Notice: Credits and degrees earned from colleges within the state of Florida that are licensed by the State Board of Independent Colleges and Universities do not automatically qualify the individual to participate in professional examinations in Florida. The established procedure requires the appropriate state professional board to review and recognize the colleges granting the degrees prior to scheduling examinations. Additional information regarding Nova Southeastern University Health Professions Division and its Colleges of Osteopathic Medicine, Pharmacy, Optometry, Health Care Sciences, Medical Sciences, Dental Medicine, and Nursing may be obtained by contacting the State Board of Independent Colleges and Universities, Department of Education, Tallahassee, Florida. Any student interested in practicing a regulated profession in Florida should contact the Department of Business and Professional Regulation, 2009 Apalachee Parkway, Tallahassee, Florida 32301.

This catalog is for information purposes only and does not represent a contract. Information contained herein is subject to change at any time by administrative decision or the direction of the NSU Board of Trustees.

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.

Notice of Nondiscrimination
Consistent with all federal and state laws, rules, regulations, and/or local ordinances (e.g., Title VII, Title VI, Title III, Title II, Rehab Act, ADA, and Title IX), it is the policy of Nova Southeastern University not to engage in any discrimination or harassment against any individuals because of race, color, religion or creed, sex, pregnancy status, national or ethnic origin, nondisqualifying disability, age, ancestry, marital status, sexual orientation, unfavorable discharge from the military, veteran status, or political beliefs or affiliations, and to comply with all federal and state nondiscrimination, equal opportunity, and affirmative action laws, orders, and regulations.

NSU admits students of any race, color, religion or creed, sex, pregnancy status, national or ethnic origin, nondisqualifying disability, age, ancestry, marital status, sexual orientation, unfavorable discharge from the military, veteran status, or political beliefs or affiliations, to all the rights, privileges, programs, and activities generally accorded or made available to students at NSU, and does not discriminate in the administration of its educational policies, admission policies, scholarship and loan programs, and athletic and other school-administered programs.
Nova Southeastern University
Health Professions Division

College of Osteopathic Medicine
College of Pharmacy
College of Optometry
College of Health Care Sciences
College of Medical Sciences
College of Dental Medicine
College of Nursing
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As president of Nova Southeastern University, I am honored by your interest in learning this extraordinary educational institution and our approach to higher education.

This is a very exciting time for NSU. With the university’s golden anniversary behind us, all eyes are set on our bright future, helping our students achieve the power of their potential. To facilitate this, construction on NSU’s $80-million, 215,000-square-foot Center for Collaborative Research (CCR) is on-schedule to be completed in 2016. The CCR will house top researchers working in state-of-the-art wet labs. In addition, as a precursor to a future major teaching/research hospital, HCA East Florida has built an emergency room on our Davie campus that will provide both educational and clinical opportunities for our students, while providing much-needed health care services to the community.

As a prospective student in our prestigious Health Professions Division, you have the opportunity to learn from an array of professors from different backgrounds with a variety of real-world experiences. At NSU, your learning can and will go beyond the classroom through simulation labs, clinical rotations, research, medical missions, community service, and internships. Students have the opportunity to work with faculty members conducting research in areas including cardiovascular disease, anti-cancer therapies, chronic fatigue syndrome, autism, coral reef restoration, stem cells, and wildlife DNA forensics, among other subjects. The university has been recognized as a research university with “high research activity” by the Carnegie Foundation for the Advancement of Teaching, and you can be part of that.

Whether you are looking to become a physician, dentist, optometrist, pharmacist, nurse, or audiologist, or plan to pursue one of the many other exciting health care degrees we offer at various levels, I invite you to learn more about NSU and how we can help prepare you for success on your unique career path.

We look forward to a lifelong partnership with you.

George L. Hanbury II, Ph.D.
NSU President and Chief Executive Officer
Welcome, and congratulations on your acceptance to the Health Professions Division of Nova Southeastern University. We have developed an array of health programs at NSU that will enhance your learning experiences and prepare you for interesting and fulfilling careers in the health fields.

At NSU, your success is our success. We are committed to supporting your academic, physical, financial, and social needs through a comprehensive set of services that are in line with our mission and core values. The Health Professions Division’s distinguished faculty members are dedicated to helping you obtain the skills and knowledge you need to begin or advance your career. Their cutting-edge research, clinical skills, and commitment to academics are a valuable resource to support you on your educational journey.

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

Ralph V. Rogers, Ph.D.
Executive Vice President for Academic Affairs and Provost
Letter from the Health Professions Division Chancellor

If you wish to be a leader in the health professions, Nova Southeastern University can help you reach your potential.

The Health Professions Division is unique in that it has been developed as an interdisciplinary educational center from its inception. The division was founded on the concept that the interdisciplinary approach to education is beneficial to students of all professions, and by preparing students to work effectively with health care providers from different fields, barriers are broken and patient care is enhanced.

