.T.L., Nor Israel Rabbinical College, 1990  
B.S., The George Washington University, 1997  
M.P.A.S., University of Nebraska, 1998  
D.H.Sc., Nova Southeastern University, 2005

Mitchell Goldstein  
*Clinical Assistant Professor, Family Medicine*  
B.S., Northern Illinois University, 1974  
D.O., Chicago College of Osteopathic Medicine, 1978

Shepard Goldstein  
*Adjunct Faculty Member, Endodontics*  
D.M.D., Tufts University, 1966

Jack Goloff  
*Clinical Assistant Professor, Family Medicine*  
D.O., Southeastern University of the Health Sciences, 1985

Daniela Gomez  
*Adjunct Faculty Member, Endodontics*  
D.D.S., Central University of Venezuela, 2002  
Certificate—Endodontics, New York University College of Dentistry, 2009

Christian Gonzalez  
*Clinical Assistant Professor, Internal Medicine*  
M.D., Ponce School of Medicine, 2002

Hansel Gonzalez  
*Adjunct Faculty Member, Oral Medicine*  
D.M.D., Pontifica Universidad Catolica Madre y Maestra, 1999

Jamyes R. Gonzalez  
*Adjunct Assistant Professor, Psychiatry*  
B.A., University of Alaska, 2001  
Ph.D., University of Alaska, 2012

Michelle Gonzalez  
*Adjunct Clinical Assistant Professor, Optometry*  
O.D., Nova Southeastern University, 2009

Miguel Angel Gonzalez  
*Clinical Assistant Professor, Obstetrics and Gynecology*  
M.D., Universidad Central, 1968
Rene D. Gonzalez  
**Clinical Assistant Professor, Internal Medicine**  
M.D., Universidad Catolica Madre y Maestra, 1982

Manuel Gonzalez-Brito  
**Clinical Assistant Professor, Pediatrics**  
B.S., University of Florida, 1993  
D.O., Nova Southeastern University, 1997

Menayra C. Gonzalez-Olivares  
**Clinical Instructor, Pediatrics**  
B.S., University of Puerto Rico, 1986  
M.D., Ponce School of Medicine, 1990

Antonio M. Gordon  
**Clinical Professor, Internal Medicine**  
B.S., John Carroll University, 1966  
M.S., University of Miami, 1969  
Ph.D., Florida State University, 1971  
M.D., Emory University, 1975

Mark W. Gordon  
**Clinical Associate Professor, Surgery**  
B.S., Ursinus College, 1963  
M.D., Jefferson Medical College, 1967

Stuart Gordon  
**Adjunct Faculty Member, Department of Prosthodontics**  
D.D.S., New York University, 1976

Cleopatra Gordon-Pusey  
**Clinical Assistant Professor, Affiliated, Family Medicine**  
B.A., Wesleyan University, 1996  
M.D., Ross University School of Medicine, 2004

Maria A. Gorelick  
**Clinical Instructor, Psychiatry**  
M.D., Universidad Cetec, 1982

Steven Gorin  
**Clinical Assistant Professor, Surgery**  
B.S., Sargent College, 1994  
D.O., Nova Southeastern University, 2000

Jay S. Gottlieb  
**Clinical Professor, Dermatology**  
**Clinical Associate Professor, Otorhinolaryngology**  
B.S., University of Michigan, 1974  
D.O., University of Health Sciences, 1977

Deborah Gracia  
**Clinical Assistant Professor, Internal Medicine**  
B.S., University of Florida, 1992  
D.O., Philadelphia College of Osteopathic Medicine, 1999

Daniel Gracie  
**Adjunct Faculty Member, College of Nursing**  
B.S.N., Mountain State University, 2003  
M.S.N., The Medical University of South Carolina, 2009  
D.N.P., The Medical University of South Carolina, 2012

Jamie Graham  
**Clinical Assistant Professor, Pediatrics**  
D.O., University of Florida, 2017

Jeremy R. Graham  
**Clinical Instructor, Family Medicine**  
B.S., Mississippi State University, 2002  
D.O., Pikeville College School of Osteopathic Medicine, 2006

Kenneth Greenberg  
**Clinical Assistant Professor, Psychiatry**  
M.D., Guadalaxarensis Universitas Autonoma, 1982

Bruce D. Greene  
**Clinical Assistant Professor, Radiology**  
B.S., University of Florida, 1976  
M.D., University of South Florida, 1979

Sharon L. Greene  
**Adjunct Instructor, Preventive Medicine**  
B.S., Florida State University, 1983

James Greenstone  
**Adjunct Professor, Disaster and Emergency Management**  
B.A., University of Oklahoma, 1965  
M.S., North Texas State University, 1966  
Ed.D., University of North Texas, 1974

Robert C. Greer IV  
**Clinical Associate Professor, Family Medicine**  
B.S., Texas Christian University, 1973  
D.O., Philadelphia College of Osteopathic Medicine, 1977  
Fellow, American College of Osteopathic Family Physicians

Margaret I. Grell  
**Clinical Assistant Professor, Pediatrics**  
B.S., University of the West Indies, 1980  
M.D., University of the West Indies, 1986

Maritza Y. Grey  
**Clinical Adjunct Instructor, Optometry**  
O.D., New England College of Optometry, 2011

Karl-Henrik Grinnemo  
**Clinical Associate Professor, Surgery**  
M.D., University of Gothenburg, 1997  
Ph.D., Karolinska Institutet, 2007

Martin B. Grossman  
**Clinical Associate Professor, Surgery**  
B.S., Muhlenberg College, 1966  
M.D., Chicago Medical School, 1970

Raul Grosz  
**Clinical Assistant Professor, Affiliated, Neurology**  
B.S., State University of New York—Stony Brook  
M.D., State University of New York—Buffalo School of Medicine, 1985

Jeffrey Grove  
**Clinical Professor, Family Medicine**  
B.S., Florida Southern College, 1986  
D.O., Southeastern University of the Health Sciences, 1990

Felix J. Grucci III  
**Clinical Assistant Professor, Osteopathic Principles and Practice**  
D.O., New York College of Osteopathic Medicine, 2010
Paul Grusso  
Adjunct Clinical Assistant Professor, Optometry  
O.D., State University of New York, College of Optometry, 1999

Vito Guario  
Adjunct Clinical Associate Professor, Optometry  
B.S., University of South Florida, 1984  
O.D., Southern College of Optometry, 1988

Manjit Gulati  
Clinical Assistant Professor, Internal Medicine  
M.D., Ranchi University, 1979

Seza Gulec  
Clinical Professor, Surgery  
M.D., Ankara University, 1984

Neena Gupta  
Clinical Associate Professor, Family Medicine  
B.S., Iowa State University, 1976  
D.O., University of Osteopathic Medicine and Surgery, 1983

William Gustave  
Clinical Assistant Professor, Family Medicine  
M.D., St. Matthews University, 2007

Miguel Gutierrez  
Adjunct Assistant Professor, Disaster and Emergency Medicine  
B.S., University of North Texas, 2012  
M.P.A., University of North Texas, 2014  
Ph.D., University of North Texas, 2019

Sartiza Guzman-Sardina  
Adjunct Faculty, Occupational Therapy  
B.S., University of Puerto Rico, 1981  
M.Ed., National-Louis University, 2000

Natalie S. Hadaway  
Adjunct Faculty Member, Department of Pediatric Dentistry  
B.S., Rutgers University, 2005  
M.D., Howard University College of Dentistry, 2010

Michael Hadley  
Clinical Assistant Professor, OPP  
D.O., Nova Southeastern University, 1994

Everold Haffizulla  
Clinical Assistant Professor, Allied, Medicine  
B.S., University of the West Indies, 1974  
M.D., University of the West Indies, 1979

Jason Haffizulla  
Clinical Assistant Professor, Allied, Medicine  
B.S., Emory University, 1995  
M.D., University of Miami Miller School of Medicine, 2000

Gregory Hale  
Clinical Assistant Professor, Internal Medicine  
M.D., University of Mississippi School of Medicine, 1990

Martin Hale  
Clinical Assistant Professor, Surgery  
M.D., SUNY—Buffalo, 1980

Charles Halfpenny  
Clinical Assistant Professor, Internal Medicine  
B.S., Drexel University, 1959  
M.D., Hahnemann Medical College, 1963

Arthur F. Haliczker  
Adjunct Faculty Member, Department of Prosthodontics  
B.A., New York University, 1975  
D.D.S., Emory University School of Dentistry, 1983

Anthony J. Hall  
Clinical Assistant Professor, Surgery  
B.S., Vanier College, 1982  
M.D., McGill University, 1988

Leslie Haller  
Adjunct Faculty Member, Diagnostics Sciences  
D.M.D., Harvard School of Dental Medicine, 1992

Shaker Hamadiya  
Clinical Assistant Professor, Family Medicine  
M.D., St. George's University School of Medicine, 2015

Maxine E. Hamilton  
Clinical Associate Professor, Internal Medicine  
M.D., University of the West Indies, 1982

Melissa Hammer  
Assistant Professor, Allied, Psychology  
B.A., University of Miami, 2004  
M.S., Nova Southeastern University, 2007  
Psy.D., Nova Southeastern University, 2010

Brady Hanlon  
Adjunct Assistant Professor, Optometry  
O.D., Indiana University School of Optometry, 2004

Megan L. Hanley  
Adjunct Faculty Member, Pharmacy Practice  
B.S., University of Florida, 2003  
Pharm.D., Nova Southeastern University, 2007

Ashraf Hanna  
Clinical Assistant Professor, Surgery Anesthesiology  
M.D., Ain Shams University, 1986

Dennis E. Hanney  
Clinical Associate Professor, Cardiology  
B.A., Hofstra University, 1971  
M.A., Hollins College, 1972  
D.O., Kirksville College of Osteopathic Medicine, 1976

Seneca Harberger  
Clinical Assistant Professor, Family Medicine  
M.D., Temple University School of Medicine, 2015

Ryan Hargreaves  
Adjunct Clinical Associate Professor, Optometry  
O.D., New England College of Optometry, 1996

Martin Harland  
Clinical Assistant Professor, Family Medicine  
B.S., University of Florida, 1983  
D.O., Southeastern University of the Health Sciences, 1988
Meredith P. Harold
Adjunct Faculty Member, Department of Speech-Language Pathology
Ph.D., University of Kansas, 2011

Richard M. Harrell
Clinical Assistant Professor, Internal Medicine
A.B., University of North Carolina, 1975
M.D., University of North Carolina—Chapel Hill, 1979

Michael Harris
Adjunct Faculty Member, Oral and Maxillofacial Surgery
D.M.D., University of Pennsylvania, 2001
Certificate—Oral Maxillofacial Surgery, Nova Southeastern University, 2005

Philip L. Harris
Clinical Associate Professor, Surgery
B.S., Muhlenberg College, 1978
M.D., Pennsylvania State University College of Medicine, 1982

Leigh Hart
Adjunct Faculty Member, College of Nursing
B.S.N., Medical College of Georgia, 1986
M.S.N., Albany State University, 1995
Ph.D., Barry University, 2000

Mian A. Hasan
Clinical Assistant Professor, Cardiology
M.D., King Edward Medical College, 1990

Kay E. Haw
Adjunct Assistant Professor, Health Science
B.S.N., Towson State University, 1993
M.S., Central Michigan University, 1999
D.H.Sc., Nova Southeastern University, 2006

Anna Hayden
Adjunct Faculty Member, Community and Public Health Sciences
B.S., Seton Hall University, 1983
D.O., University of the Health Sciences College of Osteopathic Medicine, 1988

David W. Hays
Adjunct Associate Professor, Biomedical Informatics
B.S., State University New York, 1982
M.A., Central Michigan University, 1984
D.P.A., Nova University, 1992

Michael R. Heaphy, Jr.
Clinical Assistant Professor, Pediatrics
B.S., University of Michigan, 1995
M.D., University of Texas, 1999

Robert Hecht
Clinical Associate Professor, Clinical Medicine
M.D., Columbia University, 1988

Steve Heiden
Adjunct Clinical Assistant Professor, Optometry
O.D., University of California College of Optometry, 1972

Lori Heisler
Adjunct Faculty Member, Department of Speech-Language Pathology
B.A., Brock University, 1996
M.Sc., Dalhousie University, 1999
Ph.D., Purdue University—West Lafayette, 2004

Allen Helfer
Adjunct Faculty Member, Endodontics, Division of Surgical Sciences
D.D.S., Columbia University, 1961

Daniel Heller
Clinical Assistant Professor, Internal Medicine
M.D., Sackler School of Medicine, 2008

Charles H. Hennekens
Clinical Professor, Preventive Medicine
B.S., Queens College, 1963
M.D., Cornell University Medical College, 1967
M.S., Harvard School of Public Health, 1973
Dr.P.H., Harvard School of Public Health, 1975

Christel Henseler
Adjunct Assistant Professor, Health Science
M.S., Florida International University, 1990
Ph.D., Florida International University, 2003

Kelly Henson-Evertz
Adjunct Faculty Member, Ron and Kathy Assaf College of Nursing
B.S.N., Metropolitan State University, 2009
M.A., St. Catherine University, 2011
D.N.P., Chatham University, 2013

Mehmet F. Hepgur
Clinical Assistant Professor, Internal Medicine
M.D., Istanbul University, 1999

Hantz C. Hercule
Clinical Assistant Professor, Correctional Medicine
B.A., Manhattan College, 1989
M.D., Universidad Central del Este, 1996

Baron Herford
Clinical Assistant Professor, Internal Medicine
D.O., University of Pikeville—Kentucky College of Osteopathic Medicine, 2008

Frederick N. Herman
Clinical Assistant Professor, Surgery
M.D., University of Miami School of Medicine, 1977

Richard Herman
Adjunct Faculty Member, Endodontics
D.D.S., New York University, 1966

Felix Hernandez
Clinical Assistant Professor, Affiliated, Pulmonary/Critical Care
B.S., University of Miami, 2004
M.D., Ross University School of Medicine, 2009

Joel Hernandez
Clinical Assistant Professor, Family Medicine
B.S., Carlos Chessalle College Institute, 1984
M.D., Instituto Superior de Ciencias Medicas de Villa Clara, 1990
Juan Hernandez  
Clinical Assistant Professor, Psychiatry  
M.D., University of Granada School of Medicine, 1979

Julie Hernandez  
Adjunct Faculty Member, Periodontology, Division of Surgical Sciences  
A.S., Broward Community College, 1999  
B.S., University of Massachusetts, 1991

Mayrene Hernandez  
Clinical Assistant Professor, Family Medicine  
B.S., Florida International University, 1993  
D.O., Nova Southeastern University, 2001

Marlow Hernandez  
Clinical Assistant Professor, Internal Medicine  
Community Assistant Professor, Public Health  
B.S., University of Miami, 2007  
M.P.H., Nova Southeastern University, 2010  
M.A., Nova Southeastern University, 2011  
D.O., Nova Southeastern University, 2011

Ana Hernandez-Puga  
Clinical Assistant Professor, Pediatrics  
B.A., Florida International University, 1990  
M.D., University of Miami, 1994

Kenneth Herskowitz  
Clinical Assistant Professor, Surgery  
M.D., Baylor College of Medicine, 1986

Valerie Herskowitz  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., University of Miami, 1977  
M.A., University of Miami, 1978

Jorge Hervas  
Adjunct Faculty Member, Prosthodontics  
D.D.S., Central University of Ecuador

Kerri-Ann Hew  
Clinical Instructor, Family Medicine  
B.S., Florida International University, 2002  
M.S., Nova Southeastern University, 2004  
D.O., Nova Southeastern University, 2008

Stuart Himmelstein  
Clinical Assistant Professor, Internal Medicine  
M.D., Hahnemann University School of Medicine, 1987

Kimberly Ho  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., Boston College, 1994  
M.S., Purdue University—West Lafayette, 1997  
Ph.D., Purdue University—West Lafayette, 2000

Kent Hoffman  
Clinical Assistant Professor, Family Medicine  
D.O., Chicago College of Osteopathic Medicine, 1988

Mitchel S. Hoffman  
Clinical Assistant Professor, Internal Medicine  
B.A., Wesleyan University, 1975  
M.P.H., Columbia University School of Public Health, 1979  
M.D., New York Medical College, 1981

Thomas Hoffman, Jr.  
Clinical Assistant Professor, Internal Medicine  
B.S., University of Notre Dame, 1986  
M.D., University of Miami School of Medicine, 1990

Daniel J. Hogan  
Clinical Professor, Dermatology  
M.D., Dalhousie University College of Medicine, 1976

John Holgerson  
Adjunct Assistant Professor, Disaster and Emergency Management  
B.A., Florida Atlantic University, 1994  
M.B.A., New York Institute of Technology, 1996

Christopher P. Hollowell  
Clinical Assistant Professor, Surgery  
B.A., Wayne State University, 1989  
M.D., Wayne State University, 1993

Gretchen Holmes  
Adjunct Assistant Professor, Medical Education  
B.S., New York University, 1993  
Ph.D., University of Kentucky, 2003

Chanda Nicole Holsey  
Adjunct Faculty, Health Science  
B.A., San Diego State University, 1993  
M.P.H., Rollins School of Public Health at Emory University, 1996  
Dr.P.H., University of Alabama—Birmingham School of Public Health, 2005

Allen Horowitz  
Adjunct Faculty Member, Periodontology, Division of Surgical Sciences  
D.D.S., University of Michigan School of Dentistry, 1968

Firaz R. Hosein  
Clinical Assistant Professor, Internal Medicine  
B.S., Barry University, 1996  
D.O., Nova Southeastern University, 2000

David Hotwagner  
Clinical Assistant Professor, Emergency Medicine  
D.O., Michigan State University, 2011

Outi Hovatta  
Clinical Professor, Biomedical Sciences  
Ph.D., University of Helsinki, 1970

Douglas K. Hoverkamp  
Clinical Assistant Professor, Psychiatry  
B.S., St. George’s University, 1999  
M.D., St. George’s University, 2003

Charee Howard  
Adjunct Faculty Member, Family Medicine  
B.S., Florida State University, 2005  
M.S., Nova Southeastern University, 2010  
D.O., Nova Southeastern University, 2014
Denise Howard
Adjunct Faculty Member, Ron and Kathy Assaf College of Nursing
B.S.N., Nova Southeastern University, 2008
M.S.N., Nova Southeastern University, 2010
D.N.P., Nova Southeastern University, 2014

Donald C. Howard
Clinical Assistant Professor, Family Medicine
B.A., University of South Florida, 1980
D.O., Southeastern University of the Health Sciences, 1985

Lydia H. Howard
Clinical Assistant Professor, Pathology
B.S., Florida International University, 1976
M.D., University of Florida College of Medicine, 1990

James T. Howell
Clinical Professor, Disaster and Emergency Management
Clinical Professor, Public Health
Clinical Professor, Rural Medicine
B.S., St. John's University, 1962
M.D., New York Medical College, 1966
M.P.H., Harvard University School of Public Health, 1972

Tjasa Hranjec
Clinical Professor, Surgery
B.S., University of Rochester, 2002
M.S., University of Virginia, 2009
M.D., Stony Brook University, 2006

Jimmy C. Huang
Clinical Assistant Professor, Family Medicine
B.S., Cornell University, 1995
D.O., Nova Southeastern University, 2001

Kurt K. Hubbard
Adjunct Faculty, Occupational Therapy
A.A., Suffolk County Community College, 1991
B.A., State University of New York, 1993
M.A., Farleigh Dickinson University, 1997
M.S., Columbia University, 2000
O.T.D., University of St. Augustine, 2006
Ph.D., Northcentral University, 2015
Fellow, American Occupational Therapy Association, 2017

Hans E. Hubsch
Clinical Assistant Professor, Pediatrics
M.D., Universidad de Carabobo, 1992

George M. Hudson
Clinical Assistant Professor, Family Medicine
B.A., University of Kansas, 1976
D.O., Philadelphia College of Osteopathic Medicine, 1989

Frank P. Hull
Clinical Professor, Pulmonary Medicine
M.D., University of Pretoria, 1990

Brett R. Hutton
Clinical Assistant Professor, Internal Medicine
B.S., University of North Carolina, 1996
M.D., Universidad Autonoma de Guadalajara, 2003

Adeel A. Igbal
Clinical Assistant Professor, Internal Medicine
B.S., Cornell University, 2002
D.O., New York College of Osteopathic Medicine, 2007

Deborah E. Ingram
Clinical Assistant Professor, Pediatrics
B.S., University of Georgia, 1994
M.D., Medical College of Georgia, 1998

Emmanuel R. Isaac
Clinical Assistant Professor, Family Medicine
D.O., Philadelphia College of Osteopathic Medicine, 2005