In less than two decades, NSU’s Health Professions Division has developed into a multidisciplinary academic health center of international stature. Composed of the Colleges of Osteopathic Medicine, Pharmacy, Dental Medicine, Optometry, Health Care Sciences, Medical Sciences, and Nursing, the Health Professions Division continues its commitment to academic excellence, innovation, and community service, while expanding its mission in research and scholarship. Together, as a team, the distinguished faculty prepares students for an exciting career on tomorrow’s dynamic health care team.

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

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

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

Jacqueline A. Travisano, M.B.A., CPA  
Executive Vice President and Chief Operating Officer

Ralph V. Rogers, Ph.D.  
Executive Vice President for Academic Affairs and Provost

Executive Dean for Administration

Stanley Cohen, B.S., M.Ed., Ed.D.  
Executive Vice Dean for Educational Support

Howard Neer, D.O., FAC  
Executive Associate Dean for Professional Affairs

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Director of Finance

Kelly Gregg, B.S.  
Vice President for Clinical Operations

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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

<table>
<thead>
<tr>
<th>Academic Excellence</th>
<th>Opportunity</th>
</tr>
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<tbody>
<tr>
<td>Student Centered</td>
<td>Scholarship/Research</td>
</tr>
<tr>
<td>Integrity</td>
<td>Diversity</td>
</tr>
<tr>
<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.
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.

Campus
Nova Southeastern University’s Health Professions Division—now composed of the Colleges of Osteopathic Medicine, Pharmacy, Optometry, Health Care Sciences, Medical Sciences, Dental Medicine, and Nursing—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 main 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 the main campus and encompasses more than 540,000 square feet of space for administrative offices, classrooms, laboratories, the HPD 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 large 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 prosthodontics; 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.

### 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.
  Attn: Documentation Center
  Bowling Green Station
  P.O. Box 5087
  New York, New York 10274-5087
  (212) 966-6311
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905, for the appropriate college.

### 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.

### Background Checks

Accepted applicants and students 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. This information must be delivered in the format requested (electronic or written) to the NSU Health Professions Division Background Check Committee within 10 business days of the date the communication is sent or another date specified by HPD in its communication with the student.

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.
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 for certain rotations.

**Tuition Credit Policy—Voluntary Withdrawals**

Students who wish to withdraw must submit a written request for voluntary withdrawal to the dean, who will evaluate the student's request. After completing the required withdrawal form(s) and obtaining the dean's approval, an eligible student may receive partial credit of the tuition, according to the following formula:

- Drops during the first week of the semester in which classes begin ........ 75 percent
- Drops after the first week of the semester in which classes begin ........ No 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 the master's degree programs in the College of Osteopathic Medicine will have until 11:59 p.m. the first Sunday of the semester, which is the end of the drop/add period, to make any changes in their schedule without incurring any financial expenses. Students who drop after this date 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 in the undergraduate catalog.

Students may not be given refunds for portions of tuition paid by financial aid funds. As appropriate, the respective financial aid programs will be credited in accordance with federal regulations. Students should notify the Office of Student Financial Assistance prior to withdrawing to determine the effect this will have on financial aid. For complete withdrawals, please refer to the Return of Title IV Funds section of the student handbook.

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 his or her checking account as soon as the dean 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 30 days after the semester ends.

**Florida Residency**

Eligible students must request in-state tuition on 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.

**Enrollment and Student Services**

Enrollment and Student Services (ESS) includes the Office of Student Financial Assistance, Office of the University Registrar, Office of the University Bursar, the One-Stop Shops in the Horvitz and Terry Administration buildings, the University Call Center, Enrollment Processing Services/Admissions Management Services, Transfer Evaluation Services, Health Professions Division (HPD) Office of Admissions, and the Help Desk. Collectively, the ultimate goal of ESS is to effectively meet 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. Both are accessible through SharkLink. Students are encouraged to use NSU’s SharkLink to

- access email
- access their financial aid information
- request official transcripts
- view their student accounts
- make payments
- access their grades
- register for classes
- sign the student enrollment agreement

The SharkLink system is available 24 hours a day, 7 days a week. Students may also call the University Call Center for questions or visit one of the One-Stop Shops on the main campus.

**The Office of Student Financial Assistance**

The Office of Student Financial Assistance (OSFA) is dedicated to helping students make informed financial choices while in college. There are four types of financial aid available to assist in meeting the cost of attending college: grants, scholarships, student employment, and loans. Grants and scholarships are considered “gift” aid and generally do not have to be repaid. However, if a student drops or withdraws from any classes for which financial aid has been received, the student may have to return any “unearned” funds. Loans are considered “self-help”
aid and always have to be repaid. Student employment requires the student to work in exchange for a pay check. Please remember that students interested in federal financial aid must complete the Free Application for Federal Student Aid (FAFSA) and meet general eligibility criteria. For detailed information on the financial aid process and sources of aid, visit the financial aid website at www.nova.edu/financialaid.

Financial Aid Checklist

1. Complete the FAFSA and NSU State Aid Application.

Complete the Free Application for Federal Student Aid (FAFSA) at www.fafsa.gov annually. It becomes available each January 1. The earlier you apply, the better chance you have of being considered for maximum available funds. To apply for Florida grants and scholarships, undergraduate students should also complete the NSU State Aid Application available at www.nova.edu/financialaid/forms/index.html.

2. Plan for Housing and Meal Expenses.

Your budget includes a housing and meal component. Please ensure that your budget covers these expenses if you intend to live on campus.


Regularly check your financial aid status via SharkLink to ensure that you have no outstanding requirements. The link to My Financial Aid is located in the center of your SharkLink Student tab. Now is a good time to confirm your admissions status. You will have to be fully admitted in order for your financial aid funds to disburse.

4. Submit Additional Documents and Complete a Master Promissory Note.

Some students may be required to submit additional documents prior to being awarded. You will be notified of outstanding requirements via NSU (SharkLink) email. If you are interested in receiving Federal Direct Loans, you will be required to complete a Direct Loan Master Promissory Note (MPN) and the entrance counseling at www.studentloans.gov.

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

Your financial aid award notice will provide you with detailed instructions on how to accept, reduce, or decline your financial aid award. Your award will not be disbursed until this step has been completed.

6. Don’t Forget to Continually Apply for and Identify Scholarships.

Schedule time regularly to search for scholarships. The best place to start is the scholarship web page at www.nova.edu/financialaid/scholarships/.

7. Check Your NSU (SharkLink) Email Daily.

NSU (SharkLink) email and SharkLink are the official means that the OSFA will use to communicate with students. Keep up-to-date by checking your NSU email daily.

8. Register for Classes (early).

Students awarded Federal Direct Loans must be enrolled at least half time. Half-time enrollment is defined as 6 credits per semester for all undergraduate students. For graduate and first-professional students, your program of study defines half-time status. Enrollment requirements for federal and state grants vary. Familiarize yourself with the enrollment requirements defined by your program office as well as by the financial aid programs through which you are receiving aid. Be sure to register as early as possible to ensure timely disbursement of your financial aid funds.

Return of Title IV Funds

Any student who does not complete at least one course within an academic semester for which financial aid is received, or could have been received, will be reviewed for a Return of Title IV Funds calculation. For complete information, please review www.nova.edu/financialaid/grantsloans/title_iv_return.html.

Student Employment

There are three main student employment programs: Federal Work-Study (FWS), 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 program is need-based and requires 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 part-time and full-time student employment, visit www.nova.edu/financialaid/employment.

Satisfactory Academic Progress (SAP)

In order to receive financial assistance, a student must continually meet Satisfactory Academic Progress (SAP). Different definitions of SAP apply for Florida state aid and federal aid. According to federal regulations, NSU has established university-wide quantitative, qualitative, maximum time frame, and pace SAP requirements.

Students who fail to meet SAP during the 2015–2016 academic year will not be eligible for Title IV federal and Florida state financial aid during the 2016–2017 academic year.

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

Department of Veterans Affairs educational benefits are designated to provide eligible individuals with an opportunity for educational and career growth. Eligible veterans and their dependents should contact the Veterans Benefits Office at (954) 262-7236; toll free 800-541-6682, ext. 27236, Monday through Friday, between the hours of 8:30 a.m. and 5:00 p.m., at the William and Norma Horvitz Administration Building. Detailed information is also available on the Veterans Education Benefits webpage at www.nova.edu/financialaid/veterans as well. If you have any questions concerning eligibility, you may also contact the U.S. Department of Veterans Affairs (DVA) at 888-442-4551 or visit their website at www.gibill.va.gov.

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 https://sharklink.nova.edu/cp/home/displaylogin.

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.

Bursar's Office 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 bills are sent in 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, 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. Delinquent students 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. Credit card authorization forms can be downloaded from the Bursar's website at www.nova.edu/bursar/forms/cr_authorization.pdf and faxed to (954) 262-2473. 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 main campus.

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 www.nova.edu/bursar/payment_plans.html.

Tuition Assistance Plans

- Tuition Deferment

Graduate students should contact their program office for information on deferment programs. Undergraduate students participating in employer tuition assistance programs who wish to defer tuition payment must
  - submit a letter of eligibility, a purchase order from their employer, or details of their employer's program from the employer's human resources office or the employer's website
  - provide postdated payments (check or credit card authorizations) for the amount of tuition. Payment of tuition only (not fees) may be deferred for five weeks after course completion.
  - pay a $75 deferment fee along with all other fees
Tuition Reimbursement

- Tuition Reimbursement

The University Registrar’s Office 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, transfer of credit services, and general university information. Additional information is available at www.nova.edu/registrar.

Florida Prepaid College Plan

NSU accepts and bills the Florida Prepaid College Plan 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 this procedure by submitting a completed and signed Florida Prepaid College Plan Billing Request Form available on the bursar website at www.nova.edu/bursar/forms/index.html. To learn more about the Florida Prepaid College Plan, visit www.myfloridaprepaid.com.