Gustavo A. Isaac
Clinical Assistant Professor, Pathology
M.D., Universidad Javeriana Medical School, 1986

Alejandro Isava-Quintero
Clinical Assistant Professor, Pediatrics
B.S., Champagnat School, 1981
M.D., Dr. Jose Maria Vargas School of Medicine, 1989

Steven B. Iskowitz
Clinical Assistant Professor, Pediatrics
B.A., University of Michigan, 1976
M.D., University of Pittsburgh, 1981

John D. Izsak
Clinical Assistant Professor, Pediatrics
B.A., University of Vermont, 1958
M.D., University of Vermont, 1963

Richard A. Jablonski
Clinical Assistant Professor, Ophthalmology
B.A., Eastern Michigan University, 1970
D.O., Chicago College of Osteopathic Medicine, 1974

Gilbert Jacobson
Adjunct Faculty Member, Periodontology
D.D.S., Ohio State University

Fabiana H. Jaen
Clinical Instructor, Pediatrics
M.D., Central University of Venezuela, 2002

Ashkan Jafarbay
Clinical Assistant Professor, Internal Medicine
B.S., George Mason University, 1995
M.D., Ross University, 2000

Victor Jaffe
Clinical Assistant Professor, Family Medicine
D.O., Nova Southeastern University, 2006

Mandar R. Jagtap
Clinical Assistant Professor, Internal Medicine
B.S., Purdue University, 2003
D.O., Nova Southeastern University, 2009

Mudit Jain
Clinical Assistant Professor, Endocrinology
M.B.B.S., Sawai Man Singh Medical College, 1991
Sandeep Jain  
Clinical Associate Professor, Internal Medicine  
M.B.B.S., Rajasthan University, Sawai Mann Singh Medical College, 1988

Kumar Jairamdas  
Adjunct Faculty Member, Ron and Kathy Assaf College of Nursing  
B.A., University of South Florida, 2003  
M.S.N., University of South Florida, 2004  
D.N.P., University of South Florida, 2018

Maury A. Jayson  
Clinical Associate Professor, Urology  
B.S., Tufts University, 1986  
M.D., Jefferson Medical College, 1990

Ian Jeffries  
Clinical Associate Professor, Pediatrics  
M.D., Dublin University, 1969

Andrew Jensen  
Adjunct Clinical Assistant Professor  
O.D., Nova Southeastern University, 2006

Katherine Jensen  
Adjunct Clinical Instructor  
B.A., B.S., University of Florida, 2001  
O.D., Nova Southeastern University, 2006

Mark A. Jester  
Clinical Assistant Professor, Internal Medicine  
B.S., Davidson College, 1977  
M.D., University of Missouri, 1981

Francisco Jimenez  
Adjunct Faculty Member, Cariology and Restorative Dentistry  
D.M.D., University of Puerto Rico School of Dentistry, 1974  
Postgraduate Studies—Prosthodontics, Veteran’s Administration Hospital and University of Puerto Rico

Tobin John  
Clinical Assistant Professor, Family Medicine  
M.D., The Medical University of Lublin, 2012

Judith M. Johnson  
Clinical Assistant Professor, Surgery  
B.S., Villanova University, 1975  
M.S., Villanova University, 1981  
M.D., Temple University School of Medicine, 1981

Vanessa Johnson  
B.S.N., Oral Roberts University, 1983  
M.S.N., University of Oklahoma, 1990  
Ph.D., Oklahoma State University, 2004

Iris Johnson-Arnold  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., South Carolina State College, 1991  
M.S., South Carolina State, 1995  
Ph.D., University of Memphis, 1999

Claude L. Jones  
Clinical Assistant Professor, Internal Medicine  
Community Assistant Professor, Public Health  
B.S., University of Miami, 1991  
M.P.H., Nova Southeastern University, 2001  
D.O., Nova Southeastern University, 2005

Sina A. Joorabchi  
Clinical Assistant Professor, Surgery  
B.S., University of Michigan, 2004  
D.O., Michigan State University, 2008

Christian Jordan  
Adjunct Clinical Assistant Professor, Optometry  
O.D., Pennsylvania College of Optometry, 2006

Mary Josefyk  
Adjunct Faculty Member, College of Nursing  
B.S.N., Jacksonville University, 2008  
M.S.N., South University, 2010  
D.N.P., Capella University, 2013

George Joseph  
Clinical Assistant Professor, Surgery  
M.D., Northeastern Ohio Universities, 2005

Jeffrey Joy  
Adjunct Clinical Assistant Professor, Optometry  
O.D., University of Indiana College of Optometry, 2001

Lorena Kaelber  
Adjunct Faculty Member, College of Nursing  
B.S.N., University of Central Florida, 1993  
M.S.N., University of Illinois—Chicago, 2000  
Ph.D., University of Miami, 2012

Andrew M. Kahn  
Clinical Assistant Professor, Family Medicine  
B.S., University of South Florida, 1987  
D.O., Nova Southeastern University, 1991

Charles B. Kahn  
Clinical Assistant Professor, Internal Medicine  
M.D., Jefferson Medical College, 1963

Rishi Kakar  
Clinical Instructor, Psychiatry  
B.S., Rutgers University  
M.D., Albany Medical College, 2006

Alfred M. Kalman  
Clinical Assistant Professor, Hematology  
B.A., Brooklyn College, 1974  
M.D., State University of New York, 1978

Douglas Kalman  
Adjunct Professor, Health and Human Performance  
Adjunct Assistant Professor, Nutrition  
B.S., Florida State University, 1993  
M.S., Hunter College, 1997  
Ph.D., Touro University International, 2007
Jordan Kaltman  
Adjunct Faculty Member, Oral and Maxillofacial Surgery  
D.M.D., Nova Southeastern University, 2007  
Certificate, Nova Southeastern University, 2011

Keith Kaner  
Adjunct Faculty Member, Oral and Maxillofacial Radiology, Diagnostic Sciences, Division of Primary Care  
B.S., University of Florida, 1986  
D.D.S., New York University, 1990

Regine Kanzki  
Community Assistant Professor, Public Health  
Volunteer Assistant Professor, Biomedical Sciences  
B.S., University of Florida, 1998  
M.P.H., University of Miami, 2006

Arthur Kapit  
Adjunct Faculty Member, Orthodontics and Dentofacial Orthopedics  
D.D.S., Medical College of Virginia School of Dentistry, 1970  
M.S.D., Boston University Goldman School of Graduate Dentistry, 1972

Howard Kaplan  
Clinical Professor, Surgery  
D.D.S., Temple University, 1971  
M.D., State University of New York, 1973  
M.S., Nova Southeastern University, 1995

Roland D. Kaplan  
Clinical Associate Professor, Physical Medicine of Rehabilitation  
B.S. University of Miami, 1982  
D.O., Southeastern University of the Health Sciences, 1990

Pran M. Kar  
Clinical Assistant Professor, Internal Medicine  
M.D., University of Delhi, 1980

Laszlo J. Karai  
Clinical Assistant Professor, Dermatology  
M.D., Ph.D., Albert Szent-Gyorgyi Medical University, 1994  
Ph.D., University of Szeged, 2004

Ehsanul Karim  
Clinical Assistant Professor, Internal Medicine  
M.D., Chittagong Medical College, 1992

Ebrahim Karkevandian  
Clinical Assistant Professor, Emergency Medicine  
D.O., The University of Health Sciences, 1992

Helena J. Karnani  
Clinical Assistant Professor, Family Medicine  
M.D., Birmingham University Medical School, 1980

Sanaz Kashan  
Clinical Assistant Professor, Affiliated, Medicine  
M.D., Shahid Behesbi University of Medical Sciences, 2006

Ethan Kass  
Clinical Assistant Professor, Psychiatry  
B.S., Syracuse University, 1979  
D.O., University of Medicine and Dentistry of New Jersey, 1983  
M.B.A., Florida Atlantic University, 2002

Daniel Kaswan  
Clinical Assistant Professor, Affiliated, Medicine  
M.D., Escuela de Medicina Luis, 1995

Charles H. Kates  
Adjunct Associate Professor, Family Medicine  
A.B., Indiana University, 1961  
M.D., Indiana University, 1965

Ronald Katz  
Adjunct Faculty Member, Oral and Maxillofacial Surgery  
D.M.D., Tufts University, 1999

Himangi Kaushal  
Clinical Assistant Professor, Internal Medicine  
M.D., Government Medical College, 1999

David J. Kay  
Clinical Assistant Professor, Otolaryngology  
B.A., Yeshiva University, 1992  
M.D., University of Pennsylvania School of Medicine, 1997  
M.P.H, University of Pittsburgh, 2004

Sonia F. Kay  
Visiting Assistant Professor, Occupational Therapy  
B.S., University of Florida, 1975  
M.H.S., University of Florida, 1976  
Ph.D., Nova Southeastern University, 2001

Scott D. Kazdan  
Clinical Assistant Professor, Orthopedic Surgery  
B.S., Tulane University, 1985  
D.O., Southeastern University of the Health Sciences, 1991

Todd J. Kazdan  
Clinical Assistant Professor, Family Medicine  
B.A., Florida International University, 1995  
D.O., Philadelphia College of Osteopathic Medicine, 1999

Mark R. Keller  
Clinical Assistant Professor, Internal Medicine  
B.S., University of Maryland College Park, 1978  
M.D., University of Maryland School of Medicine, 1982

Nathaniel A. Keller  
Clinical Assistant Professor, Psychiatry  
B.S., Union College, 1991  
M.D., Tel Aviv University, 1996

Nickelle Kellough-Menendez  
Adjunct Clinical Professor, Optometry  
O.D., Nova Southeastern University, 2000

David N. Kenigsberg  
Clinical Assistant Professor, Cardiology  
B.S., University of Miami, 1995  
M.D., University of Miami School of Medicine, 1999

Karen T. Kennedy  
Clinical Assistant Professor, Anesthesiology  
B.S., Eckerd College, 1988  
D.O., Southeastern University of the Health Sciences, 1992
Daniel Kesden  
Clinical Assistant Professor, Internal Medicine  
B.A., University of Chicago, 1966  
M.D., University of Miami, 1971

Kevin J. Kessler  
Clinical Assistant Professor, Orthopedic Surgery  
Clinical Assistant Professor, Sports Medicine  
M.D., University of Health Sciences Chicago Medical School, 1987

Husman Khan  
Clinical Assistant Professor, Internal Medicine  
M.D., Agra University, 1972  
M.P.H., Florida International University, 1994

Sabiha Khan  
Clinical Assistant Professor, Affiliated, Medicine  
B.A., Yeshiva University, 1990  
M.D., University of Illinois—Chicago College of Medicine, 1994

King Kim  
Adjunct Faculty Member, Oral and Maxillofacial  
D.M.D., University of Pittsburgh, 2004  
Certificate—Oral Surgery, Nova Southeastern University, 2008

Steven C. Kimmel  
Clinical Associate Professor, Rheumatology  
B.A., University of Pennsylvania, 1982  
M.D., New York University School of Medicine, 1986

Kevin King  
Clinical Assistant Professor, Affiliated, Emergency Medicine  
B.S., Loyola College in Maryland, 1992  
M.S., Georgetown University, 1993  
M.D., Royal College of Surgeons, 1999

William T. Kirby  
Clinical Assistant Professor, Dermatology  
B.S., Emory University, 1995  
D.O., Nova Southeastern University, 2000

William D. Kirsh  
Clinical Associate Professor, Family Medicine  
Community Associate Professor, Public Health  
B.S., Florida State University, 1981  
D.O., Southeastern University of the Health Sciences, 1985  
M.P.H., Johns Hopkins University, 1988

Michelle Kirwan  
Clinical Assistant Professor, Clinical Medicine  
B.A., Washington University, 1993  
M.D., University of Miami, 2000

Aaron L. Klein  
Clinical Assistant Professor, Internal Medicine  
B.A., Yeshiva University, 1996  
D.O., Nova Southeastern University, 2001

Elizabeth A. Klein  
Adjunct Faculty Member, Department of Community and Public Health Sciences  
B.S., Walla Walla University, 2003  
D.D.S., Loma Linda University School of Dentistry, 2007

Jesse Klein  
Clinical Assistant Professor, Cardiology  
B.S., University of Wisconsin, 1994  
D.O., Des Moines University Osteopathic Medical Center, 2001

Gary I. Kleiner  
Clinical Associate Professor, Pediatrics  
B.S., Fordham University, 1989  
Ph.D., State University of New York, 1995  
M.D., State University of New York, 1995

Harvey S. Kleiner  
Clinical Associate Professor, Family Medicine  
B.A., Indiana University, 1967  
M.S., Indiana University, 1969  
M.S., Indiana University Medical Center, 1979  
D.O., Southeastern University of the Health Sciences, 1987

Boris V. Klopukh  
Clinical Assistant Professor, Surgery  
B.A., Columbia University, 1986  
M.D., Mt. Sinai School of Medicine, 1990

Paula Knapp-Baker  
Clinical Assistant Professor, Family Medicine  
D.O., Kansas City University of Medicine and Biosciences, 1998

Paul Koenigsberg  
Clinical Assistant Professor, Surgery  
B.S., Yeshiva University, 1977  
M.D., University of Cincinnati, 1982

Susan M. Koff  
Adjunct Assistant Professor, Geriatrics  
B.S., Carlow College, 1978  
M.S.N., University of Pennsylvania, 1984

William C. Kohlhepp  
Adjunct Faculty  
B.A., University of Connecticut, 1974  
B.S., Livingston College, 1979  
Certificate—PA, University of Medicine and Dentistry of New Jersey, 1979  
M.H.A., Quinnipiac University, 1997  
D.H.Sc., Nova Southeastern University, 2007

So Young (Susan) Kong  
Adjunct Faculty Member, Periodontology  
A.S., New York University Dental School  
B.S., Loyola University of Chicago

Sheldon Konigsberg  
Clinical Assistant Professor, Internal Medicine  
M.P.H., Harvard School of Public Health, 1975  
M.D., Columbia University College of Physicians and Surgeons, 1975

Jorge C. Konopka  
Clinical Assistant Professor, Affiliated, Family Medicine  
M.D., Instituto Superior de Ciencias de Santiago de Cuba, 1983  
B.S.N., Florida International University, 2003

Rebecca Kordsmeier  
Adjunct Faculty Member, College of Nursing  
B.S.N., Nova Southeastern University, 2008  
M.S.N., Nova Southeastern University, 2011
Matthew W. Korn
Clinical Assistant Professor, Family Medicine
B.S., University of Florida, 1996
D.O., Nova Southeastern University, 2001

Henry Koser
Adjunct Faculty Member, Osteopathic Principles and Practice
D.O., Philadelphia College of Osteopathic Medicine, 1969

Frank Kosnosky
Adjunct Faculty Member, Ron and Kathy Assaf College of Nursing
Diploma, Conemaugh Memorial School of Nursing, 2005
M.S.N., Clarion University of Pennsylvania, 2009
D.N.P., University of Alabama—Birmingham, 2012
Postdoctoral Certificate—Neonatal Nurse Practitioner, University of South Alabama, 2014

Dianne Kowing
Adjunct Clinical Associate Professor, Optometry
O.D., Indiana University College of Optometry, 1995

Takashi Koyama
Adjunct Faculty Member, Oral and Maxillofacial Surgery
D.M.D., University of Pennsylvania, 2000

Rachel Krackov
Adjunct Professor, Physician Assistant Program—Orlando
B.A., Smith College, 1983
M.F.A., University of California—Irvine, 1985
Ph.D., Columbia University, 1992
Certificate—P.A. Studies, Bronx Lebanon Hospital Center, 1998
M.P.A.S., Pace University, 2015

Lawrence Krasne
Adjunct Associate Professor, Prosthodontics
D.D.S., St. Louis University, 1954
Fellow, International College of Dentistry
Fellow, Royal Society of Health

Jacob Krive
Adjunct Assistant Professor, Biomedical Informatics
B.S., University of Maryland, 2002
M.B.A., University of Maryland, 2005
M.S., University of Maryland, 2006
Ph.D., Nova Southeastern University, 2013

Melvin Krohn
Adjunct Faculty Member, Oral and Maxillofacial Surgery,
Division of Surgical Sciences
D.M.D., Harvard School of Dentistry, 1970

Merrill A. Kroll
Clinical Associate Professor, Cardiology
B.S., Rensselaer Polytechnic Institute, 1981
D.O., New York College of Osteopathic Medicine, 1985

Jennifer Kroll
Adjunct Faculty Member, Department of Speech-Language Pathology
B.A., Yeshiva University, 1992
M.A., Queens College—City University of New York, 1994

Michael E. Krutchik
Clinical Assistant Professor, Dermatology
B.S., Florida State University, 1984
D.O., Southeastern University of the Health Sciences, 1988

Marc A. Kudelko
Clinical Assistant Professor, Internal Medicine
B.A., Southern Methodist University, 1997
D.O., Nova Southeastern University, 1997

Mark F. Kufel
Clinical Assistant Professor, OB/GYN
B.S., University of Akron, 1986
M.D., Northeastern Ohio Universities, 1990

Gary Kunsman
Clinical Assistant Professor, Pathology
B.S., Virginia Polytechnic Institute, 1982
Ph.D., LSU Medical Center, 1991

Andrew M. Kusienski
Clinical Assistant Professor, Osteopathic Principles and Practice
B.S., St. Joseph University, 1996
D.O., Lake Erie College of Osteopathic Medicine, 2001

Lisa Kvarda
Adjunct Faculty Member, Department of Speech-Language Pathology
B.A., University of Florida, 1995
M.S., University of South Florida, 1997
SLP.D., Nova Southeastern University, 2008

Theresa Kyle
Adjunct Faculty Member
M.S.N., Emory University, 1995
D.N.P., American Sentinel University, 2017

Kyriaki Kyriakou
Adjunct Faculty Member, Department of Speech-Language Pathology
B.A., Brock University, 1997
M.S., University of the District of Columbia, 2001
SLP.D., Nova Southeastern University, 2011

Charles P. Lago
Clinical Assistant Professor, Affiliated, Surgery
B.S., Syracuse University
M.D., Mount Sinai School of Medicine, 1989

Shane A. Lam
Adjunct Assistant Professor, Disaster and Emergency Management
B.S., Nova Southeastern University, 2006
M.S., Nova Southeastern University, 2011

Charles Lambert Jr.
Clinical Professor, Cardiology
M.D., University of Florida, 1979

Peter Lamelas
Clinical Instructor, Internal Medicine
B.S., Palm Beach Community College, 1978
B.S., Ohio Northern University, 1993
M.D., Universidad Central del Este School of Medicine, 1981