The Office of the University Registrar

Transcript Requests

Students may view a complete academic history, print out an unofficial transcript, and request an official transcript via the Student tab in SharkLink. In addition, a Transcript Request Form, available online at www.nova.edu/registrar/forms/transreq.pdf, can be completed and submitted in person, or via regular email to the One-Stop Shop, where the official transcript may be printed immediately. There is a $10 fee per 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 semester/term 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 www.nova.edu/registrar/forms/catch-the-sea-wave.pdf. Students must be officially registered prior to the start date of course(s) in order to participate in and receive academic credit for those courses. 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 medical records and death certificates.

Name and/or Social Security Number Changes

NSU requires official documentation to make any change to the name or Social Security number students have on record. Acceptable documents verifying a name change include a marriage license or certified abstract of marriage, divorce decree, driver’s license, certificate of naturalization, permanent or conditional permanent resident card, resident alien card, passport (book or card), court order (final judgment of name change or final judgment of change of name), uniformed services military identification card, birth certificate (acceptable only for correcting spelling errors), and a Bureau of Vital Statistics card. Documents that will not be accepted include a petition of name change, Social Security card, petition for naturalization, employee identification card, and professional license card.
Address Changes
Students may change their address via SharkLink or submit a written request to the University Registrar's Office via fax at (954) 262-2915, in person at the One-Stop Shop, or via regular mail.

Loan Deferment/Enrollment and Degree Verification
Students may obtain a free, official Loan Deferment/Enrollment Verification Form and Verification of Degree Conferral, via the student tab in 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 University Registrar's Office coordinates all NSU commencement exercises, processes degree applications, and prints and distributes diplomas. Complete information is available online at www.nova.edu/commencement.

Transfer Evaluation Services
NSU will transfer a maximum of 90 degree-applicable credits toward a degree, including credit for the College-Level Examination Program (CLEP), proficiency exams, and prior experiential learning. NSU will transfer courses from previous institutions for which a student has earned a grade of C or higher. Remaining credits and at least 50 percent of credits in the student’s major must be earned at NSU in regular academic offerings.

Transfer students who have earned an Associate in Arts degree or 60 credits as of 1992 to the present from a Southern Association of Colleges and Schools (SACS) accredited institution and who are in good academic standing, as defined by the transfer institution, shall be admitted to NSU with junior standing. Grades of C- and D will transfer under this policy. Applicable credits are transferred based upon received transcripts. The evaluation of transfer credit is performed on both unofficial and official transcripts. However, a student will not receive full acceptance to the university nor financial aid until all final official transcripts have been received. Students will be advised to take courses at NSU based upon the completed transfer evaluation.

Official transcripts from all previously attended institutions should be sent to:

Nova Southeastern University
Enrollment Processing Services
Attn: Undergraduate Admissions
P.O. Box Office 299000
Fort Lauderdale, Florida 33329-9905

For additional information please contact the Office of Transfer Evaluation Services at (954) 262-8414 for details.

CAPP Degree Evaluation
The Curriculum, Advising, and Program Planning (CAPP) degree evaluation system allows students to compare their completed coursework against the degree requirements published in the college catalog. This useful reference tool helps you track your progress toward degree completion and is available through SharkLink, the university's interactive online portal. Please note that CAPP does not replace your academic advisor or college catalog information. CAPP degree evaluations are not official. You should consult your academic advisor/program office for detailed program requirements and course options. Final approval for the completion of graduation requirements is granted by your program office. For further information about CAPP degree evaluation, visit the Office of the University Registrar's website at www.nova.edu/capp.

University Call Center
The University Call Center is available during the hours listed below to answer financial aid, bursar, registrar, and academic computing Help Desk questions. All hours are eastern time.

University Bursar: (954) 262-5200 • 800-806-3680
Office of Student Financial Assistance: (954) 262-3380 • 800-806-3680
University Registrar: (954) 262-7200 • 800-806-3680
HPD Admissions: (954) 262-1101
Help Desk: (954) 262-HELP (4357)*

Hours of Operation
Monday–Friday: 7:00 a.m. to 10:00 p.m.
Saturday and Sunday: 8:30 a.m. to 5:00 p.m.
* The Help Desk is available until midnight on Sundays.

The One-Stop Shop
(Horvitz and Terry Administration Buildings)
The One-Stop Shop is 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. The One-Stop Shop is located in the Horvitz Building on the main campus as well as on the first floor of the Terry Administration Building.

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 University Call Center and the One-Stop Shop are closed on holidays observed by NSU.

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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 University Call Center and the One-Stop Shop 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–Friday: 9:00 a.m.–5:30 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: 8:30 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)

**Tampa**
Tuesday–Friday: 8:00 a.m.–4:30 p.m.  
Saturday: 7:30 a.m.–1:00 p.m.

Certificate of Physical Examination
Students must 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.