Mario Landera
Adjunct Faculty Member, Department of Speech-Language Pathology
B.S., Florida State University, 2004
M.A., University of Florida, 2006
SLP.D., Nova Southeastern University, 2015
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arnold Chester Lang</td>
<td>Clinical Assistant Professor, Affiliated, Surgery</td>
<td>B.A., Syracuse University; M.D., Université de Liège</td>
</tr>
<tr>
<td>David Lasko</td>
<td>Clinical Assistant Professor, Surgery</td>
<td>B.A., University of Pennsylvania, 1990; M.S., University of Miami, 1993; M.D., University of Miami, 1999</td>
</tr>
<tr>
<td>Mohammad J. Latif-Jangda</td>
<td>Clinical Associate Professor, Geriatrics</td>
<td>M.D., La Universidad Tecnologica de Santiago, 1956</td>
</tr>
<tr>
<td>Anthony Lauro</td>
<td>Adjunct Instructor, Medical Education</td>
<td>M.A., Temple University, 1976</td>
</tr>
<tr>
<td>Nuria M. Lawson</td>
<td>Clinical Assistant Professor, Surgery</td>
<td>M.D., University of Panama, 1987</td>
</tr>
<tr>
<td>Sasha Lazarus</td>
<td>Clinical Instructor, Obstetrics and Gynecology</td>
<td>M.D., Saba University, 2005</td>
</tr>
<tr>
<td>Matt Leavitt</td>
<td>Clinical Assistant Professor, Dermatology</td>
<td>B.S., University of Michigan, 1981; D.O., Michigan State University; College of Osteopathic Medicine, 1986</td>
</tr>
<tr>
<td>Heather Levensburger</td>
<td>Adjunct Faculty Member, Department of Speech-Language Pathology</td>
<td>B.A., University of Florida, 1998; M.S., Nova Southeastern University, 2001; SLP.D., Nova Southeastern University, 2003</td>
</tr>
<tr>
<td>Katarina Le Blanc</td>
<td>Clinical Professor, Biomedical Sciences</td>
<td>Ph.D., Karolinska Institutet, 1993</td>
</tr>
<tr>
<td>Benjamin Lechner</td>
<td>Clinical Associate Professor, Internal Medicine</td>
<td>B.A., Yeshiva University, 1963; M.D., New York University, 1977</td>
</tr>
<tr>
<td>Bruce M. LeClair</td>
<td>Clinical Associate Professor, Family Medicine</td>
<td>B.S., San Diego State University, 1976; M.D., University of California, 1981</td>
</tr>
<tr>
<td>Melinda Ledbetter</td>
<td>Adjunct Instructor, Family Medicine</td>
<td>PA-C, Stanford University, 2002</td>
</tr>
<tr>
<td>Douglas Leder</td>
<td>Clinical Assistant Professor, Ophthalmology</td>
<td>B.A., Rutgers College, 1978; D.O., University of Medicine and Dentistry of New Jersey School of Osteopathic Medicine, 1983</td>
</tr>
<tr>
<td>Idle Lee</td>
<td>Clinical Assistant Professor, Affiliated, Medicine</td>
<td>B.A., Baylor University, 2008; M.D., Universidad Autonoma de Guadalajara, 2012</td>
</tr>
<tr>
<td>Marah J. Lee</td>
<td>Clinical Assistant Professor, Internal Medicine</td>
<td>B.S., Northeast Missouri State University, 1985; D.O., Kirksville College of Osteopathic Medicine, 1989</td>
</tr>
<tr>
<td>Seong K. Lee</td>
<td>Clinical Assistant Professor, Surgery</td>
<td>B.A., University of Missouri, 1997; M.D., University of Missouri School of Medicine, 1998</td>
</tr>
<tr>
<td>James Lefler</td>
<td>Clinical Assistant Professor, Radiology</td>
<td>M.D., University of South Florida, 1993</td>
</tr>
<tr>
<td>Christine Legler</td>
<td>Adjunct Associate Professor, Health Science</td>
<td>B.S./PA-C, Hahnemann University, 1976; M.S., University of Pittsburgh, 1981; D.H.Sc., Nova Southeastern University, 2004</td>
</tr>
<tr>
<td>Gabriela Lemoine</td>
<td>Clinical Assistant Professor, Dermatology</td>
<td>M.D., Christian Albrechts University, 1983</td>
</tr>
<tr>
<td>Bruce A. Lenes</td>
<td>Clinical Associate Professor, Internal Medicine</td>
<td>B.S., Union College, 1971; M.D., Albany Medical College, 1975</td>
</tr>
<tr>
<td>Charlene A. Lepane</td>
<td>Clinical Assistant Professor, Internal Medicine</td>
<td>B.S., Auburn University, 1998; M.P.H., University of Alabama; D.O., University of Health Sciences College of Osteopathic Medicine</td>
</tr>
<tr>
<td>Andrew S. Lepoff</td>
<td>Clinical Associate Professor, Surgery</td>
<td>B.S., Villanova University, 1982; D.O., Southeastern University of the Health Sciences, 1986</td>
</tr>
<tr>
<td>Keith J. Lerner</td>
<td>Clinical Assistant Professor, Internal Medicine</td>
<td>B.A., Boston University, 1980; M.D., Boston University School of Medicine, 1980</td>
</tr>
<tr>
<td>Richard S. Levene</td>
<td>Clinical Assistant Professor, Family Medicine</td>
<td>B.S., Syracuse University, 1984; D.O., New York College of Osteopathic Medicine, 1988</td>
</tr>
<tr>
<td>Richard Levin</td>
<td>Clinical Assistant Professor, Urology</td>
<td>B.A., Clark University, 1985; M.D., George Washington University, 1989</td>
</tr>
</tbody>
</table>
Brett S. Levine
Clinical Assistant Professor, Family Medicine
B.S., George Washington University, 2005
D.O., Nova Southeastern University, 2012

Norman Levy
Adjunct Faculty Member, Cariology and Restorative Dentistry
D.D.S., Maryland University, 1974

Emma Lew
Clinical Associate Professor, Pathology
B.S., University of Saskatchewan, 1976
M.D., University of Saskatchewan, 1982

Nicholas M. Lewis
Adjunct Assistant Professor, Clinical Immunology
B.S., University of Florida, 2004
J.D., University of Miami, 2009

Wilhelmina N. Lewis
Clinical Associate Professor, Family Medicine
M.D., University of Cincinnati, 1998

Soling Li
Clinical Assistant Professor, Internal Medicine
B.S.N., Florida International University, 1992
M.P.H., Nova Southeastern University, 2000
D.O., Nova Southeastern University, 2000

Mark Libow
Clinical Associate Professor, Affiliated, Cardiology
M.D., University of Miami, 1976

Craig H. Lichtblau
Clinical Assistant Professor, Physical Medicine and Rehabilitation
M.D., American University of the Caribbean, 1985

Charles E. Lieber
Clinical Instructor, Internal Medicine
B.A., Rollins College, 1979
M.D., Ross University, 1984

Jill Liebman
Clinical Assistant Professor, Neurology
B.S., Union College, 1985
D.O., Southeastern University of the Health Sciences, 1989

Mayer Liebman
Adjunct Faculty Member, Periodontology
D.D.S., Georgetown University, 1967
Certificate—Periodontology, Tufts University, 1972

Nicole Lillenthal
Adjunct Supervisor, Department of Speech-Language Pathology
B.A., University of Connecticut, 1995
M.S., Florida State University, 1999

Kathryn Lin
Clinical Assistant Professor, Pediatrics
M.D., University of Virginia School of Medicine, 1983

Felix Linetsky
Clinical Associate Professor, Osteopathic Principles and Practice
M.D., Voronezh Medical Institute, 1975

Hans-Gustaf Ljunggren
Affiliate Dean
Clinical Professor, Biomedical Sciences
Ph.D., Karolinska Institutet, 1990
M.D., Karolinska Institutet, 1992

Karon LoCicero
Clinical Associate Professor, Internal Medicine
M.D., University of South Florida College of Medicine, 1984

Thomas P. Lohmann
Clinical Professor, Affiliated, Pathology
B.S., University of New Orleans, 1975
M.D., Louisiana State University, 1979

Jeffrey S. Lombard
Clinical Associate Professor, Urology
B.S., Waynesburg College, 1976
D.O., Philadelphia College of Osteopathic Medicine, 1980

Eustorgio A. Lopez
Adjunct Faculty Member, Oral and Maxillofacial Surgery
D.D.S., University of Sao Paulo, Brazil, 1977
M.D., University of Miami, 1995
Certificate—OMFS, Jackson Memorial Hospital/University of Miami, 1990

Fabian A. Lopez
Clinical Assistant Professor, Internal Medicine
B.S., University of California, 1990
M.D., University of California, 1994

Fernando Lopez-Evangelio
Adjunct Faculty Member, Sociobehavioral and Administrative Pharmacy
B.S., Sacred Heart University, 1986
M.H.S.A., Graduate School of Public Health, University of Puerto Rico, 1988
Ph.D., Nova Southeastern University, 2018

Alfredo Lopez-Gomez
Clinical Associate Professor, Internal Medicine
B.S., Matanzas Institute, 1947
M.D., Universidad de la Havana, 1954

Rene L. Lopez-Guerrero
Clinical Assistant Professor, Pediatrics
B.S., University of Miami, 1973
M.B.A., Florida International University, 1977
M.D., Universidad Tecnologica de Santiago, 1983

Jorge A. Loredo
Clinical Assistant Professor, Internal Medicine
B.S., Florida International University, 1996
D.O., Nova Southeastern University, 2000

Arquimedes G. Losada
Clinical Instructor, Internal Medicine
B.S., Florida International University, 1996
D.O., Nova Southeastern University, 2000

Ramesh R. Loungani
Clinical Professor, Cardiology
M.D., Bangalore Medical College, 1977
Mary Ann Lowe  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.S., West Virginia University—Morgantown, 1968  
M.Ed., Florida Atlantic University, 1988  
Ed.S., University of New Mexico—Gallup, 1998  
SLP.D., Nova Southeastern University, 2005

Robert Lowe  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.S., Slippery Rock University of Pennsylvania, 1973  
M.Ed., Clarion University of Pennsylvania, 1977  
Ph.D., Ohio State University—Athens, 1986

Glen D. Lowery  
Clinical Associate Professor, Surgery  
B.S., Southern Oklahoma State University, 1975  
D.O., Oklahoma College of Osteopathic Medicine, 1978

Luis Lugo  
Clinical Assistant Professor, Affiliated, Medicine  
M.D., Universidad Nacional Pedro Henríquez Ureña

Melinda H. Luis  
Adjunct Instructor, Nutrition  
M.S., Florida International University, 2001

Jorge O. Luna  
Clinical Associate Professor, Family Medicine  
B.S., Aquinas College, 1970  
D.O., Michigan State University, 1977

Andreas Lundqvist  
Clinical Assistant Professor, Biomedical Sciences  
B.S., Royal Institute of Technology, 1996  
Ph.D., Karolinska Institutet, 2003

Heather M. Lutz  
Clinical Assistant Professor, Family Medicine  
B.A., Florida Atlantic University, 1996  
D.O., Nova Southeastern University, 2001

Christopher G. Lynch  
Assistant Professor, Pharmacy PT  
Pharm.D., Nova Southeastern University, 1997  
M.Ed., University of North Florida, 2006

Jacqueline C. Machado  
Clinical Assistant Professor, Pediatrics  
B.S., University of Miami, 1999  
M.D., University of Miami, 2003

Ann T. Macintyre  
Clinical Assistant Professor, Internal Medicine  
B.A., University of Michigan, 1995  
M.S., Johns Hopkins University School of Hygiene and Public Health, 1997  
D.O., Nova Southeastern University, 2002

Jennifer Madeo  
Clinical Assistant Professor, Internal Medicine  
D.O., Touro University College of Medicine, 2009

Michelle Madera  
Adjunct Faculty Member, Department of Community and Public Health Sciences  
B.S., University of Science, 2010  
D.M.D., Tufts University, 2014

Sonia P. Madrazo-Rico  
Clinical Assistant Professor, Pediatrics  
M.D., Universidad de Monterrey, 1986

Demaris Mafut  
Clinical Assistant Professor, Affiliated, Pediatrics  
M.D., Barry University, 2002  
D.O., Nova Southeastern University, 2007

Maria Mahmoodi  
Clinical Assistant Professor, Family Medicine  
B.S., Metropolitan State College, 1990  
M.D., University of Colorado Health Sciences Center, 1994

Hilda Mahmoudi  
Clinical Instructor, Medical Education  
M.D., Shiraz University, 2001

Jonell Y. Mahoney  
Clinical Assistant Professor, Pediatrics  
B.S., Florida State University, 1982  
M.D., University of Miami, 1989

Brian Mahony  
Adjunct Clinical Assistant Professor, Optometry  
O.D., Pennsylvania College of Optometry, 1985

Andrew Mahar  
Adjunct Faculty Member, Pharmacy Practice  
Pharm.D., Nova Southeastern University, 2015

Archana Maini  
Clinical Assistant Professor, Hematology/Oncology  
M.D., Lady Harding Medical College, 1986

Mazhar Majid  
Clinical Assistant Professor, Cardiology  
M.D., University of Karachi, 1988

Farhan Malik  
Clinical Assistant Professor, Pediatrics  
D.O., New York College of Osteopathic Medicine, 2009

Sawan Malik  
Adjunct Faculty Member, Periodontology  
D.M.D., Nova Southeastern University, 2009  
Certificate—Periodontics, Nova Southeastern University, 2012

Theodore Malinin  
Clinical Professor, Biomedical Sciences  
B.S., Concord College, 1955  
M.S., University of Virginia, 1958  
M.D., University of Virginia, 1960

Craig Mallak  
Clinical Associate Professor, Pathology  
B.S., Michigan State University, 1982  
M.D., Creighton University, 1989  
J.D., Creighton University, 1985
Rubaiya Mallay
Clinical Assistant Professor, Rheumatology
B.S., University of North Carolina, 2001
D.O., Edward Via Virginia College of Osteopathic Medicine, 2007

Michael J. Mallis
Clinical Assistant Professor, Surgery
D.O., Philadelphia College of Osteopathic Medicine, 1997

Mauricio Malo
Adjunct Faculty Member, Prosthodontics
D.D.S., Colombian Odontological College, Colombia, 1995
Certificate—Prosthodontics, Loma Linda University, 2004

Jere J. Mammino
Clinical Assistant Professor, Dermatology
B.S., Albright College, 1978
D.O., Philadelphia College of Osteopathic Medicine, 1982

David L. Mandell
Clinical Associate Professor, Otolaryngology
B.A., University of Maryland, 1992
M.D., University of Maryland, 1996

Maria Mandese
Adjunct Clinical Assistant Professor, Optometry
O.D., Nova Southeastern University, 2006

Michael Mandese
Adjunct Clinical Assistant Professor, Optometry
O.D., Nova Southeastern University, 1996

Susan G. Manella
Clinical Assistant Professor, Family Medicine
B.S., Pennsylvania State University, 1978
D.O., Philadelphia College of Osteopathic Medicine, 1983

Gene F. Manko
Clinical Assistant Professor, Obstetrics and Gynecology
B.S., University of Pennsylvania, 1968
M.D., University of Pennsylvania, 1972

Judith Mann
Adjunct Faculty, Physical Therapy
B.S.PT, Boston University, 1975
M.A. PT, Touro College, 1997
D.P.T., Nova Southeastern University, 2008

Murugesan Manoharan
Clinical Professor, Surgery
M.D., Madras Medical College, 1982

Jason A. Mansour
Clinical Assistant Professor, Family Medicine
B.S., Duquesne University, 1998
M.D., Drexel University College of Medicine, 2003

Alberto A. Marante
Clinical Assistant Professor, Pediatrics
B.A., University of South Florida, 1978
M.D., Universidad CETEC, 1981

James Marbourg
Adjunct Clinical Assistant Professor, Optometry
O.D., University of Alabama School of Optometry, 1977

Anthony L. Marcotte
Clinical Assistant Professor, Surgery
B.S., University of Illinois, 1999
D.O., Midwestern University, 2003

David Marcus
Clinical Associate Professor, Pediatrics
B.S., Tulane University, 1977
M.D., Tulane University, 1981

Susannah Marcus
Adjunct Clinical Associate Professor, Optometry
O.D., State University of New York, 1994

Gary L. Marder
Clinical Assistant Professor, Dermatology
B.A., New York University, 1977
D.O., University of Health Sciences
College of Osteopathic Medicine, 1983

Cristina S. Marin
Clinical Assistant Professor, Gastroenterology
B.S., University of Miami, 2002
M.D., University of Miami, 2006

Michael Markou
Clinical Assistant Professor, Family Medicine
B.S., University of South Florida, 1987
D.O., Kirksville College of Osteopathic Medicine, 1991

Riva H. Markowitz
Adjunct Faculty Member, Department of Speech-Language Pathology
M.Ed., University of North Florida, 1978

Nelson J. Marquez
Adjunct Faculty, Occupational Therapy
B.S., University of the Philippines, 1988
M.S., Nova Southeastern University, 2002
Ed.D., Nova Southeastern University, 2003

Erin M. Marra
Clinical Assistant Professor, Family Medicine
B.S., University of Wisconsin, 2006
M.D., University of Wisconsin, 2010

Oneka B. Marriott
Clinical Assistant Professor, Pediatrics
B.S., Oakwood University, 2003
M.P.H., Ohio State University, 2004
D.O., M.P.H, Ohio University, 2009

Naicie Marrow
Clinical Instructor, Obstetrics and Gynecology
B.S., Mercer University, 2005
M.D., Medical College of Georgia, 2009

Vicky Marsh
Clinical Assistant Professor, Affiliated, Family Medicine
B.S., Nova Southeastern University, 2005
D.O., Nova Southeastern University, 2012

Barbara Martin
Clinical Assistant Professor, Clinical Medicine
B.S., Florida International University, 1988
M.D., Ross University, 1991
Jose A. Martin
Clinical Assistant Professor, Surgery
B.S., Florida International University, 2002
D.O., Nova Southeastern University, 2009

Angelique T. Martinez
Clinical Assistant Professor, Pediatrics
B.A., Old Dominion University, 2001
M.D., Eastern Virginia Medical School, 2005

Kenia Martinez
Clinical Assistant Professor, Pediatrics
B.S., Florida International University, 2003
M.D., University of Miami, 2008

Romeena Martinez
Clinical Assistant Professor, Family Medicine
D.O., New York College of Osteopathic Medicine, 2010

Santiago E. Martinez
Clinical Assistant Professor, Internal Medicine
M.D., Universidad Autonoma de Santo Domingo, 1982

William C. Martinez
Clinical Associate Professor, Neurology
B.S., San Marco, 1960
M.D., San Marcos University, 1967

Eugene L. Mascarenhas
Clinical Associate Professor, Cardiology
M.D., Grant Medical College, 1966

Mohammad M. Masri
Clinical Associate Professor, Surgery
M.D., Aleppo University, 1976

Haane Massarotti
Clinical Assistant Professor, Surgery
M.D., The University of Hawaii, 2009

Cristina B. Mata
Clinical Assistant Professor, Internal Medicine
B.A., University of Miami, 1980
M.D., University of Miami, 1985

Thomas H. Mateo, Jr.
Clinical Associate Professor, Emergency Medicine
B.S., Villanova University, 1984
D.O., University of Health Sciences College of Osteopathic Medicine, 1988

Joseph Mathai
Clinical Assistant Professor, Family Medicine
B.S., University of South Florida, 2003
D.O., Lake Erie College of Osteopathic Medicine, 2008

Huber Matos-Garsault
Clinical Instructor, Anesthesiology
B.S., Autonomous School of Central America, 1977
M.D., Universidad de Ciencias Medicas, 2001

Mitchell D. Maulfair
Clinical Associate Professor, Family Medicine
D.O., Philadelphia College of Osteopathic Medicine, 1977

Dane L. Maxfield
Clinical Associate Professor, Internal Medicine
B.A., Northwestern University, 1968
D.O., Kirksville College of Osteopathic Medicine, 1972

John P. May
Clinical Assistant Professor, Internal Medicine
B.S., University of Notre Dame, 1984
M.D., Loyola University Stritch School of Medicine, 1988

Laura L. Mays
Adjunct Faculty, Physician Assistant Studies
B.S., Butler University, 2001

Gloria A. McAllister
Adjunct Assistant Professor, Disaster and Emergency Management
B.A., Memphis State University, 1974
M.S., Boston College, 1975
Ph.D., University of Texas, 1985

Tina McAlpin
Adjunct Faculty Member, Department of Speech-Language Pathology
B.A., Lenoir-Rhyne College, 1981
M.S., Southern Connecticut State University, 1986

James L. McBride
Adjunct Associate Professor, Family Medicine
Ph.D., Florida State University, 1988

Heather McCarthy
Adjunct Assistant Professor, Medical Education
B.S., Florida Southern College, 1999
D.O., Nova Southeastern University, 2004

Paul A. McCarthy
Adjunct Instructor, Preventive Medicine
B.A., Canisius College, 1978
M.A., Syracuse University, 1989

John W. McFadden, III
Adjunct Clinical Assistant Professor, Optometry
O.D., Illinois College of Optometry, 1979

George McCord
B.S., Capella University, 2012
M.S., Saint Leo University, 2014
Ph.D., Walden University, 2019

Violeta McCormack-Atanasoski
Clinical Assistant Professor, Cardiology
B.S., New York University, 1976
M.D., University of Edward Kardelj, 1981

Wayne A. McCreath
Clinical Assistant Professor, Obstetrics and Gynecology
B.S., Clark University, 1990
B.S., Cornell University, 1992
M.D., Medical College of Ohio, 1998

Regina McEady
Adjunct Faculty Member, College of Nursing
B.S.N., Howard University, 1986
M.P.H., Florida International University, 1992
Malcolm H. McDonald  
Clinical Associate Professor, Surgery  
B.S., Michigan State University, 1965  
D.O., Michigan State University, 1969

Wendy M. McGonigal  
Adjunct Clinical Assistant Professor, Optometry  
O.D., Pennsylvania College of Optometry, 1997

David A. McInnes  
Clinical Associate Professor, Family Medicine  
A.B., William Jewell College, 1977  
M.D., University of Missouri, 1981  
M.Ed., University of Southern California, 2001

Mark McKenney  
Founding Chair, Department of Surgery  
Clinical Professor, Surgery  
B.S., Michigan State University, 1981  
M.D., University of Michigan, 1985  
M.B.A., University of Miami, 2005

Michael J. McKenzie  
Clinical Assistant Professor, Family Medicine  
B.S., Virginia Commonwealth University, 1992  
M.D., Universidad Iberoamericana School of Medicine, 1999

Ilka L. McKinney  
Clinical Assistant Professor, Family Medicine  
B.S., University of Maryland, 1988  
M.D., Chicago Medical School, 2002

Shelly McLaren  
Clinical Assistant Professor, Pediatrics  
M.D., University of Florida College of Medicine, 2004

Barbara McNeil  
Adjunct Faculty Member, College of Nursing  
B.S.N., University of Illinois, 1976  
M.S.N., Oregon Health Science University, 1982  
Ph.D., University of Idaho, 1989

Ian McNiece  
Clinical Professor, Biomedical Sciences  
B.S., Melbourne University, 1979  
M.S., Melbourne University, 1981  
Ph.D., Melbourne University, 1986

John McSoley  
Adjunct Clinical Associate Professor, Optometry  
O.D., New England College of Optometry, 1991

Lee Meach  
Adjunct Faculty, Occupational Therapy  
B.S., University of South Florida, 2013  
O.T.D., Nova Southeastern University, 2016

Fatema P. Meah  
Clinical Assistant Professor, Pediatrics  
B.A., Hunter College, 1992  
M.D., Yeshiva University, 1996

Clyde Meckstroth  
Clinical Assistant Professor, Surgery  
B.S., University of Florida, 1981  
D.O., Southeastern University College of Health Sciences, 1985  
M.H.A., University of Florida, 2003

Heather Medeiros  
Adjunct Faculty, Cardiovascular Sonography Program—Tampa  
B.S., Nova Southeastern University, 2010

Yiraima Medina-Blasini  
Clinical Assistant Professor, Affiliated, Emergency Medicine  
B.S., University of Puerto Rico, 2008  
M.D., Ponce School of Medicine, 2008

Malcolm Meister  
Adjunct Faculty Member, Orthodontics and Dentofacial Orthopedics  
M.S.M., Florida International University, 1981  
J.D., Nova Southeastern University, 1995

Elise Mellman  
Adjunct Faculty Member, Periodontology  
A.S., State University of New York, 1979

Frieda Menasche  
Adjunct Faculty Member, Physical Therapy  
A.S., Broward College, 1983  
B.S., Florida International University, 1986  
D.P.T., Shenandoah University, 2010

Carolina Mendoza  
Adjunct Faculty Member, Pediatrics  
B.S., Florida International University, 2006  
M.D., New Jersey Medical School, 2011

Benny Menendez  
Clinical Assistant Professor, Family Medicine  
M.D., University of Puerto Rico, 1986  
D.O., New York College of Osteopathic Medicine, 1989

Richard J. Menendez  
Clinical Associate Professor, Family Medicine  
B.S., Tulane University, 1979  
M.D., University of Puerto Rico Medical School, 1983

Steve Mescher  
Adjunct Faculty Member, Oral and Maxillofacial Surgery  
D.D.S., University of Maryland, 1980

Charles A. Messa III  
Clinical Professor, Affiliated, Surgery  
B.A., LaSalle University, 1985  
M.D., Pennsylvania State University, 2008

Dean Metz  
Community Instructor, Public Health  
B.S., State University of New York, 1992  
M.P.H., Nova Southeastern University, 2012

Christos G. Mihos  
Clinical Assistant Professor, Internal Medicine  
B.A., Brandeis University, 2003  
D.O., Nova Southeastern University 2009
Jane Miller  
Adjunct Faculty Member, Department of Periodontology  
A.S., Miami-Dade Community College, 1978  
B.S., Nova Southeastern University

Joseph Miller  
Adjunct Clinical Assistant Professor, Optometry  
O.D., Indiana University School of Optometry, 2006

Richard Miller  
Clinical Associate Professor, Dermatology  
D.O., Michigan State University, 1984

Jules G. Minkes  
Clinical Professor, Cardiology  
D.O., Kirksville College of Osteopathic Medicine, 1962

Barry M. Miskin  
Clinical Assistant Professor, Surgery  
M.D., New York Medical College of New Rochester, 1981

David A. Mittleman  
Clinical Assistant Professor, Surgery  
B.S., Yale University, 1984  
M.D., Johns Hopkins University, 1988

Emad H. Mohamed  
Clinical Instructor, Internal Medicine  
M.D., University of Khartoum, 1989

Suzanne Moineau  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., Rutgers State University—Douglass College, 1991  
M.B.A., Rutgers State University—Graduate School of Management, 1992  
M.A., University of Iowa, 1995  
Ph.D., University of California—San Diego, 2006

Migvis Monduy  
Clinical Assistant Professor, Pediatrics  
B.S., Florida International University, 2001  
M.D., University of South Florida, 2005

Silvana L. Montautti  
Clinical Assistant Professor, Psychiatry  
M.D., University of Montemorelos, 1983

Alfredo Montero–Hurtado  
Clinical Assistant Professor, Internal Medicine  
M.D., Universidad Catolica Boliviana, 2006

Harry K. Moon  
Clinical Associate Professor, Surgery  
B.A., Tulane University, 1972  
M.D., University of South Alabama College of Medicine, 1978

Molly A. Moor  
Adjunct Assistant Professor, Medical Education  
B.A., Agustana University, 2006  
M.P.H., San Diego State University, 2010  
Ph.D., M.P.H., University of California, 2015

Barbara Moore  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., California State University—Fullerton, 1980  
M.A., Whittier College, 1982  
Ed.D, University of Southern California, 1998

Jacquelyn Moore  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., Howard University, 1971  
M.S., University of Michigan—Ann Arbor, 1972  
M.S., Johns Hopkins University, 1994  
Ph.D., Howard University, 2007

Erika Moorman  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., Indiana University, 1997  
M.S., Nova Southeastern University, 2001

Mohamad M. Morad  
Clinical Assistant Professor, Internal Medicine  
M.D., University of Damascus, 2000

Brian C. Moraes  
Clinical Assistant Professor, Internal Medicine  
B.A., University of South Florida, 1988  
D.O., Southeastern University of the Health Sciences, 1992

M. Fernando D. J. Moraflores  
Clinical Assistant Professor, Pediatrics  
M.D., Universidad San Carlos de Guatemala, 1982

Glenn Moran  
Clinical Professor, Family Medicine  
B.A., Florida Atlantic University, 1982  
D.O., Southeastern University of the Health Sciences, 1988

Henry Moran  
Adjunct Faculty Member, Ron and Kathy Assaf College of Nursing  
B.S.N., American Sentinel University, 2015  
M.S.N., American Sentinel University, 2016  
M.S.N., American Sentinel University, 2018

Mark Edward Moran  
Clinical Assistant Professor, Affiliated, Surgery  
B.A., University of Western Ontario  
M.D., University of Toronto, 1986

Robert A. Moran  
Clinical Assistant Professor, Psychiatry  
B.S., Trinity College, 1985  
M.D., Mount Sinai School of Medicine, 1989

Dionne Morgan  
Clinical Assistant Professor, Affiliated, Pulmonary/Critical Care  
B.S., University of the West Indies  
M.D., University of the West Indies

Jason Morris  
Clinical Assistant Professor, Emergency Medicine  
D.O., University of Medicine and Dentistry of New Jersey School of Osteopathic Medicine, 2008
Seger S. Morris  
Clinical Assistant Professor, Internal Medicine  
B.S., Florida Gulf Coast University, 2001  
D.O., DeBusk College of Osteopathic Medicine, 2012

Stephen A. Morris  
Adjunct Clinical Instructor, Optometry  
O.D., Southern College of Optometry, 1964

Steven E. Morris  
Clinical Assistant Professor, Hematology  
B.A., Columbia College, 1978  
M.D., University of Connecticut, 1982

Terry Morrow-Nelson  
Adjunct Faculty, Medical Education  
B.A., University of Nevada, 1997  
M.S., Eckerd College, 2005  
Ph.D., Nova Southeastern University, 2011

Monica Mortensen  
Clinical Assistant Professor, Pediatrics  
B.S., Loyola University, 1994  
D.O., Chicago College of Osteopathic Medicine, 2001

Allen Moskow  
Adjunct Faculty Member, Endodontics  
D.D.S., Temple University, 1981  
Certificate—Endodontic, Temple University, 1983

Stephen E. Moskowitz  
Clinical Assistant Professor, Psychiatry  
B.A., New York University, 1962  
M.D., University of Louvain, 1973

Vladimir B. Mouraviev  
Clinical Assistant Professor, Affiliated, Surgery  
M.D., Medical School, Kirov Military Medical Academy, 1980  
Ph.D., KMMA, 1988

Fatemeh Mousavi  
Clinical Assistant Professor, Pathology  
M.D., Azad University, 1993

Fernando Moya  
Clinical Assistant Professor, Surgery  
B.S., Purdue University, 1982  
M.S., Massachusetts College of Pharmacy, 1985  
Ph.D., Massachusetts College of Pharmacy, 1987  
M.D., Robert W. Johnson Medical School, 1995

Enrique Muller  
Adjunct Faculty Member, Periodontology  
D.M.D., Boston University, 2007

Deborah A. Mulligan  
Clinical Professor, Pediatrics  
B.A., University of San Francisco, 1976  
M.D., University of California—Los Angeles, 1982

Duaine D. Murphree  
Clinical Assistant Professor, Family Medicine  
B.S., University of South Alabama, 1977  
M.D., University of South Alabama, 1983  
M.S., Wake Forest University, 1991

Jason M. Murphree  
Clinical Assistant Professor, Surgery  
B.S., Mississippi State University, 2004  
M.D., University of Mississippi, 2008

Suzanne C. Murphy  
Clinical Assistant Professor, Internal Medicine  
B.S., Villanova University, 1988  
M.D., Albany Medical College, 1992

William Murphy  
Clinical Associate Professor, Family Medicine  
B.S., St. Joseph University, 1975  
D.O., Philadelphia College of Osteopathic Medicine, 1979

Timothy Murray  
Clinical Professor, Ophthalmology  
B.A., Johns Hopkins University, 1981  
M.D., Johns Hopkins Hospital, 1985  
M.B.A., University of Miami, 2005

Khalid Mutawalli  
Adjunct Faculty Member, Pediatric Dentistry  
B.D.S., University of Cairo, 2008  
Certificate—AEGD, University of Maryland, 2014  
Certificate—Pediatric Dentistry, Nova Southeastern University, 2016

Martha J. Mutis  
Community Assistant Professor, Public Health  
D.D.S., Colombian School of Medicine, 2000  
M.P.H., Nova Southeastern University, 2012

Lisa Marie Myers  
Clinical Assistant Professor, Internal Medicine  
M.D., University of Tennessee, 1989

Dayan Naik  
Clinical Associate Professor, Internal Medicine  
M.D., Karnataka Medical College, 1968

Kenneth Namerow  
Adjunct Faculty Member, Endodontics  
D.D.S., Fairleigh Dickinson University, 1985  
Certificate—Endodontics, Columbia University, 1972

Kenneth R. Nanni  
Adjunct Professor, Health Science  
B.S., University of Florida, 1995  
M.S., California College for Health Science, 1999  
Ph.D., Nova Southeastern University, 2004

Sumana Narayanan  
Clinical Assistant Professor, Surgery  
M.D., Drexel University College of Medicine, 2010

Antoinette Navarre  
Adjunct Faculty Member, Nutrition  
B.S., University of Delaware, 1988  
M.S., Finch University, 2000

Claudia Navarrete  
Adjunct Faculty Member, Endodontics  
D.D.S., Pontifica Universidad Javeriana, 1993  
Certificate—Endodontics, Universidad El Bosque, 2002
Lourdes I. Navarro  
Adjunct Instructor, Internal Medicine  
B.A., Liceo Hondureño Sagrado Corazon, 1970  
P.A., University Michoacan De San Nicolas de Hidalgo, 1979

Gerald Needham  
Clinical Assistant Professor, Internal Medicine/Nephrology  
D.O., Midwestern University Chicago College of Osteopathic Medicine, 1995

Jeffrey Nelson  
Clinical Assistant Professor, Family Medicine  
B.S., George Fox University, 2004  
D.O., Western University of Health Sciences, 2010

Beverly Y. Nelson-Curtis  
Clinical Professor, Pediatrics  
B.A., Herbert H. Lehman College, 1976  
M.D., Downstate Medical Center, 1982

Edward Neuwirth  
Adjunct Faculty Member, Prosthodontics  
D.D.S., New York University College of Dentistry, 1960

Jack Newman  
Adjunct Faculty Member, Endodontics  
D.D.S., New York University, 1962

Emanuel Newmark  
Clinical Professor, Ophthalmology  
B.S., Rutgers University College of Pharmacy, 1959  
M.D., Duke University School of Medicine, 1966

Nam Q. Nguyen  
Clinical Assistant Professor, Internal Medicine  
B.A., Florida Atlantic University, 1994  
D.O., Nova Southeastern University, 1999

Melissa Nichols  
Adjunct Clinical Assistant Professor, Optometry  
B.S., Nova Southeastern University, 2007  
D.O., Nova Southeastern University, 2009

Nannette Nicholson  
Professor, Affiliated, Audiology  
B.S.Ed., Northwest Missouri State University, 1978  
M.S., Illinois State University, 1980  
Ph.D., University of Kansas Medical Center, 2003

Alan Niederman  
Clinical Assistant Professor, Affiliated, Cardiology  
B.S., Emory University, 1976  
M.S., Illinois State University, 1980  
M.D., University of Kansas Medical School, 2003

Barry P. Nierenberg  
Adjunct Associate Professor, Psychiatry  
B.A., State University of New York, 1973  
M.S., Queens College, 1975  
Ph.D., University of Tennessee, 1981

Iran Niroomand-Rad  
Clinical Associate Professor, Pediatrics  
M.S., Michigan State University, 1982  
D.O., Southeastern University of the Health Sciences, 1989

Beth E. Norris  
Adjunct Clinical Instructor, Optometry  
B.S., Nova Southeastern University, 2006  
O.D., Nova Southeastern University, 2008

Martin Novey  
Adjunct Clinical Associate Professor, Optometry  
B.S., Indiana University of Pennsylvania, 1991  
O.D., Pennsylvania College of Optometry, 1994

Robert P. Novo  
Clinical Assistant Professor, Pediatrics  
B.A., Rutgers University, 1975  
M.D., Universidad CETEC, 1980

Doron Nuchovich  
Clinical Assistant Professor, Internal Medicine  
B.S., ORT School of Technology, 1980  
M.D., University of the Republic, 1989

Edgard A. Nuñez  
Clinical Assistant Professor, Family Medicine  
M.D., Universidad Nacional Autonoma de Honduras, 1983

Jerome R. Obed  
Clinical Assistant Professor, Dermatology  
B.S., University of Florida, 1998  
D.O., Kirksville College of Osteopathic Medicine, 2003

Christopher N. Ochner  
Adjunct Assistant Professor, Medical Education  
B.A., University of Virginia, 1998  
M.A., American University, 2000  
Ph.D., Drexel University, 2006

Tatiana M. Ochoa  
Community Assistant Professor, Public Health  
M.D., Universidad Central del Ecuador, 1986

Diana O’Connor  
Adjunct Faculty Member  
M.S.N., Florida Atlantic University, 2001  
Ph.D., Barry University, 2016

David K. O'Connor  
Clinical Assistant Professor, Radiology  
B.S., University of Miami, 1990  
M.D., University of Miami, 1994

Timothy E. O’Connor  
Adjunct Instructor, Preventive Medicine  
B.A., Wayne State University, 1974

Hector Octaviani  
Clinical Assistant Professor, Pediatrics  
B.S.N., University of Puerto Rico, 1978  
M.D., University of Puerto Rico School of Medicine, 1982
Arlene E. O’Donnell  
Clinical Assistant Professor, Family Medicine  
B.S., Liberty University, 2007  
D.O., Edward Via Virginia College of Osteopathic Medicine, 2011

Amy Ogburn  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.S., Auburn University, 1999  
Ph.D., University of South Alabama, 2003

Ayorinde Ogunbameru  
Clinical Assistant Professor, Internal Medicine  
M.D., University of Benin, 2002

Erin O’Hora  
Adjunct Faculty, Health Science  
B.S., Marywood University, 1998  
M.S., Marywood University, 2009  
D.H.Sc., Nova Southeastern University, 2014

Nicholas Z. Okeson  
Clinical Assistant Professor, Family Medicine  
B.A., Bethany College, 1991  
D.O., Kirksville College of Osteopathic Medicine, 1995

Nnachi L. Oko  
Clinical Assistant Professor, Family Medicine  
M.D., University of Health Sciences Antigua, 1987

Dennis J. O’Leary  
Clinical Professor, Internal Medicine  
B.A., Manhattan College, 1971  
D.O., Philadelphia College of Osteopathic Medicine, 1977

Juan Oms  
Clinical Assistant Professor, Psychiatry  
B.S., Ohio Dominican College, 1994  
M.D., Universidad Autonoma de Guadalajara, 1997

James Ongley  
Adjunct Faculty, Health Science  
B.S., University of Florida, 1973  
M.D., University of Florida, 1977  
J.D., Nova University, 1989

Peter H. Oostwouder  
Clinical Assistant Professor, Family Medicine  
B.A., Washington University, 1978  
M.D., St. Louis University School of Medicine, 1982

Arnold A. Oper  
Clinical Instructor, Family Medicine  
M.S., Columbia University, 1952  
M.D., University of New York College of Medicine, 1957

Jacques E. Orces  
Adjunct Assistant Professor, Biomedical Informatics  
Clinical Assistant Professor, Pediatrics  
B.A., Arizona State University, 1988  
D.O., Nova Southeastern University, 1996

Edgar G. Orellana  
Clinical Assistant Professor, Pediatrics  
M.D., University of San Carlos, Guatemala, 1979

Betty Oremland  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., Hofstra University, 1976  
M.A., Hofstra University, 1977  

Aeyal Oren  
Clinical Assistant Professor, Surgery  
B.S., Tulane University, 1995  
D.O., Nova Southeastern University, 1999

Ross Osborn  
Medical Director, Physician Assistant Program—Jacksonville  
B.S., East Central University, 1995  
M.D., University of Oklahoma, 2002

Olayemi Osiyemi  
Clinical Assistant Professor, Internal Medicine  
B.S., Jacksonville State University, 1985  
M.D., University of Maryland, 1995

Ahmed F. Osman  
Clinical Assistant Professor, Clinical Medicine  
B.S., College of the Holy Family, 1985  
M.D., Cairo University Faculty of Medicine, 1991

Hussein M. D. Osman-Mohamed  
Clinical Assistant Professor, Surgery  
B.A., Ain Shams University, 1981  
M.D., Ain Shams University, 1986

Daniele Ostatnikova  
Clinical Professor, Pediatrics  
M.D., Comenius University Bratislava, 1982  
Ph.D., Comenius University Bratislava, 1988

Leon Ostroff  
Adjunct Faculty Member, Periodontology  
D.M.D., Tufts University School of Dental Medicine, 1973

Fredy A. Otolora  
Adjunct Clinical Faculty Member, Optometry  
Universidad de la Salle, Colombia, 2000  
O.D., Nova Southeastern University, 2009

Anthony N. Ottaviani  
Clinical Professor, Pulmonary Medicine  
Community Professor, Public Health  
B.A., Gannon College, 1964  
D.O., University of Health Sciences College of Osteopathic Medicine, 1968  
M.P.H., Nova Southeastern University, 1997

Elizabeth Oviawe  
Adjunct Instructor, Biomedical Informatics  
B.S., University of Lagos, 1991  
M.S., Nova Southeastern University, 2007  
M.S., Nova Southeastern University, 2009

James Pace  
Adjunct Faculty, Physician Assistant Studies  
PA-C, University of Nebraska, 1976
Barbara Packer-Muti  
Adjunct Professor, Audiology  
Adjunct Faculty, Medical Education  
B.A., Douglas College, Rutgers University, 1974  
M.S., Teachers College, Columbia, 1976  
Ed.D., Nova Southeastern University, 1995

Fabio M. Paes  
Clinical Assistant Professor, Surgery  
M.D., Universidade Federal da Bahia, 2005

Piero Palacios  
Adjunct Faculty Member, Orthodontics and Dentofacial Orthopedics  
D.D.S., Francisco Marroquin University, Guatemala, 2000  
Fellowship, General Dentistry, 2003  
Certificate—Orthodontics, University of Connecticut Health Center, 2006

Mark S. Palazzolo  
Clinical Assistant Professor, Obstetrics and Gynecology  
B.S., Michigan State University, 1995  
D.O., Michigan State University College of Osteopathic Medicine, 1999

Steven H. Paletsky  
Clinical Assistant Professor, Surgery  
M.D., Medical University of South Carolina, 1973