Students may request that the University Health Service perform these examinations after matriculation. The University Health Service will make appointments in as timely a manner as possible, and 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 [www.nova.edu/smc/](http://www.nova.edu/smc/).

The Colleges of Osteopathic Medicine, Pharmacy, Health Care Sciences, Dental Medicine, and Nursing use the company, Certified Background, to maintain the student’s immunization forms. Students in those colleges may go to [www.certifiedbackground.com](http://www.certifiedbackground.com) to upload the immunization form.

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:

**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.

**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 six months.

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) 262-1270 to make an appointment. Once made, the appointment becomes the student’s obligation and must be kept. For students at the SECs, the appointments may be scheduled with the NSU-designated physician for their area.
HPD Fee: The HPD general access fee covers a series of three Hepatitis B vaccines and an annual PPD screening. All other immunizations and health care services are the responsibility of the student.

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.

Student Housing
NSU offers a residential living program that is designed to meet a wide array of student needs. Students who live on campus have numerous opportunities to participate in a variety of programs and activities that maximize intellectual growth and personal development. The types of facilities and amenities offered are listed below.

Leo Goodwin Sr. Residence Hall
The Leo Goodwin Sr. Residence Hall houses up to 292 students during the academic year. Leo Goodwin Sr. Residence Hall is the primary undergraduate facility for students with 0–30 credits.

Each room is built for double- or single-occupancy and features a private bathroom, large closet space, and high ceilings. The Leo Goodwin Sr. Residence Hall has limited availability for single rooms. Residents are placed on a first-come, first-served basis. Each room is furnished with beds, desks, desk chairs, dressers, and a built-in storage/counter facility. The building houses a classroom, a computer lab, study lounges on each floor, laundry facilities, a kitchen, and a large TV lounge.

All undergraduate students living in the Leo Goodwin Sr. Residence Hall, regardless of credit hours, must purchase a mandatory declining balance plan. The minimum amount a resident can apply to their NSU I.D. card for the declining balance plan is $1,450 per semester. Residents who choose to apply additional funds to their cards are able to do so at any time. If a balance exists on a resident's declining balance plan at the end of the fall semester, the resident's funds will roll over to the winter semester. Once the winter semester has ended, the remaining balance will no longer be available to the resident.

The Commons Residence Hall
The Commons houses undergraduate students. The state-of-the-art living and learning community includes 501 beds, classroom and meeting space, 16 community living rooms, 16 study rooms, and plenty of indoor and outdoor common space. The 16 community living rooms have comfortable furnishings that create unique spaces for students and groups to conduct study sessions or group meetings or to congregate with friends. The Office of Residential Life and Housing is located in The Commons. The Commons is unique and dynamic for the inclusion of incorporating communities within a community. Twelve of the communities are reserved for returning and incoming residents. The other communities (listed below) will be based upon themes and/or academic initiatives.

- Razor's Edge Leadership Program
- Greek Life (Greek Village)

All undergraduate students living in The Commons, regardless of credit hours, must purchase a mandatory declining balance plan. The minimum amount a resident can apply to their NSU I.D. card for the declining balance plan is $1,450 per semester. Residents who choose to apply additional funds to their cards are able to do so at any time. If a balance exists on a resident's declining balance plan at the end of the fall semester, the resident's funds will roll over to the winter semester. Once the winter semester has ended, the remaining balance will no longer be available to the resident.

Founders, Farquhar, and Vettel Residence Halls
These residence halls each house undergraduate students with 49 or more credits throughout the academic year. Each apartment is furnished and features single and double options. Each apartment provides a full kitchen with refrigerator and stove, one private bathroom, and a living room.

All undergraduate students living in the Founders, Farquhar, and Vettel Residence Halls, regardless of credit hours, must purchase a mandatory $200 declining balance plan per semester. If a resident chooses to apply additional funds to their card, they are able to do so at any time. If a balance exists on a resident's declining balance plan at the end of the fall semester, the resident's funds will roll over to the winter semester. Once the winter semester has ended, the remaining balance will no longer be available to the resident.

Cultural Living Center
The Cultural Living Center was built in 1984 and houses undergraduate students with 49 or more credits throughout the academic year. Each apartment is fully furnished and features single and double rooms with a full kitchen, bathroom, and living room.

All undergraduate students living in the Cultural Living Center, regardless of credit hours, must purchase a mandatory $200 declining balance plan per semester. If a resident chooses to apply additional funds to their card, they are able to do so at any time. If a balance exists
on a resident's declining balance plan at the end of the fall semester, the resident's funds will roll over to the winter semester. Once the winter semester has ended, the remaining balance will no longer be available to the resident.

Rolling Hills Graduate Residence Hall
The Rolling Hills Graduate Residence Hall is approximately one mile west of the NSU main campus and houses approximately 373 graduate and doctoral students. The Rolling Hills Graduate Hall complex is made up of a seven-story building and a three-story building. The buildings feature single studios and quad apartments that are furnished and feature a kitchen, bathroom, and living room.