Lynne Palma  
Adjunct Assistant Professor, Family Medicine  
B.S.N., University of California, 1977  
M.S., University of California, 1984

Harry Panahi  
Adjunct Faculty Member, Community and Public Health Sciences  
D.M.D., University of the East, 1999  
Certificate—Oral and Maxillofacial Surgery, Jackson Memorial Hospital/University of Miami, 2007

Siddharth J. Pandya  
Clinical Associate Professor, Radiology  
B.S., Arizona State University, 1990  
D.O., University of Health Sciences College of Osteopathic Medicine, 1995

Sonali V. Pandya  
Clinical Assistant Professor, Surgery  
B.S., University of Miami, 1998  
M.S., Barry University, 2000  
M.D., St. George's University, 2004

Efstratios Pantages  
Clinical Assistant Professor, Pediatrics  
M.D., University of South Florida College of Medicine, 1979

Louis M. Paolillo  
Clinical Assistant Professor, OB/GYN  
B.A., Rutgers University, 1975  
M.D., Autonomous University of Guadalajara, 1979

Zulema Pappaterra  
Adjunct Faculty Member, Periodontology  
D.M.D., Universidad Iberoamericana, 2005

Juan C. Paramo  
Clinical Associate Professor, Surgery  
M.D., Pontificia Universidad Javeria, 1991

Judith Pardo  
Clinical Assistant Professor, Obstetrics and Gynecology  
B.S., Duke University, 1977  
M.D., University of Miami School of Medicine, 1981

Theresa Parenteau  
Adjunct Faculty Member, College of Nursing  
B.S.N., Barry University, 1990  
M.S.N., Nova Southeastern University, 2006  
D.N.P., Nova Southeastern University, 2014

Parth R. Parikh  
Clinical Assistant Professor, Affiliated, Medicine  
B.M.B.S., JMF'S A.C.P.M. Medical College  
M.D., JMF'S A.C.P.M. Medical College, 2009

Robert Parkes  
Community Assistant Professor, Public Health  
B.S., University of the West Indies, 1996  
M.D., University of the West Indies, 2003  
M.P.H., Nova Southeastern University, 2012

Billy D. Parsons  
Clinical Assistant Professor, Surgery  
B.S., Southeastern Oklahoma State University, 1985  
M.D., University of Oklahoma, 1989

Joshua Pasol  
Adjunct Clinical Assistant Professor, Optometry  
M.D., State University of New York—Buffalo

Arpit Patel  
Clinical Assistant Professor, Internal Medicine  
D.O., Lake Erie College of Osteopathic Medicine, 2011

Ashok Patel  
Clinical Assistant Professor, Psychiatry  
M.D., University of Baroda, 1984

Beejel Patel  
Adjunct Faculty Member, Pharmacy Practice  
Pharm.D., Nova Southeastern University, 2007

Milan Patel  
Clinical Assistant Professor, Internal Medicine  
M.D., Florida State University, 2012

Vipul R. Patel  
Clinical Associate Professor, Urology  
M.D., Baylor College of Medicine, 1995

Arnie Patrick  
Adjunct Faculty Member, Optometry  
B.A., Brooklyn College, 1975  
A.A.S., New York City Community College, 1977  
O.D., Nova Southeastern University, 1994

Andres Patron  
Clinical Associate Professor, Internal Medicine  
B.A., Seton Hall University, 1984  
D.O., New York College of Osteopathic Medicine, 1988
Jason D. Perelman  
*Clinical Assistant Professor, Urology*  
B.S., University of Colorado, 1992  
M.S., Indiana University, 1995  
M.D., Indiana University, 1997

Hugo N. Perez  
*Clinical Associate Professor, Pediatrics*  
M.D., Universidad Central del Este Dominican Republic, 1980

Margaret Perez  
*Adjunct Faculty Member, Physical Therapy*  
B.S., University of Florida, 2001  
M.P.T., University of Florida, 2002

Maribelas Perez  
*Clinical Assistant Professor, Pediatrics*  
M.D., New York University, 2009

Eduardo Perez-Stable  
*Clinical Assistant Professor, Family Medicine*  
B.S., University of South Florida, 1990  
M.D., University of Miami, 1994

Jose H. Perez-Suarez  
*Clinical Assistant Professor, Family Medicine*  
B.S., Catholic University of Puerto Rico, 1978  
M.D., Ponce School of Medicine, 1982

Trina C. Perkins  
*Adjunct Clinical Assistant Professor, Optometry*  
O.D., Nova Southeastern University, 2007

David E. Perloff  
*Clinical Associate Professor, Internal Medicine*  
B.G.S., University of Miami, 1987  
M.D., University of Miami School of Medicine, 1991

Elby Pernsteiner  
*Adjunct Faculty, Health Science*  
B.S., Florida Hospital College of Health Sciences, 2006  
M.H.Sc., Nova Southeastern University, 2008  
D.H.Sc., Nova Southeastern University, 2013

Parvathi Perumareddi  
*Clinical Assistant Professor, Medical Education*  
B.S., University of Florida, 1989  
D.O., 1995

Richard K. Peterson  
*Clinical Associate Professor, Family Medicine*  
B.S., University of Florida, 1987  
M.D., University of Florida, 1992

Frederick C. Petty  
*Clinical Associate Professor, Psychiatry*  
B.A., Southern Adventist University, 1965  
Ph.D., Georgia Institute of Technology, 1971  
M.D., Ph.D., University of Tennessee, 1976

Barry Pevner  
*Clinical Assistant Professor, Medicine*  
B.A., Lehigh University, 1978  
M.D., Medical College of Pennsylvania, 1983

Norman Pevsner  
*Clinical Assistant Professor, Medicine*  
B.A., Carthage College, 1964  
M.D., Chicago Medical School, 1969

Thomas Pham  
*Clinical Assistant Professor, Dermatology*  
M.D., Wayne State University, 1993

James R. Phelps  
*Adjunct Professor, Disaster and Emergency Management*  
B.A., University of Southern Colorado, 2003  
M.A., Sam Houston State University, 2005  
Ph.D., M.A., Sam Houston State University, 2008

Elizabeth Philippe  
*Clinical Assistant Professor, Family Medicine*  
B.S., College Marie Anne, 1978  
M.D., Republic of Haiti, 1984  
M.P.H., Yale University, 1986

Kerrilyn Phillips  
*Adjunct Faculty Member, Department of Speech-Language Pathology*  
B.A., University of Louisiana—Monroe, 1983  
M.A., University of Louisiana—Monroe, 1986  
SLP.D., Nova Southeastern University, 2003

Carey Phlong  
*Adjunct Clinical Associate Professor, Optometry*  
O.D., Nova Southeastern University, 2011

Lois Piano  
*Adjunct Faculty Member, College of Nursing*  
B.S.N., Saint Joseph’s College of Maine, 1981  
M.S.N., Gwynedd Mercy University, 1984  
Doctorate, Temple University, 1997

Denise Pickett-Bernard  
*Adjunct Associate Professor, Nutrition*  
B.S., Johnson and Wales, 1989  
M.S., University of Rhode Island, 1993  
Ph.D., Barry University, 1997

Marguerite Pierce  
*Adjunct Faculty Member, College of Nursing*  
B.S.N., Rutgers University, 1983  
M.S.N., Phoenix University, 2010

Berry Pierre  
*Clinical Assistant Professor, Internal Medicine*  
B.S., Florida State University, 2007  
M.P.H., Nova Southeastern University, 2011  
D.O., Nova Southeastern University, 2011

Yves E. Pierre-Louis  
*Clinical Assistant Professor, Family Medicine*  
M.D., Haiti State University Medical School, 1980

Antoinette C. Pignataro  
*Clinical Assistant Professor, Internal Medicine*  
B.A., Manhattanville College, 1979  
M.D., San Juan Bautista School of Medicine, 1983
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Degree Details</th>
</tr>
</thead>
</table>
| Rhoda Pilelsky-Levine     | Adjunct Faculty Member, Department of Speech-Language Pathology | B.A., Boston University, 1981  
M.A., Northwestern University, 1983  
SLP.D., Nova Southeastern University, 2000 |
| Joseph Pino               | Clinical Assistant Professor, Family Medicine | B.A., Hunter College, 1977  
M.D., University of Dominica, 1981  
M.B.A., University of Phoenix, 2000 |
| Ana S. Piragic            | Adjunct Faculty Member, Department of Speech-Language Pathology | B.S., University of Central Florida, 2007  
M.A., University of Central Florida, 2009 |
| David Z. Pizzimenti       | Clinical Associate Professor, Internal Medicine | B.S., University of Florida, 1997  
D.O., Nova Southeastern University, 2002 |
| Daniel J. Plasencia       | Clinical Associate Professor, Pediatrics | M.D., Doctor of Medicine and Surgery Medical School, 1975 |
| Nicholas A. Plaxton       | Clinical Assistant Professor, Surgery | B.S., Michigan Technological University, 1992  
M.D., Case Western Reserve University, 2005 |
| Michael J. Plaza          | Clinical Assistant Professor, Surgery | B.A., Wake Forrest University, 2004  
M.D., Wake Forrest University, 2008 |
| Robert J. Poppiti         | Clinical Professor, Surgery          | B.S., University of Miami, 1975  
M.D., Universidad Nacional, 1978 |
| Constance K. Porcaro      | Adjunct Faculty Member, Department of Speech-Language Pathology | B.A., University of South Dakota, 1987  
M.A., University of Northern Colorado, 1989  
Ph.D., University of Arizona, 2004 |
| Regina Portcarrero        | Adjunct Clinical Associate Professor, Optometry | O.D., Nova Southeastern University, 2002 |
| Manuel Porth              | Clinical Associate Professor, Orthopedic Surgery | M.D., Wayne State University, 1968 |
| Jason Portnof             | Adjunct Associate Professor, Oral and Maxillofacial Surgery | D.M.D., Nova Southeastern University, 2002  
M.D., Cornell University, 2006 |
| Seth H. Portnoy           | Clinical Assistant Professor, Family Medicine | B.A., Florida Atlantic University, 1991  
D.O., Nova Southeastern University, 1996 |
| Donna R. Potts            | Clinical Assistant Professor, Family Medicine | A.A., University of South Florida, 1980  
B.S., Florida State University, 1982  
M.D., University of South Florida College of Medicine, 1992 |
| Michelle C. Powell        | Clinical Assistant Professor, Family Medicine | B.S., Florida International University, 1989  
D.O., Nova Southeastern University, 1995  
M.P.H., Nova Southeastern University, 2002 |
| Randy Powell              | Adjunct Faculty Member, College of Nursing | B.S.N., Nova Southeastern University, 2006  
M.S.N., Nova Southeastern University, 2010 |
| Oscar D. Pozo             | Clinical Instructor, Psychiatry      | M.D., La Universidad Racional Autonoma de Nicaragua, 1971 |
| Ramona Pramedass-Blom     | Adjunct Faculty Member, College of Nursing | Pharm.D., Florida A & M University, 2004 |
| John W. Prather           | Clinical Assistant Professor, Cardiology | B.S., Mississippi State University, 1965  
Ph.D., University of Mississippi Medical Center, 1968  
M.D., University of California, 1972 |
| Allan Pratt               | Clinical Assistant Professor, Obstetrics and Gynecology | B.S., Brigham Young University, 1972  
D.O., Des Moines College of Osteopathic Medicine, 1976 |
| Lee Pravder               | Clinical Assistant Professor, Clinical Medicine | B.S., University of Miami, 1985  
M.D., University of Miami, 1989 |
| Paul Preste               | Clinical Assistant Professor, Medicine | B.S., University of South Florida, 1974  
M.D., University of South Florida, 1978 |
| Lisa Presti               | Adjunct Faculty Member, Department of Speech-Language Pathology | B.S., University of Florida, 1994  
M.A., University of Houston, 1998 |
| Victoria Prignanc         | Adjunct Professor, Occupational Therapy | B.S., University of Wisconsin—Milwaukee, 1994  
M.S., University of Vermont, 2001  
Ph.D., Nova Southeastern University, 2007 |
| Xiaomei Qu                | Adjunct Clinical Assistant Professor, Optometry | B. (Medicine), Shanghai Medical University, 1990  
Ph.D. (Medicine), Fudan University, 2002 |
| Georges Quesnel           | Clinical Associate Professor, Obstetrics and Gynecology | M.D., Universite de Montreal, 1965 |
Hugo F. Quevedo
Adjunct Faculty, Physician Assistant Studies
B.S., Universidad de Chile, 1981
M.A., San Jose State University, 1992
P.A., Miami Dade Community College, 2001

Jennifer Quiñones Nottingham
Adjunct Faculty, Medical Education
B.S., Nova Southeastern University, 1998
M.S., Nova Southeastern University, 2001
Ed.D., Nova Southeastern University, 2007

Zafar I. Qureshi
Clinical Assistant Professor, Pediatrics
M.D., Sindh Medical College, 1989

Harold S. Rabinowitz
Clinical Professor, Dermatology
B.A., Princeton University, 1973
M.D., University of Miami School of Medicine, 1977

Ian Raden
Adjunct Associate Professor, Optometry
B.S., Nova Southeastern University, 1997
O.D., Nova Southeastern University, 1999

Daniel Radu
Adjunct Faculty Member, Prosthodontics
D.M.D., Tufts University, 2015

Michael Radu
Adjunct Faculty Member, Prosthodontics
D.D.S., University of Bucharest, 1979
M.S., Lynn University, 2000

Amr Radwan
Adjunct Faculty Member, Endodontics
B.D.S., University of Cairo, 2004
Fellowship, Endodontics, Baylor College of Dentistry, 2009
Certificate—AEGD, University of Maryland, 2011
Certificate—Endodontics, Columbia University, 2013

Frederick Rahe
Adjunct Assistant Professor, Audiology
B.A., University of Florida, 1975
M.A., University of Florida, 1976
Au.D., Nova Southeastern University, 2000

Layal A. Rahman
Clinical Assistant Professor, Internal Medicine
M.D., Lebanese University, 2007

Anand P. Rajani
Clinical Instructor, Surgery
B.A., Emory University, 2004
D.O., Philadelphia College of Osteopathic Medicine, 2009
M.S., Lake Erie College of Osteopathic Medicine, 2013

Suresh P. Rajpara
Clinical Assistant Professor, Psychiatry
M.D., M. P. Shah Medical College, 1978

Nina C. Ramirez
Clinical Assistant Professor, Pediatrics
B.A., Fordham University, 1953
M.D., Cornell University, 1978

Walter O. Ramirez
Clinical Assistant Professor, Internal Medicine
B.S., National Institute Central para Varones, 1985
M.D., La Universidad de San Carlos, 1992

Eileen M. Ramsaran
Clinical Instructor, Internal Medicine
M.D., St. George’s University School of Medicine, 1991

Andrea Ramsay
Clinical Assistant Professor, Affiliated, Family Medicine
B.S., University of Florida, 1989
M.D., St. George University School of Medicine, 1995

Elaine M. Rancatore
Clinical Associate Professor, Family Medicine
B.A., Boston University, 1980
M.S., Fairleigh Dickinson University, 1982
M.D., New York University, 1984

Shahid R. Randhawa
Clinical Assistant Professor, Internal Medicine
M.D., University of Punjab, 1985

Jorge Rangel
Clinical Assistant Professor, Family Medicine
M.D., Pontificia Universidad Javeriana, 1979
M.P.H., University of Missouri, 1990

Robert F. Raspa
Clinical Associate Professor, Family Medicine
B.S., Fairmont State College, 1978
M.D., West Virginia University, 1982

Ranga Rathakrishnan
Clinical Assistant Professor, Internal Medicine
B.A., University of Oklahoma, 1988
M.D., University of Oklahoma College of Medicine, 2000

Kenneth R. Ratzan
Clinical Professor, Internal Medicine
M.D., Harvard Medical School, 1965

Lionel P. Raymon
Adjunct Assistant Professor, Pathology
B.S., Lycee Bouchardon, 1983
Pharm.D., University of Bourgogne School of Medicine and Pharmacy, 1989
Ph.D., University of Maryland, 1994

Nasreen Razack-Malik
Clinical Assistant Professor, Psychiatry
M.D., St. George’s School of Medicine, 1999

Sarah Rebstock
Clinical Assistant Professor, Affiliated, Anesthesiology
M.S., University of Florida, 1994
M.D., Johannes Gutenberg Universitat, 2002
Dianne Rechtine  
**Clinical Associate Professor, Family Medicine**  
M.D., West Virginia University School of Medicine, 1965

Monica A. Recine  
**Clinical Assistant Professor, Pathology**  
M.D., Central University of Venezuela, 1993

Hope C. Reed  
**Adjunct Faculty Member, Department of Speech-Language Pathology**  
B.S., Alabama Agricultural and Mechanical University, 1999  
M.S., Alabama Agricultural and Mechanical University, 2001  
SLP.D., Nova Southeastern University, 2005

Ryan Reed  
**Clinical Assistant Professor, Internal Medicine**  
D.O., Lake Erie College of Osteopathic Medicine, 2014

Marcos Rejtman  
**Clinical Assistant Professor, Family Medicine**  
B.S., University of Florida, 1990  
D.O., Nova Southeastern University, 1994

Michael R. Remaly  
**Clinical Assistant Professor, Family Medicine**  
B.S., Daemen College, 1992  
D.O., Chicago College of Osteopathic Medicine, 2000

Stephen Resnick  
**Adjunct Faculty Member, Prosthodontics**  
D.M.D., Fairleigh Dickinson University, 1974

Julia M. Retureta  
**Clinical Assistant Professor, Pediatrics**  
B.S., Interamerican University of Puerto Rico, 1989  
M.D., Universidad Central del Caribe School of Medicine, 1993

Mallica Reynolds  
**Adjunct Assistant Professor, Disaster and Emergency Management**  
B.S., Nova Southeastern University, 2006  
M.S., Nova Southeastern University, 2011

Donna K. Rhoden  
**Clinical Assistant Professor, Pediatrics**  
B.A., Clemson University, 1982  
B.S., University of Georgia, 1985  
M.D., Medical College of Georgia, 1988

Hasan Riaz  
**Clinical Assistant Professor, Internal Medicine**  
M.D., Nishtar Medical College, 2004

Jennifer S. Rich  
**Clinical Assistant Professor, Pediatrics**  
B.A., Brandeis University, 1992  
M.D., Yeshiva University, 1996

Marvin Richards  
**Adjunct Faculty Member, Prosthodontics**  
D.D.S., New York University, 1967

Willie F. Richardson, Jr.  
**Clinical Assistant Professor, Dermatology**  
B.S., Pembroke State University, 1996  
M.D., East Carolina University, 2000

Paul T. Richman  
**Adjunct Faculty Member, Oral and Maxillofacial Surgery**  
D.D.S., University of Michigan School of Dentistry, 1958  
M.S., University of Illinois, 1961

Gary J. Richmond  
**Clinical Assistant Professor, Pulmonary Medicine**  
B.S., University of Massachusetts, 1979  
M.D., New York Medical College, 1983

Jorge Riestra  
**Clinical Assistant Professor, OB/GYN**  
M.D., University of Kentucky, 1983

Eric Rishe  
**Clinical Assistant Professor, Affiliated, Medicine**  
B.A., Emory University, 1995  
M.D., Tel Aviv University, Sackler School of Medicine, 2001

Mark L. Ritch  
**Clinical Assistant Professor, Internal Medicine**  
B.A., University of South Florida, 1984  
D.O., Southeastern University of the Health Sciences, 1988

Rafael F. Rivas-Chacon  
**Clinical Assistant Professor, Rheumatology**  
M.D., University of El Salvador, 1980

Aleydis Rivera-Onitiri  
**Clinical Instructor, Family Medicine**  
B.S., Pontificia Universidad Catolica de Puerto Rico, 2002  
M.D., Universidad Autonoma de Guadalajara, 2007

Diana Riviera  
**Adjunct Faculty, Medical Education**  
B.S., Nova Southeastern University, 2004  
M.A., Nova Southeastern University, 2007  
Ph.D., Nova Southeastern University, 2014

Andres Rivero  
**Clinical Assistant Professor, Affiliated, Medicine**  
M.D., Universidad Central de Venezuela, Luis Razetti School of Medicine, 2000

David L. Roach  
**Community Assistant Professor, Public Health**  
B.A., Emory University, 1969

James P. Roach  
**Clinical Assistant Professor, Family Medicine**  
B.A., Florida Atlantic University, 1996  
D.O., Nova Southeastern University, 2002

Christopher C. Roberts  
**Clinical Instructor, Surgery**  
B.S., Georgia State University, 1997  
D.O., Nova Southeastern University, 2005
Elysa Roberts  
Adjunct Professor, Occupational Therapy  
B.A., Syracuse University, 1990  
M.S., Florida International University, 1994  
Ph.D., Nova Southeastern University, 2001