The Rolling Hills Graduate Hall complex is made up of 10 separate communities, 3 of which are based upon themes. Two of these themes are

- HPD Communities (one in Building A and one in Building C)
- Law Community (in Building A)

For more information, please contact the Office of Residential Life and Housing at (954) 262-7052 or visit their website at www.nova.edu/reslife/.

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 following constitute acceptable attire:

1. Students must wear their white consultation jackets with their names and appropriate college designation embroidered over or on the left breast pocket. A white jacket is to be worn daily over the prescribed attire, unless the student is in the College of Medical Sciences, where a professional dress code is still required at all times.

2. Shirt (approved college polo shirt for pharmacy students only), tie, slacks, socks, and regular shoes for men, and for women it should be professional business dress, which includes slacks, pants, or skirt with blouse (approved college polo shirt for pharmacy students only), or dress and appropriate shoes.

3. Matching scrub sets, socks, and shoes.

4. Identification badges will be issued at the One-Stop Shops in the Health Professions Division and the Horvitz Administration Building, or from the Office of Student Affairs for distance programs students, and must be worn at all times when the student is on campus or clinical rotation. Please note that ID badges are necessary for proper use of on-campus auditoriums, library and recreational facilities, offices, laboratories, and certain restricted parking areas. These badges are given to the students at no charge, except for replacement.

Students may not wear the following:

- shorts
- cut-offs
- mini-skirts (higher than mid-thigh)
- jeans
- see-through clothing or halter-tops
- open-toed shoes, including beach/flip-flops, sandals, thong footwear, or plastic clogs with holes on the sides or top (Croc type)
- t-shirts (as the outer shirt)
- jogging or exercise clothing
- hats or caps, unless of a religious nature

All individuals who work or study in the clinic environment must be proactive in reducing the potential for workplace foot injuries. No open-toed shoes are to be worn in the clinics. These guidelines apply on campus from 8:00 a.m.–5:00 p.m., Monday through Friday, and while on duty on rotations.

Students inappropriately dressed or groomed may be requested to leave the campus. In this circumstance, an unexcused absence will be recorded until the student returns properly attired. Questionable or disputed cases of dress or grooming shall be presented to the dean, whose decision shall be final. Repeated violations will be considered improper professional behavior and may result in disciplinary action. When a class requires special dress (such as the wearing of scrub suits in anatomy laboratory or shorts in clinical skills laboratories), it will be the only exception to the dress code allowed during that time.

The dress code is to be observed at all times including midterms and examination periods.

Students are expected to consult their respective program handbooks for compliance with any program-specific or 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, 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.

**Student Insurance Requirement**

It is required that each Health Professions Division student including online M.P.H. students carry adequate personal medical and hospitalization insurance. (Other specific online program students may not be required to submit proof of personal medical and hospitalization insurance. Students should check with their specific program office.) It is strongly suggested that students and their families avail themselves of the insurance plan obtainable through the university. Information about the policy can be obtained by accessing the website at [www.nova.edu/studentinsurance](http://www.nova.edu/studentinsurance) and clicking on the link for Student Health Insurance. Please note that students will see a charge for health insurance appear on their student account as part of the academic registration process.

For those students who already have health insurance coverage and do not need the NSU-endorsed insurance plan, this charge will be removed from their account once proof of coverage has been submitted by completing the online waiver. To complete the waiver form, go to [www.nova.edu/insurancewaiver](http://www.nova.edu/insurancewaiver). The online waiver is the only process by which insurance charges will be removed and coverage will be cancelled. Students who fail to complete the waiver form and provide proof of health insurance by the stated deadline will not be eligible to have charges removed and will continue to be enrolled in the insurance plan endorsed by NSU. Waivers must be completed each academic year.

In view of health care reform and the Affordable Care Act, as well as all forms of health care insurance, we wish to advise those students who have health care coverage from commercial carriers—or the marketplace health care exchanges from other states than Florida—to check with their carriers in order to be sure they have comprehensive health care coverage in the region of Florida where they will be attending classes or practicum rotations.

**Service Units Learning Resources**

The HPD Library is located on the first floor at the north end of the Terry Building Complex in the Library/Lab Building. The collection consists of more than 17,000 print volumes, 700+ electronic books, and 8,000+ active medical/health journal subscriptions in both print and digital formats. Many of the available electronic texts are required textbooks in various courses. In addition, more than 210 medical/health databases are available 24/7 to meet the needs of the seven HPD colleges. All students have access to the full resources of all NSU libraries, both print and online. Medical/health databases include Medline, CINAHL, Clinical Key (which includes Procedures Consult and First Consult), LexiComp, and UpToDate, as well as many databases specific to individual programs. The Interlibrary Loan and Document Delivery Office will provide additional journal articles, books, and items not available digitally to any student at no cost. All resources are available through the HPD Library homepage ([www.nova.edu/hpdlibrary](http://www.nova.edu/hpdlibrary)).

Professional reference services are available via phone, text, email, or face to face. Seven professional librarians are available for help with searching, finding full-text journals, citation reference management, and research strategies. Each HPD college/program is assigned a subject specialist liaison librarian who works closely with faculty members and offers assistance with specific class assignments.

Quiet study areas are designated in the library with a variety of seating options available, from large tables to individual carrels and comfortable seating. There are 48 individual/small group study rooms in the library and adjacent Assembly II Building. Rooms may be checked out for up to three hours. All rooms are equipped with white boards and Wi-Fi. A small teaching lab is available for group instruction and there is a large group study hall. Two 50-station computer labs are open when the library is open. In addition, a production studio is available for student use for Tegrity, video recording, and video editing. A common area provides space for collaborative projects and is equipped with two Mediascape units for collaboration using multiple laptops with single or double monitor displays for group work. The library has both PC and Mac computers for student use, as well as iPads for short-term checkout, each is loaded with 100 medical and production apps. Other library services include binding, faxing, and scanning services; earplugs; sports equipment for the student lounge; and coffee service. Twenty-six individual rooms in the Assembly II Building are open from midnight until the library opens the next day, providing 24/7 access to study areas.

Hours of operation for the HPD Library, Study Center rooms in Assembly II, and adjoining computers labs are Monday–Thursday: 7:00 a.m.–midnight, Friday: 7:00 a.m.–9:00 p.m., and Saturday and Sunday: 10:00 a.m.–midnight. The study rooms in the Assembly II building are open 24/7.

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

See the Libraries section of the NSU Student Handbook for information about NSU’s Alvin Sherman Library, Research, and Information Technology Center.

**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.
• Sanford L. Ziff Health Care Center

The Ziff Health Care Center is a state-of-the-art, primary care facility with full-service, radiologic-diagnostic capabilities. Contained at the health care center are family medicine, pediatrics, X-ray, occupational therapy, pharmacy, physical therapy, rehabilitation, nephrology, hypertension, an optometric center, optical dispensary, OB-GYN, dermatology, and general internal medicine. Complete dental services are available next door at the clinics operated by the NSU College of Dental Medicine. Ambulatory medical, optometric, and dental care is made available during regular business hours for the university community. When a student or a family member needs care, they may make an appointment with the University Health Service. For those unable to make appointments in advance, hours will be posted. For urgent situations, contact the University Health Service at (954) 262-4100. Most insurance policies are accepted by the health facility for medical services.

• Hearing and Balance Center

The Hearing and Balance Center, located in the Ziff Health Care Center, evaluates individuals of all ages using a variety of diagnostic testing procedures to determine the exact nature of the hearing and/or balance impairment. It provides tinnitus evaluation and treatment services, as well as auditory processing evaluation and treatment. The center also offers an array of treatment options for hearing loss to fit a patient's lifestyle and communication needs. These include digital hearing instruments and assistive listening devices. Additionally, newborn hearing screenings, hearing conservation services, and hearing protection device services are offered. For more information or an appointment, call (954) 678-2273.

Consultation with specialists, when needed, will be arranged by the University Health Service. Such specialty care will be the student's financial responsibility. Direct visits to specialists without referral by the University Health Service are strongly discouraged.

• Sports Medicine Clinic

Sports Medicine services are available in the Don Taft University Center.

• Campus Pharmacy

Located adjacent to the Ziff Health Care Center is the pharmacy where prescriptions and over-the-counter, herbal, and homeopathic remedies are available. The pharmacy Wellness Center addresses diabetes, high blood pressure, and other diseases.

Hours of Operation
Monday–Friday: 9:00 a.m. to 6:00 p.m.
Saturday: 9:00 a.m. to 1:00 p.m.
For additional information, contact (954) 262-4550.

• NSU Student Counseling

Counseling for NSU students is provided by the Henderson Student Counseling Center. Services include treatment for anxiety, depression, anger management issues, stress, relationship challenges, chronic illnesses, abuse, suicidal thoughts, break-up/divorce, assault, substance abuse, and many other areas affecting a student's quality of life. The office is staffed with licensed mental health professionals including a psychologist and psychiatrist. Services include

– individual counseling
– couples counseling
– group counseling
– psychiatric services

Contact Information
Office: (954) 424-6911
Fax: (954) 424-6915
After hours on-call counselor: (954) 424-6911

Hours
Monday, Thursday, Friday: 9:00 a.m. to 5:00 p.m.
Tuesday, Wednesday: 9:00 a.m. to 8:00 p.m.

• NSU Health Care Center at North Miami Beach

1750 NE 167th Street, North Miami Beach, Florida
This facility houses a full-service primary care family medicine practice as well as a state-of-the-art dental center, a comprehensive optometric clinic and optical dispensary to serve the community. For more information or an appointment, call (954) 678-2273.