Paul J. Roberts III  
Clinical Assistant Professor, Psychiatry  
B.S., University of Central Florida, 1981  
D.O., Southeastern University of the Health Sciences, 1985

Sherry Robins  
Adjunct Faculty, Health Science  
A.A.S., Delta College, 1977  
B.S., Saginaw Valley State University, 1989  
M.S., University of Michigan, 1992  
D.H.Sc., Nova Southeastern University, 2007

Nyoka Robinson  
Adjunct Instructor, Disaster and Emergency Management  
B.S., Nova Southeastern University, 2009  
M.S., Nova Southeastern University, 2013

Tommie L. Robinson, Jr.  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., University of Mississippi, 1984  
M.S., University of Mississippi, 1986  
Ph.D., Howard University, 1992

Jeffry Rocker  
Clinical Assistant Professor, Family Medicine  
B.S., University of Central Florida, 1984  
D.O., Southeastern University of the Health Sciences, 1988

Raul A. Rodas  
Clinical Associate Professor, Surgery  
B.S., University of Oregon, 1978  
D.O., Michigan State University, 1983

Carlos Rodriguez  
Clinical Assistant Professor, Affiliated, Anesthesiology  
B.S., University of West Florida, 2007  
M.D., University of Miami, 2015

Estelamari Rodriguez  
Clinical Assistant Professor, Internal Medicine  
B.A., Columbia University, 1994  
M.P.H., Universidad Autonoma de Madrid, 1995  
M.D., State University of New York, 2002

Joseph A. Rodriguez  
Clinical Assistant Professor, Family Medicine  
B.A., University of Pennsylvania, 1979  
M.D., University of Pennsylvania, 1983

Leopoldo Rodriguez  
Clinical Assistant Professor, Affiliated, Anesthesiology  
M.D., Universidad Central de Venezuela, 1993

Raul Rodriguez  
Clinical Assistant Professor, Psychiatry  
B.A., Florida International University, 1993  
M.D., University of South Florida, 1997

Richard Rodriguez  
Clinical Associate Professor, Surgery  
D.O., Philadelphia College of Osteopathic Medicine, 1990

Hector M. Rodriguez-Cortes  
Clinical Assistant Professor, Pediatrics  
M.D., University of Puerto Rico School of Medicine, 1991

Ramon Rodriguez-Cruz  
Clinical Associate Professor, Internal Medicine  
B.S., University of Puerto Rico, 1996  
M.D., Universitas Portoricensis, 2000

Theresa Rohr-Kirchgraber  
Clinical Associate Professor, Medicine  
B.A., California State University, 1984  
M.D., Cornell University, 1988

Douglas Rolfe  
Adjunct Faculty Member, Prosthodontics  
D.D.S., Emory University, 1985

Rita Romaguera  
Clinical Assistant Professor, Pathology  
M.D., University of Puerto Rico, 1994

Mark A. Romer  
Adjunct Faculty Member, Department of Prosthodontics  
A.A., University of Florida, 1966  
D.D.S., Medical College of Virginia, 1970

Carlos H. Romero  
Clinical Assistant Professor, Family Medicine  
B.S., John's University, 1986  
D.O., Southeastern University of the Health Sciences, 1993

Jennifer A. Romero  
Clinical Assistant Professor, Family Medicine  
B.S., Georgian Court University, 1989  
D.O., Southeastern University of the Health Sciences, 1993

Patricia L. Rooney  
Clinical Assistant Professor, Surgery  
B.S., Hillsdale College, 1977  
D.O., University of Health Sciences College of Osteopathic Medicine, 1982

Trumane J. Ropos  
Clinical Assistant Professor, Internal Medicine  
B.S., Newcomb College, 1980  
D.O., University of Osteopathic Medicine and Health Sciences, 1985

Gavin E. Rose  
Clinical Assistant Professor, Psychiatry  
B.A., Johns Hopkins University, 1983  
M.D., University of Maryland School of Medicine, 1988

Joel B. Rose  
Clinical Associate Professor, Family Medicine  
D.O., West Virginia School of Osteopathic Medicine, 1983

Norman Rose  
Clinical Professor, Surgery  
B.S., Marietta College, 1959  
D.O., Des Moines College of Osteopathic Medicine & Surgery, 1963
Saul Rose  
Clinical Associate Professor, Surgery  
B.S., Marietta College, 1956  
D.O., Des Moines College of Osteopathic Medicine, 1969

Janet L. Roseman  
Clinical Assistant Professor, Family Medicine  
B.S., Syracuse University, 1976  
M.S., Lesley College, 1978  
Ph.D., The Union Institute, 2001

Alexander Rosemurgy II  
Clinical Professor, Surgery  
M.D., University of Michigan Medical School, 1975

Evan Rosen  
Adjunct Faculty Member, Department of Prosthodontics  
M.P.H., Florida International University, 2008  
D.D.M., University of Florida, 2010

Leslie B. Rosen  
Clinical Associate Professor, Dermatology  
B.A., Kenyon College, 1975  
M.D., State University of New York, 1979

David Rosenberg  
Clinical Associate Professor, Pediatrics  
B.S., Florida International University, 1976  
M.D., American University of the Caribbean, 1984

Boaz S. Rosenblat  
Clinical Assistant Professor, Family Medicine  
B.A., Columbia University, 1994  
M.D., State University of New York, 1998

Robert S. Rosenstein  
Clinical Assistant Professor, Cardiology  
M.D., University of Louisville Medical School, 1978

Charles Ross  
Clinical Assistant Professor, Family Medicine  
B.S., Florida State University, 1992  
M.D., University of South Florida, 2003

Sharona Ross  
Clinical Assistant Professor, Surgery  
M.D., The George Washington University, 2001

Michelle Rountree  
Adjunct Clinical Assistant Professor  
B.S., Florida State University, 1996  
O.D., Nova Southeastern University, 2003

Howard D. Routman  
Clinical Assistant Professor, Orthopedic Surgery  
B.A., University of Florida, 1991  
D.O., Nova Southeastern University, 1995

Patricia A. Rowe-King  
Clinical Associate Professor, Pediatrics  
B.A., Boston University, 1984  
M.D., University of Miami School of Medicine, 1988

Daryl Roy  
Adjunct Faculty Member, Prosthodontics  
D.M.D., Boston University, 1986

Kaye Rozecki  
Clinical Assistant Professor, Internal Medicine  
D.O., Lake Erie College of Osteopathic Medicine, 2012

Richard Rozencwaig  
Clinical Assistant Professor, Surgery  
M.D., University of Miami School of Medicine, 1992

Paul L. Rozynes  
Clinical Assistant Professor, Geriatrics  
B.S., University of Florida, 1971  
M.D., University of Miami School of Medicine, 1975

David M. Rube  
Clinical Associate Professor, Psychiatry  
B.A., Yeshiva University, 1983  
M.D., Mount Sinai School of Medicine, 1987

Mark A. Rubenstein  
Clinical Associate Professor, Family Medicine  
B.S., Tulane University School of Engineering, 1985  
M.D., State University of New York Health Science Center, 1989

Darin M. Rubin  
Clinical Assistant Professor, Family Medicine  
B.A., State University of New York, 1988  
D.O., New York College of Osteopathic Medicine, 1992

Lester Kaye C. Rubio  
Adjunct Faculty Member, Occupational Therapy  
B.S.O.T., University of the Philippines, 2003  
M.H.S., University of Florida, 2011

Jennifer Ruble  
Adjunct Faculty Member, Department of Cariology and Restorative Dentistry  
D.M.D., Boston University School of Dental Medicine, 2009  
GPR, Mountain Area Health Education Center, 2010

Michael J. Ruddy  
Clinical Assistant Professor, Orthopedic Surgery  
B.S., Villanova University, 1973  
M.D., Villanova University, 1979

Camilo A. Ruiz  
Clinical Assistant Professor, Internal Medicine  
B.S., Florida International University, 2002  
D.O., Nova Southeastern University, 2007

Joel L. Rush  
Clinical Professor, Orthopedic Surgery  
B.A./B.S., Washington University, 1977  
D.O., Southeastern University of the Health Sciences, 1985

Howard M. Ruskin  
Clinical Professor, Internal Medicine  
M.D., University of Miami, 1966
Hector Vazquez Saad  
Clinical Assistant Professor, Affiliated, Medicine  
B.S., Pontificia Universidad Catolica, 1995  
M.D., Universidad Autonomo de GDL, 1999

Joshua G. Sabet  
Adjunct Assistant Professor, Disaster and Emergency Management  
B.S., University of Florida, 2004  
J.D., State University of New York, 2008

Utpal N. Sagar  
Clinical Assistant Professor, Internal Medicine  
B.S., Nova Southeastern University, 2001  
M.D., University of Medicine and Dentistry of New Jersey, 2005

Gennaro Sagliocca  
Clinical Assistant Professor, Nephrology  
B.S., Rensselaer Polytechnic Institute, 1976  
M.D., University of Padova School of Medicine, 1985

Bhagirathy Sahasranaman  
Clinical Assistant Professor, Psychiatry  
M.D., VSS Medical College, 1981

Palghat M. Sahasranaman  
Clinical Assistant Professor, Pediatrics  
M.D., University of Calcutta, 1972

Ala Sahawneh  
Clinical Assistant Professor, Family Medicine  
M.D., Semmelweis University, 2001

James Sainsbury  
Adjunct Faculty Member, Endodontics, Division of Surgical Sciences  
D.M.D., University of Pittsburgh, 1970

Hadley Saitowitz  
Adjunct Faculty Member, Optometry

Gustavo Saldias  
Adjunct Assistant Professor, Public Health  
B.A., North Carolina State University, 1984  
M.P.H., University of North Carolina, 1990

Eli R. Saleeby  
Clinical Associate Professor, Dermatology  
B.S., Columbia University, 1977  
M.D., Jefferson Medical College, 1981

Carlos A. Salgado  
Clinical Assistant Professor, Psychiatry  
B.S., University of Miami, 2005  
M.D., University of Illinois, 2009

Emery M. Salom  
Clinical Associate Professor, Obstetrics and Gynecology  
B.S., University of Miami, 1993  
M.D., University of Miami School of Medicine, 1997

Susan G. Salzman  
Adjunct Faculty Member, Periodontology  
A.S., New York Community College, 1979

Jose U. Sanchez  
Clinical Assistant Professor, Internal Medicine  
B.S., Superior Institute of Medical Sciences of Havana—Havana University, 1986

Ramon Sanchez  
Adjunct Faculty Member, Prosthodontics  
D.D.S., University of Iowa College of Dentistry, 1967

Marcos A. Sanchez-Gonzalez  
Clinical Assistant Professor, Family Medicine  
B.S., University of Puerto Rico, 1999  
M.D., Universidad Iberoamericana, 2005  
Ph.D., Florida State University, 2013

Javier Sandoval  
Clinical Assistant Professor, Family Medicine  
B.S., University of Central Florida, 2000  
M.D., Nova Southeastern University, 2005

John R. Santangelo  
Assistant Professor, Affiliated  
B.S., Barry University, 2010  
M.B.A., Nova Southeastern University

Jose Santoro  
Clinical Assistant Professor, Surgery  
M.D., Universidad Catolica de Santiago de Guayaquil, 1991

Juan Santos-Olivares  
Adjunct Faculty Member, Pharmacy Practice  
Pharm.D., Nova Southeastern University, 2005

Brittaney Sargent  
Adjunct Faculty, Occupational Therapy  
B.A., University of South Florida  
O.T.D., Nova Southeastern University, 2016

Astrid Sarvis  
Clinical Assistant Professor, Affiliated, Emergency Medicine  
B.S., Xavier University of Louisiana, 2005  
M.P.H., Yale School of Public Health, 2010  
M.D., University of Mississippi School of Medicine, 2010

Michael J. Sasoni  
Clinical Assistant Professor, Family Medicine  
B.S., Florida Atlantic University, 1997  
D.O., Nova Southeastern University, 2002

Victor Sasson  
Clinical Assistant Professor, Emergency Medicine  
M.D., George Washington School of Medicine, 2000

Richard Saul  
Associate Professor, Audiology  
B.A., University of Florida, 1973  
M.A., Florida Atlantic University, 1976  
Ph.D., State University of New York—Buffalo, 1983

Sandra Savinelli  
Adjunct Faculty, Health Science  
B.S., Kean College, 1984  
M.A., Marywood College, 1990  
SLP.D., Nova Southeastern University, 2001
Timothy Scala  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.S., Florida State University, 1999  
M.S., Nova Southeastern University, 2001  
Psy.D., Nova Southeastern University, 2004

Thomas L. Schaar  
Clinical Assistant Professor, Family Medicine  
M.D., Wayne State University, 1980

Paul N. Schacknow  
Clinical Associate Professor, Ophthalmology  
B.S., Brooklyn College, 1970  
Ph.D., City University of New York, 1976  
M.D., University of Miami School of Medicine, 1983

Shelley Schacter  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., Adelphi University, 1972  
M.A., George Washington University, 1973

Curtis Schalit  
Adjunct Faculty Member, Oral and Maxillofacial Surgery  
D.D.S., University of Missouri, 1993  
Certificate—General Practice, University of North Carolina, 1995

Jordan Schapiro  
Adjunct Faculty Member, Endodontics  
D.D.S., New York University, 1991

Virginia Scheppa  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., College of New Rochelle, 1981  
M.S., Adelphi University, 1983  
M.S., Nova Southeastern University, 1998

Eric Schiffman  
Clinical Assistant Professor, Surgery  
B.S., University of Michigan, 2002  
M.D., Albert Einstein College of Medicine, 2006

Lawrence A. Schiffman  
Clinical Assistant Professor, Dermatology  
B.S., University of Miami, 1996  
M.D., University of Medicine and Dentistry of New Jersey, 2000

Alan Schiller  
Founding Chair, Department of Pathology  
Clinical Professor, Pathology  
M.D., Chicago Medical School, 1967

Brent M. Schillinger  
Clinical Associate Professor, Dermatology  
B.A., State University of New York, 1975  
M.D., State University of New York, 1979

Jeffrey Schneider  
Clinical Assistant Professor, Internal Medicine  
B.A., University of Pennsylvania, 1988  
M.D., Mount Sinai School of Medicine, 1992

Ricky M. Schneider  
Clinical Assistant Professor, Internal Medicine  
M.D., Yale University School of Medicine, 1977

Martin S. Schnier  
Clinical Assistant Professor, Family Medicine  
B.A., Lafayette College, 1980  
D.O., University of Medicine and Dentistry of New Jersey, 1984

Michael Schulman  
Clinical Assistant Professor, Internal Medicine  
B.A., State University of New York—Binghamton, 1983  
D.O., University Health Sciences College of Osteopathic Medicine, 1988

Neil A. Schultz  
Clinical Assistant Professor, Internal Medicine  
B.S., Columbian College, 1973  
M.D., Chicago Medical School, 1977

Aaron Schwartz  
Clinical Assistant Professor, Pulmonary Medicine  
B.S., University of Miami, 1980  
D.O., Philadelphia College of Osteopathic Medicine, 1984

Barry Schwartz  
Clinical Assistant Professor, Surgery  
M.D., University of Miami, 1968

Gary B. Schwartz  
Clinical Associate Professor, Orthopedic Surgery  
Clinical Assistant Professor, Surgery  
B.S., Fairleigh Dickinson University, 1976  
M.D., New York Medical College, 1980

Leslie H. Schwartz  
Clinical Associate Professor, Psychiatry  
A.B., Columbia University, 1967  
M.D., University of Pennsylvania, 1971

Roger K. Schwartzberg  
Clinical Assistant Professor, Internal Medicine  
B.A., Syracuse University, 1970  
D.O., Michigan State University College of Osteopathic Medicine, 1973

Anthony Sciar  
Adjunct Faculty Member, Oral and Maxillofacial Surgery  
D.M.D., University of Florida, 1984

Gregory Scott  
Adjunct Faculty, Health Science  
B.S., Ohio State University, 1998  
M.H.A., Ohio State University, 2000  
Ph.D., Old Dominion University, 2013

Robert H. Sculthorpe  
Clinical Professor, Anesthesiology  
B.S., University of Nebraska, 1970  
D.O., Philadelphia College of Osteopathic Medicine, 1974

Joan M. Sears  
Adjunct Clinical Assistant Professor, Optometry  
O.D., Illinois College of Optometry, 1991

Jesus Seda  
Clinical Assistant Professor, Affiliated, Emergency Medicine  
B.S., Florida International University, 2008  
M.D., Albert Einstein College of Medicine of Yeshiva University, 2013
Mona Sedrak
Adjunct Faculty, Health Science
B.S., University of Texas South Western Medical Center—Dallas, 1990
M.S., AT Stills University, 2000
Ph.D., Walden University, 2003

Scott D. Segal
Clinical Assistant Professor, Psychiatry
B.S., Rensselaer Polytechnic Institute, 1982
M.D., Albany Medical College, 1986
M.B.A., University of Miami, 1996

Zachary K. Segal
Clinical Assistant Professor, Surgery
B.A., Brown University, 1996
M.D., University of Miami, 2001

Romualdo J. Segurola, Jr.
Clinical Associate Professor, Surgery
B.A., University of Miami, 1992

Amy Seinfield
Clinical Assistant Professor, Affiliated, Family Medicine
B.A., University of Michigan, 1990
D.O., Nova Southeastern University, 1998

Andrew A. Seltzer
Clinical Assistant Professor, Orthopedic Surgery
B.S., Michigan State University, 1979
D.O., University of Osteopathic and Health Sciences, 1983

Paul D. Seltzer
Clinical Associate Professor, Orthopedic Surgery
B.S., Eastern Michigan University, 1976
D.O., Philadelphia College of Osteopathic Medicine, 1980

Arlene Semeco
Adjunct Instructor, Health and Human Performance
Adjunct Instructor, Nutrition
B.S., University of Alabama, 2007
M.S., Florida International University, 2013

Michele M. Sepe
Adjunct Faculty Member, Periodontology
A.S., Farmingdale State University, 1988

Carlos A. Sesin
Clinical Assistant Professor, Internal Medicine
B.A., Cornell University, 1995
M.D., University of Medicine and Dentistry of New Jersey, 1999

Anthony L. Shadiack
Clinical Assistant Professor, Family Medicine
B.S., The College of New Jersey, 2007
D.O., University of Medicine and Dentistry of New York, 2011

Jennifer L. Shaer
Clinical Assistant Professor, Pediatrics
B.S., Tufts University, 1992
M.D., Mount Sinai School of Medicine, 1996

Gilbert A. Shamas
Clinical Assistant Professor, Obstetrics and Gynecology
B.A., Emory University, 1968
M.D., Emory University, 1973

Robbie E. Shamet
Adjunct Faculty Member, Periodontology
A.S., Broward Community College, 1967
B.S., University of Kentucky, 1969

Eric Shamus
Adjunct Faculty, Health Science
B.S., Florida International University, 1992
M.S., University of Miami, 1997
Ph.D., Lynn University, 2001
D.P.T., Russell-Sage University, 2010

Craig S. Shapiro
Clinical Assistant Professor, Otorhinolaryngology
B.S., University of Florida, 1985
D.O., Southeastern University of the Health Sciences, 1989

Debora G. Shapiro
Adjunct Faculty Member, Orthodontics and Dentofacial Orthopedics
B.A., Barnard College, Columbia University, 2009
M.S., Nova Southeastern University, 2016
Certificate—Orthodontics and Dentofacial Orthopedics, Nova Southeastern University, 2016

Larry Shapiro
Adjunct Faculty Member, Periodontology
D.D.S., Temple University, 1974
Certificate—Periodontics, University of Pittsburgh, 1976

Laurence Shapiro
Adjunct Faculty Member, Cariology and Restorative Dentistry
D.D.S., New York University, 1975

Khavir Sharieff
Adjunct Faculty Member, Surgery
B.S., George Washington University, 1989
D.O., Des Moines University, 1993
M.B.A., George Mason University, 2010

Ashok Sharma
Clinical Assistant Professor, Internal Medicine
M.D., Punjab University, 1977

Mary Sheehan
Clinical Assistant Professor, Psychiatry
M.D., The National University of Ireland, 1978

Felecia D. Sheffield
Adjunct Assistant Professor, Psychiatry
B.A., University of Miami, 1990
M.A., University of South Florida, 1996
Ph.D., University of South Florida, 2000

Danish Sheikh
Clinical Assistant Professor, Internal Medicine
D.O., New York University, 2011
Michael Shen  
Clinical Associate Professor, Medicine  
M.D., Jiamusi Medical College, 1982  
M.S., Beijing Sports Medicine Center, 1987  
Ph.D., University of Southern California, 1988

Angela Sherman  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., Louisiana Tech University, 1992  
M.A., Louisiana Tech University, 1994  
S.L.P.D., Nova Southeastern University, 2003

P. Lee Shettle  
Clinical Assistant Professor, Ophthalmology  
B.S., Northeast Missouri State University, 1984  
D.O., Kirksville College of Osteopathic Medicine, 1988

Philip Leroy Shettle  
Clinical Assistant Professor, Ophthalmology  
B.S., Stetson University, 1962  
D.O., Kirksville College of Osteopathic Medicine, 1964

Kedar Shetye  
Clinical Assistant Professor, Nephrology  
M.D., Seth G.S. Medical College, 1994

Stuart S. Shipe  
Adjunct Faculty Member, Pharmacy Practice  
B.S., North Dakota State University, 1986  
M.S.O.M., Florida College of Integrative Medicine, 2002  
D.A.O.M., Oregon College of Oriental Medicine, 2012

Kevin B. Shrock  
Clinical Assistant Professor, Orthopedic Surgery  
B.S., Yale University, 1982  
M.D., Stanford University School of Medicine, 1987

Richard G. Shugaram  
Clinical Assistant Professor, Surgery  
A.B., Johns Hopkins University, 1960  
M.D., University of Maryland, 1964

Jagdish Shukla  
Clinical Assistant Professor, Family Medicine  
M.D., South Gujarat University, 1995

Peter Shulman  
Clinical Assistant Professor, Clinical Medicine  
B.S., State University of New York, 1968  
M.D., Chicago Medical School, 1972  
M.B.A., University of Miami, 1997

Bradley A. Shumaker  
Clinical Assistant Professor, Internal Medicine  
B.A., University of Pittsburgh, 1995  
M.D., M.B.A., Hahnemann University, 2000  
M.B.A., George Washington University, 2010

Bernard Shuster  
Clinical Assistant Professor, Surgery  
B.A., Brandeis University, 1987  
M.D., Cornell University, 1991

Kristina A. Siddall  
Clinical Assistant Professor, Surgery  
B.S., Case Western University, 1996  
M.D., Case Western University, 2001

Mohsin A. Siddiqui  
Clinical Assistant Professor, Internal Medicine  
B.S., Nova Southeastern University, 2003  
D.O., Nova Southeastern University, 2008

Rabia Siddiqui  
Clinical Assistant Professor, Internal Medicine  
M.D., University of Sind, 1999

Marc Alan Siegel  
Assistant Professor, Pediatric Dentistry  
B.A., Florida Atlantic University, 1999  
D.D.S., Howard University, 1999

Deneen Signator-Newman  
Clinical Instructor, Physician Assistant Studies  
B.S., Northern Illinois University, 1986  
P.A., Cook County Hospital Physician Assistant Program, 1993

Jaime Silverman  
Adjunct Faculty Member, Endodontics  
D.D.S., Columbia University, 2000

Randal Silbiger  
Clinical Associate Professor, Clinical Medicine  
B.A., Northwestern University, 1980  
M.D., University of Miami, 1984

Barry Silverman  
Clinical Professor, Surgery  
M.D., Chicago Medical School

Edward Silverman  
Clinical Assistant Professor, Surgery  
B.S., Pennsylvania State University, 2006  
M.D., George Washington University, 2010

Sanford M. Silverman  
Clinical Associate Professor, Surgery  
Clinical Assistant Professor, Anesthesiology  
B.S., Tufts University, 1981  
M.S., Tufts University, 1982  
M.D., New York Medical College, 1986

William M. Silverman  
Clinical Professor, Family Medicine  
B.S., Muhlenberg College, 1972  
D.O., Philadelphia College of Osteopathic Medicine, 1977

Freya Silverstein  
Clinical Assistant Professor, Nephrology  
M.D., State University of New York, 1983

Scott Silverstein  
Clinical Assistant Professor, Affiliated, Family Medicine  
B.A., University of Florida  
D.O., Des Moines University, 1998
Stephen M. Silverstein  
Clinical Assistant Professor, Family Medicine  
B.A., Temple University, 1963  
D.O., Des Moines College of Osteopathic Medicine and Surgery, 1967

Albert Simon  
Adjunct Faculty, Health Science  
B.S., Alderson-Broaddus College, Physician Assistant, 1979  
M.Ed., Saint Francis University, 1985  
D.H.Sc., Nova Southeastern University, 2004

Glenn R. Singer  
Clinical Professor, Internal Medicine  
B.S., Tulane University, 1974  
M.D., University of South Florida, 1978

Jerry Singer  
Clinical Associate Professor, Urology  
M.D., New York University School of Medicine, 1980

Jesse Singer  
Adjunct Associate Professor, Biomedical Informatics  
B.S., University of Florida, 1995  
D.O., Nova Southeastern University, 1999  
M.P.H., Nova Southeastern University, 2003

Melissa S. Singer  
Clinical Assistant Professor, Pediatrics  
B.A., Cornell University College of Arts and Sciences, 1991  
M.D., University of Miami School of Medicine, 1996  
M.P.H., George Washington Medical Center School of Public Health and Health Sciences, 2002

Alka Singh  
Clinical Assistant Professor, Affiliated, Family Medicine  
M.D., Higher Medical Institute, 2003

Satya P. Singh  
Clinical Assistant Professor, Gastroenterology  
M.B.B.S., All India Institute of Medical Sciences, 1978

Tamika G. Singh  
Clinical Assistant Professor, Affiliated, Family Medicine  
B.S., University of Miami, 2000  
M.D., Ross University, 2006

Tiffany Sizemore-Ruiz  
Clinical Assistant Professor, Internal Medicine  
Clinical Assistant Professor, Medicine  
B.S., Florida Atlantic University, 2005  
D.O., Nova Southeastern University, 2009

Arthur Skidmore  
Adjunct Faculty Member, Endodontics  
D.D.S., West Virginia University, 1966

Brandon W. Skelton  
Clinical Assistant Professor, Surgery  
B.S., University of Mississippi, 2001  
M.D., University of Mississippi, 2005

Stanley E. Skopit  
Clinical Professor, Dermatology  
B.S., University of Miami, 1967  
M.S., Drake University, 1972  
D.O., University of Health Sciences College of Osteopathic Medicine, 1977

David Skopp  
Adjunct Faculty Member, Department of Prosthodontics  
D.D.S., University of Maryland Dental School, 1990

Matthew L. Slane  
Clinical Assistant Professor, Affiliated, Emergency Medicine  
B.S., Stetson University, 2000  
D.O., Nova Southeastern University, 2005

Valori Slane  
Clinical Assistant Professor, Affiliated, Emergency Medicine  
B.S., University of Georgia, 2003  
M.D., Medical College of Georgia, 2008

Todd L. Slesinger  
Clinical Associate Professor, Family Medicine  
B.A., University of Chicago, 1994  
M.D., State University of New York, 1998

Scott Paul Sloane  
B.A., St. Thomas University, 2009  
M.S.N., University of Miami, 2015  
D.N.P., University of Miami, 2016

Alan Slootsky  
Adjunct Faculty Member, Prosthodontics  
D.M.D., New Jersey Dental School, 1978

Leslie R. Small  
Adjunct Clinical Assistant Professor, Optometry  
O.D., University of California, Berkeley School of Optometry, 2015

Kirk Smick  
Adjunct Clinical Assistant Professor, Optometry  
B.S., Pacific University, 1966  
O.D., Pacific University, 1967

Damone E. Smith  
Adjunct Faculty Member, Oral and Maxillofacial Surgery  
D.D.S., University of Michigan, 1996

Laura Smith  
Assistant Professor, College of Nursing  
B.S.N., Loyola University, 1983  
M.S.N., University of South Florida, 1997  
Ph.D., University of Florida, 2012

Shaun Smithson  
Clinical Assistant Professor, Affiliated, Cardiology  
B.A., Vassar College  
M.D., Howard University College of Medicine, 2009

Jennifer Smith-Zolmon  
Adjunct Clinical Assistant Professor, Optometry  
O.D., Nova Southeastern University, 2006
Wendolyn Sneed  
Clinical Assistant Professor, Pathology  
B.S., University of Vermont, 1993  
M.D., Ponce School of Medicine, 1999

Jeffrey P. Snow  
Clinical Assistant Professor, Surgery  
B.S., Massachusetts Institute of Technology, 1978  
M.D., Johns Hopkins School of Medicine, 1982

Tanveer Sobhan  
Clinical Assistant Professor, Psychiatry  
M.D., University of Dhaka, 1992

Javier Sobrado  
Clinical Assistant Professor, Gastroenterology  
M.D., Universidad de Costa Rica, 1977

Matthew Soff  
Clinical Assistant Professor, Medicine  
B.A., Boston University, 1973  
M.D., Albert Einstein College of Medicine, 1976

Ariel D. Soffer  
Clinical Assistant Professor, Affiliated, Cardiology  
B.S., University of South Florida, 1986  
M.D., University of Miami School of Medicine, 1990

Ekta Solanki  
Clinical Assistant Professor, Internal Medicine  
D.O., Nova Southeastern University, 2013

Max O. Solano  
Clinical Assistant Professor, Family Medicine  
M.D., Universidad de Costa Rica, 1981

Terrence L. Soldo  
Clinical Assistant Professor, Family Medicine  
B.S., University of Nebraska, 1977  
D.O., Kirksville College of Osteopathic Medicine, 1990

Natasha Solle  
Adjunct Faculty Member, College of Nursing  
B.S.N., University of Miami, 2011  
Doctorate, University of Miami, 2015

Andrea H. Sommers  
Clinical Assistant Professor, Family Medicine  
B.A., University of South Florida, 1978  
D.O., Southeastern University of the Health Sciences, 1986

Richard Sorkin  
Adjunct Faculty Member, Optometry  
O.D., Nova Southeastern University, 1997

John M. Spalding  
Adjunct Clinical Faculty, Optometry  
O.D., Nova Southeastern University, 1997

David S. Spangler  
Adjunct Instructor, Medical Education  
B.A., Carnegie Mellon University, 1970  
M.A., Union Institute and University, 2001  
Ph.D., Union Institute and University, 2007

Jesse Spearo  
B.A., Lakeland College, 2003  
M.S., Lynn University, 2005  
Ph.D., Capella University, 2016

David Speizman  
Clinical Assistant Professor, Internal Medicine  
B.A., Tulane University, 1983  
D.O., New York College of Osteopathic Medicine, 1990

Carlos E. Spera  
Clinical Assistant Professor, Surgery  
M.D., Universidad de Buenos Aires, 1974

Randi A. Sperling  
Clinical Assistant Professor, Pediatrics  
B.A., Vassar College, 1986  
D.O., New York College of Osteopathic Medicine, 1990

Evans C. Spiceland  
Adjunct Assistant Professor, Disaster and Emergency Management  
B.S., University of Alabama, 1969  
M.Ed., University of South Alabama, 1979

Adam S. Splaver  
Clinical Assistant Professor, Cardiology  
B.A., Yeshiva College, 1994  
M.D., Albert Einstein College of Medicine of Yeshiva University, 1998

Theodore Splaver  
Adjunct Faculty Member, Oral and Maxillofacial Surgery  
D.M.D., University of Pittsburgh, 1966

Henry A. Spratt  
Clinical Assistant Professor, Surgery  
M.D., University of Wales, 2001

Daina Stabulniece  
Adjunct Instructor, Medical Education  
M.A., Maryland Institute College of Art, 2004

William H. Stager  
Clinical Professor, Family Medicine  
B.A., Livingston College, 1983  
D.O., Southeastern University of the Health Sciences, 1989

Zarina Staller  
Adjunct Faculty Member, Prosthodontics  
D.M.D., Nova Southeastern University, 2000

Richard Stanton  
Adjunct Faculty Member, Prosthodontics  
D.M.D., Tufts University, School of Dental Medicine, 2001

Margaret J. Starr  
Clinical Assistant Professor, Family Medicine  
M.S., Stanford University, 1970  
D.O., Michigan State University College of Osteopathic Medicine, 1979

Eli Stav  
Adjunct Professor, Occupational Therapy  
B.A., Florida Atlantic University, 2001  
M.S., Kansas State University, 2003  
Sc.D., Towson University, 2012
Alvin Stein  
Clinical Assistant Professor, Orthopedic Surgery  
B.A., New York University, 1957  
M.D., Chicago Medical School, 1961

Joel D. Stein  
Clinical Associate Professor, Family Medicine  
D.O., Kirksville College of Osteopathic Medicine, 1983

Lauren Steinberg  
Adjunct Faculty Member, Department of Periodontology  
D.M.D., University of Florida, 2017

Joshua Z. Steiner  
Clinical Assistant Professor, Family Medicine  
B.A., Yeshiva University, 1992  
D.O., Nova Southeastern University, 2000

Michael L. Steiner  
Clinical Associate Professor, Pediatrics  
A.B., University of Pennsylvania, 1958  
M.D., St. Louis University School of Medicine, 1962

Rita Steiner  
Adjunct Faculty Member, Endodontics  
D.M.D., Nova Southeastern University, 2001

Jeff P. Steinhoff  
Clinical Associate Professor, Cardiology  
B.S., Pennsylvania State University, 1994  
M.D., University of Medicine and Dentistry of New Jersey, 1998

Steven Steinlauf  
Clinical Associate Professor, Surgery  
B.S., University of Florida, 1990  
M.D., University of Miami, 1994

Stuart Stempel  
Adjunct Faculty Member, Department of Prosthodontics  
D.D.S., New York University College of Dentistry, 1956

Edward C. Stephenson  
Community Assistant Professor, Public Health  
B.S., Long Island University, 1975  
M.S.W., Howard University, 1977  
M.P.H., University of Pittsburgh, 1979

Fran E. Sterling  
Clinical Assistant Professor, Pediatrics  
B.S., Ohio State University, 1975  
D.O., Ohio State University, 1981

David J. Stern  
Clinical Professor, Internal Medicine  
B.A., LaSalle College, 1975  
D.O., Philadelphia College of Osteopathic Medicine, 1979

Diane Stern  
Adjunct Faculty Member, Diagnostic Sciences  
D.M.D., Columbia University, 1961

James Stobinski  
Adjunct Faculty Member, College of Nursing  
B.S.P.A., Saint Joseph’s College of Maine, 1994  
B.S.N., East Carolina University, 1999  
M.A., Webster University, 1997  
M.S.N., East Carolina University, 2001  
Ph.D., Trident University International, 2011

Kevin Stone  
Clinical Associate Professor, Internal Medicine  
M.D., Universidad Mundial Dominicana, 1984

Lisa Stottlemeyer  
Adjunct Clinical Assistant Professor, Optometry  
D.O., Pennsylvania College of Optometry, 1998

Neil H. Strauss  
Adjunct Instructor, Geriatrics  
B.S., Dickinson College, 1997  
D.P.M., Barry University of Graduate Medical Science, 2003

Amy M. Strobbe  
Clinical Assistant Professor, Internal Medicine  
B.S., University of South Dakota, 2000  
D.O., Des Moines College of Osteopathic Medicine, 2004

Michael S. Strobbe  
Clinical Assistant Professor, Internal Medicine  
B.S., Nova Southeastern University, 2000  
D.O., Nova Southeastern University, 2004

Nicholas Strobbe  
Clinical Assistant Professor, Internal Medicine  
B.S., Nova Southeastern University, 2005  
D.O., Nova Southeastern University, 2009

Steven M. Strobbe  
Clinical Assistant Professor, Family Medicine  
D.O., Kirksville College of Osteopathic Medicine, 1977

Linda Strommen  
Adjunct Faculty Member, College of Nursing  
B.S.N., Benedict’s College, 1983  
M.S.N., Saint Joseph’s College of Maine, 2002  
Doctorate, Nova Southeastern University, 2010

Herman Stubbe  
Clinical Assistant Professor, Clinical Medicine  
B.S., Emory University, 1995  
M.D., University of Puerto Rico School of Medicine, 1999

Zevon Stubblefield  
Adjunct Instructor, Sports Medicine  
B.S., University of North Florida, 2004  
M.S., Florida International University, 2008

Manuel Suarez  
Clinical Assistant Professor, Pulmonary Medicine  
M.D., University Central del Este School of Medicine, 1981

Iswanto Sucandy  
Clinical Associate Professor, Surgery  
M.D., Airlangga University School of Medicine, 2003
Nichol D. A. Suite  
Clinical Assistant Professor, Affiliated, Neurology  
B.A., Johns Hopkins University of Arts and Sciences, 1982  
M.D., John Hopkins University School of Medicine, 1986

Sean A. Sukal  
Clinical Assistant Professor, Dermatology  
M.D., Ph.D., Yeshiva University, 2002

Virginia Sumrall  
Adjunct Faculty Member, College of Nursing  
B.S.N., William Carey College, 1992  
M.S.N., University of Southern Mississippi, 1997  
Ph.D., University of Mississippi Medical Center, 2010

Leo Sushner  
Adjunct Faculty Member, Department of Periodontology  
D.D.S., Meharry Medical College, School of Dentistry, 1974  
Residency—General Practice, Florida State Hospital, 1975  
Certificate—Periodontics, University of Missouri, Graduate School of Dentistry, 1977

Glen E. Sutherland  
Clinical Associate Professor, Internal Medicine  
B.S., Pennsylvania State University, 1969  
M.D., Rush Medical College, 1973

Eli Suzuki  
Adjunct Faculty Member, Community and Public Health Sciences  
D.D.S., Kanagawa Dental College, 2001  
Certificate—AEGD, Nova Southeastern University, 2008

Charles Swanson II  
Clinical Instructor, Internal Medicine  
D.O., Pikeville College, 2004

Todd Swinderman  
Adjunct Faculty Member, College of Nursing  
B.S.N., Florida Atlantic University, 1990  
M.S.N., Florida Atlantic University, 1997  
D.N.S., Florida Atlantic University, 2005  
Ph.D., Florida Atlantic University, 2010

Javier Talamo  
Clinical Assistant Professor, Emergency Medicine  
D.O., Lake Erie College of Osteopathic Medicine, 2010

Raja R. Talati  
Clinical Assistant Professor, Family Medicine  
B.S., University of California, 1991  
M.D., M.S., Ross University, 1995  
M.S., University of Illinois, 2014

Bruce Tandy  
Adjunct Faculty Member, Cariology and Restorative Dentistry  
D.D.M.D., Washington University, 1978  
GPR, Mount Sinai Hospital Hartford, 1979

Debra Tarakofsky  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.S., Florida International University, 1990  
M.S., Nova Southeastern University, 1993

Sara Tavakoli  
Assistant Professor, Affiliated  
B.S., B.A., New Mexico State University, 2001  
Ph.D., University of New Mexico, 2006

Ariana Taylor  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., University of Florida, 1997  
M.S., Nova Southeastern University, 2000

James H. Taylor  
Clinical Associate Professor, Family Medicine  
B.S., Dickinson College, 1972  
D.O., Philadelphia College of Osteopathic Medicine, 1977

Kevin Taylor  
Clinical Assistant Professor, Emergency Medicine  
M.D., Wake Forest University School of Medicine, 2006

Leslie Taylor  
Adjunct Assistant Professor, Disaster and Emergency Management  
B.A., University of Sierra Lione, 1987  
M.P.A., University of North Florida, 1995  
Ph.D., Florida Atlantic University, 2007

Tenerife Tejera  
Adjunct Faculty Member, Oral and Maxillofacial Surgery  
D.M.D., University of Alabama, 1994  
M.D., University of North Carolina, 1996

Edna L. Tello  
Clinical Assistant Professor, Pediatrics  
B.A., University of Miami, 1993  
M.D., University of Connecticut, 1997

James R. Templeton  
Adjunct Assistant Professor, Biomedical Informatics  
M.S., University of Phoenix, 2001  
M.B.A., Nova Southeastern University, 2005  
Ph.D., Nova Southeastern University, 2010

Evan Tepper  
Clinical Assistant Professor, Pediatrics  
M.D., University of South Florida, 1989

George R. Termotto  
Clinical Assistant Professor, Pediatrics  
B.S., University of Miami, 1968  
M.D., University of Zaragoza, 1975

Deborah Terry  
Adjunct Faculty Member, College of Nursing  
B.S.N., University of Miami, 1988  
M.S.N., University of Miami, 1991  
D.N.P., University of Florida, 2010

Baruch Tetri  
Adjunct Faculty Member, Department of Periodontology  
Doctor of Stomatology, Moscow University of Medicine, 2002  
D.D.S., New York University, 2006

Shaival Thakore  
Clinical Assistant Professor, Internal Medicine  
B.S., University of South Florida, 2001  
M.D., University of South Florida, 2005
Paula Thaqi
Clinical Assistant Professor, Clinical Medicine
B.S., Brooklyn College, 1986
M.D., State University of New York Health Science Center, 1990
M.P.H., Columbia University, 1997

Ann Marie Tharpe
Adjunct Professor, Audiology
B.S., University of Arizona, 1979
M.S., Vanderbilt University, 1994
Ph.D., Vanderbilt University, 1994

Mario Theliard
Adjunct Instructor, Family Medicine
M.D., State University of Haiti School of Medicine, 2000

Deborah M. Thevenin
Adjunct Associate Professor, Family Medicine
B.A., University of Miami, 1981
M.S., University of Miami, 1984
M.D., University of Miami, 1989

Ruth Thomas
Adjunct Faculty Member, College of Nursing
B.S.N., Miami-Dade College, 1987
M.S.N., University of Phoenix, 2005
Ph.D., Florida International University, 2012

Lanetta Thorpe
Adjunct Faculty, Health Science
B.A., University of North Carolina, 1987
M.S.P.H., University of North Carolina, 1998
M.D./M.P.H., University of North Carolina, 1993

Elena Timoshkin
Clinical Instructor, Family Medicine
B.A., Bowdoin College, 2002
D.O., Nova Southeastern University, 2009

David M. Tobolowsky
Clinical Associate Professor, Psychiatry
B.S., Southern Methodist University, 1974
M.D., Southwestern Medical School, 1978

Herbert Todd
Professor, Internal Medicine
M.D., University of Miami, 1966

H. Murray Todd
Adjunct Professor, Diagnostic Sciences
Clinical Professor, Neurology
B.A., University of Toledo, 1962
M.D., University of Miami School of Medicine, 1966

Kathleen L. Todd
Clinical Assistant Professor, Family Medicine
D.O., Michigan State University
College of Osteopathic Medicine, 1995

Haley Todsen
Adjunct Faculty Member, Emergency Medicine
B.S., Florida State University, 1997
D.O., Kansas City University of Medicine and Biosciences, 2002

Sharon Tollin
Adjunct Faculty Member
M.S.N.
Ph.D.

Peter A. Tomasel, Jr.
Clinical Assistant Professor, Orthopedic Surgery
D.O., Southeastern University of the Health Sciences, 1991

Terrill Tops
Clinical Assistant Professor, Pathology
B.S., Johnson C. Smith University, 1988
M.D., University of Rochester, 1995

Jaime Torner
Clinical Instructor, Internal Medicine
M.D., Universidad Complutense de Madrid, 1965

Jose Torrent
Clinical Assistant Professor, Pathology
M.D., Universidad de Sevilla, 1974

Michael Torres
Clinical Assistant Professor, Family Medicine
Spartan Health Sciences University, 1985

Julio D. Torres-Navedo
Clinical Assistant Professor, Otolaryngology
M.D., University of Puerto Rico School of Medicine, 1978

Molrine Tracey
Clinical Assistant Professor, OB/GYN
B.S., University of Miami, 1984
M.S., Barry University, 2001
M.D., University of Florida, 2005

Vu Hay Tran
Clinical Assistant Professor, Affiliated, Emergency Medicine
B.S., Florida International University, 2003
M.D., State University of New York—Downstate Medical Center, 2009

Darin P. Trelka
Clinical Assistant Professor, Pathology
B.A., Washington & Jefferson University, 1992
Ph.D., Thomas Jefferson University, 1999
M.D., CMP—Hahnemann University, 2002

Susan Triano
Adjunct Faculty Member, Department of Speech-Language Pathology
B.S., University of Florida, 1986
M.S., Nova University, 1993

Tammy L. Tuchel
Clinical Assistant Professor, Family Medicine
M.P.H., University of Miami, 1993
D.O., Nova Southeastern University, 1997

Joyce Turcotte
Adjunct Faculty Member, Periodontology
A.A.S., New York City Community College, 1973
B.S., University of Bridgeport, 1976
M.Ed., Temple University, 1982
CPR Instructor Trainer—Faculty, American Heart Association, 2005
Certificate—Local Anesthesia, University of Bridgeport, 2005
Noah Turk
Adjunct Faculty Member, Pediatric Dentistry
D.M.D., Nova Southeastern University, 2015
M.S., Nova Southeastern University, 2017
Certificate—Pediatric Dentistry, Nova Southeastern University, 2017

Michael J. Turley
Clinical Instructor, Physician Assistant Studies
P.A., Bayley Seton Hospital Physician Assistant Program, 1973

Inemesit Umoren
Clinical Assistant Professor, Infectious Disease
M.D., University of Nigeria, 2001

Narendra R. Upadhyaya
Clinical Assistant Professor, Cardiology
M.D., M. P. Shah Medical College, 1981

Norman Urich
Clinical Assistant Professor, Family Medicine
B.S., Duquesne University, 1970
D.O., Kirskville College of Osteopathic Medicine, 1974

Helena Urrea-Feldsberg
Adjunct Faculty Member, Pediatric Dentistry
D.D.S., Universidad Javeriana, 1978

Eugene Usberghi, Jr.
Clinical Assistant Professor, Family Medicine
B.S., University of Akron, 1968
D.O., College of Osteopathic Medicine and Surgery, 1976

Dushyant J. Utamsingh
Clinical Assistant Professor, Internal Medicine
M.D., Seth G.S. Medical College, 1984

Jaime Valencia
D.M.D., Tufts University School of Dental Medicine, 2017

Jessica M. Valenzuela
Associate Professor, Affiliated, Psychology
B.S., University of Florida, 2001
M.S., University of Miami, 2003
Ph.D., University of Miami, 2003

Pia Valvassori
Adjunct Assistant Professor, Family Medicine
B.S., Marquette University, 1987
M.S.N., University of Florida, 1992
Ph.D., University of Florida, 1997

Marjan Vandevar
Clinical Assistant Professor, Internal Medicine
B.S., University of Miami, 2004
D.O., Nova Southeastern University, 2009

Erik Van Ginkel
Clinical Assistant Professor, Family Medicine
M.D., University of Amsterdam, 1981

Jorge Vargas
Adjunct Faculty Member, Pediatric Dentistry
Certificate—Pediatric Dentistry, NYU, 1995
D.M.D., Nova Southeastern University, 2003
Certificate—Orthodontics, 2006

Mini Varghese
Clinical Assistant Professor, Surgery
B.S., University of Rochester, 2000
M.D., Stony Brook University School of Medicine, 2005

Norvan Vartevan
Clinical Instructor, Surgery
B.S., University of Oklahoma, 2008
D.O., Lake Erie College of Osteopathic Medicine, 2012

Kimber Vasquez
Clinical Instructor, Family Medicine
M.D., Universidad Autonoma de Sinaloa, 1984

Sofia E. Vasquez-Solomon
Clinical Assistant Professor, Internal Medicine
M.D., University of Panama Medical School, 1994

Robert Vassall
Clinical Assistant Professor, Affiliated, Psychiatry
B.S., McMaster University, 1975
M.D., Meharry Medical College, 1988

Vanitha Vasudevan
Clinical Assistant Professor, Clinical Medicine
M.S., Maulana Azad Medical College, 2003
M.D., Maulana Azad Medical College, 2006

Edwin Vazquez
Adjunct Faculty, Pharmacy Practice
B.S., Nova Southeastern University, 2002
D.V.M., Michigan State University, 2007

John Venzor
Clinical Assistant Professor, Internal Medicine
D.O., A.T. Still University of Health Sciences, 2009

Stephen Vernon
Clinical Associate Professor, Pathology
B.S., University of South Florida, 1971
M.D., University of South Florida, 1974

Shelley Victor
Adjunct Faculty Member, Department of Speech-Language Pathology
B.A., State University of New York—Center at Stony Brook, 1973
M.A., University of Miami, 1978
Ed.D., Nova Southeastern University, 1995

Yelena Vidgop
Clinical Assistant Professor, Clinical Medicine
B.S., Muhlenberg College, 2002
M.D., University of Medicine and Dentistry of New Jersey, 2006

Carlos A. Villalba
Clinical Assistant Professor, Internal Medicine
M.D., La Pontificia Universidad Javeriana, 2000

Carlos Villanueva
Adjunct Faculty Member, Prosthodontics
D.D.S., Santa Maria University, 2002
Certificate—Prosthodontics, Nova Southeastern University, 2010
Fellowship, Implant Dentistry, Nova Southeastern University, 2011
Tomas Villanueva
Clinical Assistant Professor, Internal Medicine
B.A., St. Thomas University, 1986
D.O., Southeastern University of the Health Sciences, 1991

Emilio Volz
Clinical Assistant Professor, Affiliated, Emergency Medicine
B.S., B.A., University of Miami, 2005
M.D., Creighton University School of Medicine, 2009

John W. Waidner
Clinical Assistant Professor, Pediatrics
B.A., Miami University, 1986
M.D., University of South Florida, 1990

Naimah Wajd
Adjunct Faculty Member
B.S., Florida State University, 2006
M.S., Nova Southeastern University, 2009
D.O., Nova Southeastern University, 2013

Kay Francas Walker
Adjunct Professor, Occupational Therapy
B.S., University of Florida, 1964
M.Ed., University of Florida, 1970
Ph.D., University of Florida, 1990

Terri N. Wall
Adjunct Assistant Professor, Family Medicine
B.S., University of Florida, 1990
M.A., University of North Florida, 1992
Ph.D., Pennsylvania State University, 1998

Dana Wallace
Clinical Associate Professor, Clinical Medicine
B.A., University of Tennessee, 1969
M.D., University of Tennessee, 1972

Gerald Wallach
Adjunct Faculty Member, Cardiology and Restorative Dentistry
D.D.S., New York University, 1961

Kathleen Walsh
Adjunct Faculty Member, College of Nursing
B.S., St. Joseph College, 1970
M.S., The Catholic University of America, 1981
Ed.D., Dowling College, 2005

Jacqueline R. Walter Reese
Adjunct Faculty, Occupational Therapy
B.S., Keuka College, 1997

Annie Wang
Clinical Assistant Professor, Pediatrics
D.O., Nova Southeastern University, 2010

Hiaying (Yan) Wang
Adjunct Clinical Assistant Professor, Optometry
M.D., Tianjin Medical University, 1994

Youxue Wang
Clinical Associate Professor, Biomedical Sciences
B.S., Lanzhou Medical College, 1985
M.S., Lanzhou Medical College, 1988
M.D., Nagoya University, 2001

Sheldon T. Warman
Clinical Associate Professor, Internal Medicine
B.A., New York University, 1973
M.D., Chicago Medical School, 1976

Jack Waterman
Clinical Associate Professor, Nephrology
D.O., Philadelphia College of Osteopathic Medicine, 1981

Chelsea Watts
A.A., Santa Fe College, 2010
B.S., University of South Florida, 2012
O.T.D., Nova Southeastern University, 2015

Marsha Weiner
Adjunct Associate Professor, College of Nursing
B.S.N., University of Rochester, 1975
M.S.N., University of Pennsylvania, 1993
Certificate—Pediatrics, University of Pennsylvania, 1994
D.N.P., Florida State University, 2014

Brian K. Weinstein
Clinical Assistant Professor, Surgery
M.D., State University of New York Health Science, 1993

Mitchell D. Weinstein
Clinical Associate Professor, Urology
B.S., Pennsylvania State University, 1979
D.O., University of Health Sciences, 1984

Richard A. Weinstock
Clinical Assistant Professor, Surgery
B.A., University of North Florida, 1981
D.O., Texas College of Osteopathic Medicine, 1985

Stephen A. Weirich
Clinical Associate Professor, Family Medicine
B.S., Allegheny College, 1981
M.D., University of Rochester, 1985

Jeffrey I. Weisberg
Clinical Professor, Hematology/Oncology
B.A., Brooklyn College, 1967
D.O., University of Health Sciences College of Osteopathic Medicine, 1971

William Weisberg
Clinical Assistant Professor, Surgery
B.S., Temple University, 1969
D.O., Philadelphia College of Osteopathic Medicine, 1973

Eduardo T. Weiss
Clinical Associate Professor, Dermatology
M.D., Universidad Central de Venezuela, 1982

Eric Weiss
Clinical Professor, Surgery
B.S., Penn State University, 1984
M.D., Temple University, 1988

Marcella Weiss
Clinical Assistant Professor, Family Medicine
M.D., Universidad Central de Venezuela, 1990
Kristy Weissling  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.S., University of Nebraska—Lincoln, 1988  
M.S., University of Nebraska—Lincoln, 1990  
SLP.D., Nova Southeastern University, 2006

Karl S. Weller  
Clinical Assistant Professor, Internal Medicine  
B.S., Florida State University, 2001  
D.O., Nova Southeastern University, 2007

Todd Welliver  
Clinical Instructor, Internal Medicine  
B.S., Indiana University, 1992  
M.D., Ross University, 2001

David Wessel  
Adjunct Faculty Member, Prosthodontics  
D.M.D., University of Pittsburgh, 1974  
Certificate—Prosthodontics, Boston University, 1976

Ellen Whelan  
Adjunct Faculty Member, Department of Speech Language Pathology  
M.S., Nova Southeastern University, 2001  
Psy.D., Nova Southeastern University, 2004

Graham F. Whitfield  
Clinical Associate Professor, Orthopedic Surgery  
B.S., University of London, 1963  
Ph.D., University of London, 1969  
M.D., New York Medical College, 1976

Harvey M. Wiener  
Clinical Assistant Professor, Radiology  
B.A., University of Rochester, 1979  
M.D., University of Medicine and Dentistry of New Jersey, 1983

Joseph M. Wierzbicki  
Clinical Assistant Professor, Family Medicine  
B.S., Creighton University, 2005  
M.D., University of Kansas, 2009

Ronald J. Wiewora  
Clinical Professor, Preventive Medicine  
B.S., University of Illinois, 1974  
M.D., University of Illinois, 1978  
M.P.H., University of Miami, 1986

Laure-Ann Wiggan-Lampart  
Clinical Assistant Professor, Pediatrics  
M.D., University of the West Indies, 1991

Harold E. Wiggin  
Adjunct Assistant Professor, Biomedical Informatics  
B.A., Eckerd College, 1972  
M.S., Nova University, 1977  
Ed.S., Florida Atlantic University, 1987  
Ed.D., Florida Atlantic University, 1991

Richard J. Wilbur  
Clinical Assistant Professor, Internal Medicine  
B.A., Duke University, 1978  
M.D., University of South Florida College of Medicine, 1981

Robb E. Wilentz  
Clinical Professor, Pathology  
B.A., Harvard College, 1992  
M.D., The Johns Hopkins University School of Medicine, 1996

Ronald K. Williams  
Clinical Assistant Professor, Family Medicine  
B.A., Hofstra University, 1992  
D.O., New York College of Osteopathic Medicine, 1996

Joseph G. Willmitch  
Clinical Instructor, Physician Assistant Studies  
B.S., Youngstown State University, 1976

Delfina Wilson  
Adjunct Assistant Professor, Family Medicine  
B.S., Mississippi State University, 2004  
M.A., Mississippi State University, 2005  
Ph.D., Mississippi State University, 2009

Fawn Winkelman  
Clinical Assistant Professor, Family Medicine  
B.S., University of Florida, 2002  
M.S., Nova Southeastern University, 2003  
D.O., Nova Southeastern University, 2010

Paul K. Winner  
Clinical Professor, Neurology  
B.S., Manhattan College, 1977  
D.O., New York College of Osteopathic Medicine, 1981

Jeffrey Wisnicki  
Clinical Assistant Professor, Surgery  
M.D., Albany Medical College of Union University, 1980

Bryan L. Witt  
Clinical Instructor, Surgery  
D.O., Edward Via Virginia College of Osteopathic Medicine, 2007

Sharon Lee Witt  
Clinical Assistant Professor, Family Medicine  
B.S., University of Scranton, 2004  
D.O., Nova Southeastern University, 2009

Monica Wojcik  
Adjunct Faculty Member, Department of Speech-Language Pathology  
B.A., University of Maine—Orono, 1974  
M.A., University of Miami, 1976

Edward Wolek  
Clinical Assistant Professor, Geriatrics  
B.S., Palm Beach Atlantic University, 1997  
D.O., Nova Southeastern University, 2001

Marlene R. Wolf  
Clinical Assistant Professor, Affiliated, Family Medicine  
B.A., University of Pennsylvania, 1973  
M.D., Medical College of Pennsylvania, 1977

Antonio Wong  
Clinical Assistant Professor, Clinical Medicine  
B.S., University of Miami, 1984  
M.D., University of Miami, 1990
Emily Wong-Swartz  
*Adjunct Assistant Professor, Nutrition*  
B.S., McGill University, 1981  
M.S., Barry University, 2005

Lang Woodmansee  
*Adjunct Faculty Member, Optometry*

Gale Woolley  
*Adjunct Faculty Member, College of Nursing*  
B.S.N., University of Rhode Island, 1972  
M.S.N., Adelphi University, 1976  
Ed.D., Florida International University, 1989

Darwin B. Wooten  
*Clinical Assistant Professor, Surgery*  
B.S., University of Mississippi, 1990  
M.D., Vanderbilt University School of Medicine, 1994

Randal G. Worth  
*Clinical Assistant Professor, Internal Medicine*  
B.S., Iowa State University, 1973  
D.O., Des Moines College of Osteopathic Medicine and Surgery, 1977

Marilyn Wright  
*Adjunct Faculty, Health Science*  
B.A., University of California, 1974  
B.S., Loma Linda University, 1976  
M.P.H., Loma Linda University, 1991  
D.P.H., Loma Linda University, 2001

Tamara S. Wright  
*Clinical Assistant Professor, Family Medicine*  
M.D., Lugansky Medical Institute, 1990

Robin Wucher-Willis  
*Adjunct Faculty Member, College of Nursing*  
B.S.N., Florida International University, 1979  
M.S.N., University of Miami, 1983  
Ed.D., Nova Southeastern University, 2009

Olga Wydner  
*Adjunct Faculty Member, Pharmacy Practice*  
Pharm.D., Nova Southeastern University, 2011

Albin Xavier  
*Clinical Assistant Professor, Affiliated, Emergency Medicine*  
B.S., University of Miami, 2006  
M.D., University of Miami, 2010

Elizabeth Yanik  
*Adjunct Faculty Member, Department of Speech-Language Pathology*  
B.S., University of Central Florida, 2000  
M.S., Nova Southeastern University, 2003

Francis Yoo  
*Clinical Assistant Professor, Family Medicine*  
B.A., New York University, 2006  
D.O., New York College of Osteopathic Medicine, 2011

Yuliya Yurova  
*Associate Professor, Affiliated, Medical Education*  
B.S., Novosibirsky State University, 1989  
M.S., Eastern Michigan University, 2003  
Ph.D., University of Illinois, 2009

Michael P. Zahalsky  
*Clinical Assistant Professor, Surgery*  
B.A., Brown University, 1995  
M.D., Universitas Brunensis, 1999

Elise J. Zahn  
*Clinical Associate Professor, Family Medicine*  
B.S., University of Florida, 1989  
D.O., Nova Southeastern University, 1996

Mohammad Zaman  
*Adjunct Faculty Member, Prosthodontics*  
D.M.D., Nova Southeastern University, 2013

Nellie Simkin Zeltsman  
Pharm.D., Nova Southeastern University, 1996

Jack Zeltzer  
*Clinical Assistant Professor, Affiliated, Surgery*  
B.S., McGill University, 1964  
M.D., McGill University, 1970

Xiao-Mei Zeng  
*Clinical Assistant Professor, Obstetrics and Gynecology*  
B.A., Beijing Second Foreign, 1982  
M.S., Baylor University, 1983  
M.D., New York Medical College, 1993

Michelle Zetoony  
*Clinical Assistant Professor, Internal Medicine*  
D.O., Philadelphia College of Osteopathic Medicine, 2003

Kenneth Zide  
*Clinical Assistant Professor, Internal Medicine*  
B.A., University of Pennsylvania, 1991  
M.S., University of Pennsylvania, 1998  
M.D., University of Miami, 2002

Michael B. Zlatkin  
*Clinical Professor, Osteopathic Principles and Practice*  
B.S., McGill University, 1977  
M.D., Queen’s University Medical School, 1981

Jose A. Zuniga  
*Clinical Assistant Professor, Neurology*  
B.S., Peruvian University Cayetano Heredia, 1965  
M.D., Peruvian University Cayetano Heredia, 1971

Miriam Zylberglaif  
*Clinical Assistant Professor, Affiliated, Geriatrics*  
M.P.H., Universidad Nacional Federico Villarreal, 2005  
M.D., Universidad Peruana Cayetano Heredia, 2001