• Eye Care Institute of Fort Lauderdale

The Eye Care Institute of Fort Lauderdale, located in the North Broward Hospital District building at 1111 West Broward Boulevard, provides primary eye care and pediatric/binocular vision services to the urban community in the downtown area as well as the hospital district patients. Along with routine and emergency eye care, services for early detection and monitoring and treatment of glaucoma and other eye diseases are provided by students supervised by experienced faculty members in this state-of-the-art facility. Specialty care, including vision training for children up to 12 years of age, is offered by the Eye Institute's pediatric section. A wide selection of frames and lenses for both children and adults are available at reasonable cost on-site.
**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, non-disqualifying disability, age, ancestry, marital status, sexual orientation, unfavorable discharge from the military, 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 in the following paragraphs, 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.

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. All individuals are expected to meet their program requirements on a satisfactory level as determined by HPD administration or the applicable college/program administration. Osteopathic medical 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, students, staff, 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.

**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. Pharmacy candidates and students must have sufficient motor skills to weigh chemical and pharmaceutical (including intravenous) solutions, prepare prescriptions, and carry out sterile procedures.

**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. Osteopathic medical 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.

Pharmacy students must be able to move about within a pharmacy setting and a patient’s room.

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 be able to monitor equipment.

### Visual
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. Osteopathic medicine, optometry, and 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. Pharmacy students must be able to interpret prescriptions and medical orders, as well as to 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 carry out sterile procedures. Dental students must be able to deliver appropriate treatment using high technology equipment such as dental drills and surgical instruments.

### Sensory
Osteopathic students and 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 osteopathic 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 process, with faculty, students, staff, 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. 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, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities that will be assessed during the admissions and education process.
College of Osteopathic Medicine
College of Osteopathic Medicine

Mission Statement
The mission of the 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.

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 70 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.

Accreditation
Nova Southeastern University College of Osteopathic Medicine 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.

Administration
Elaine Wallace, D.O., M.S., M.S., M.S. 
Dean
Leonard Levy, D.P.M., M.P.H. 
Associate Dean for Research and Innovation
Howard Neer, D.O., FACOFP 
Associate Dean for Alumni Affairs
Margaret Wilkinson, Ph.D. 
Associate Dean for Preclinical Education
Steven B. Zucker, D.M.D., M.Ed. 
Associate Dean for Community Affairs and Area Health Education Center
Hilda M. De Gaetano, D.O., FAAP, FACOP 
Assistant Dean for Preclinical Education
Martha Echols, Ph.D. 
Assistant Dean for Medical Education
Phyllis J. Filker, D.M.D., M.P.H. 
Assistant Dean of Graduate and Community Education
Delia Harper-Celestine, Ed.D., M.P.H. 
Assistant Dean of Osteopathic Graduate Education
James Howell, M.D., M.P.H. 
Assistant Dean of Professional Relations
Kenneth Johnson, D.O. 
Assistant Dean of Faculty Affairs
Doris Newman, D.O. 
Assistant Dean of Osteopathic Clinical Education
Edward Packer, D.O. 
Assistant Dean of Clinical Affairs
Doctor of Osteopathic Medicine Program

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

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 (Biochemistry may be substituted for all or part of Organic Chemistry II)
   - 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 sciences, and humanities courses. It is recommended that applicants complete at least one course in biochemistry and 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 www.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 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 5,500 applications a year, from which only 230 students are chosen. These students have varied backgrounds, and while some many 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 www.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
   - 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 AACOMAS application
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 withdrawal.

4. Deposit is $750. This advance payment is due March 15. It will be deducted from the tuition payment, but is not refundable in the event of a withdrawal. Applicants accepted after this date will have a due date following the date of acceptance.

Applicants accepted prior to November 15 will have until December 14 to pay the acceptance fee. Applicants accepted between November 15 and January 14 will have 30 days, and those accepted between January 15 and May 14 will have 14 days to pay their acceptance fee. Those accepted between March 1 and May 14 will be required to submit their combined acceptance and deposit fees within 14 days. 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, 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 College of Osteopathic Medicine, and AACOMAS forms are made available.

**July**—Credentials sent to AACOMAS are processed, and applicant records are forwarded to Nova Southeastern University 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 start.

**January 15**—Deadline for AACOMAS applications.

**March 1**—Deadline for NSU-COM supplemental applications.

**Technology Requirements**

Students are required to own an Apple iPad® second generation or newer with a minimum of 64 gigabytes (GB) of memory. As part of the curriculum, students will develop medical research skills, hone and refine information management skills, and be exposed to medical informatics. Students have access to a variety of computer educational resources and course material, including:

- Blackboard courses, including Tegrity® recordings via iShark
- Electronic textbooks
- Books and equipment
- Clinical rotation travel
- Miscellaneous expenses
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 College of Osteopathic Medicine.
- Transfers from an LCME-accredited medical school must complete NSU 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 COM’s graduation requirements.

Anyone wishing to transfer to NSU College of Osteopathic Medicine must meet the following criteria:

1. make a formal application to NSU College of Osteopathic Medicine Office of Admissions
2. satisfy all admission requirements to NSU 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.

Advanced Placement
Request for advanced placement for any course at Nova Southeastern University College of Osteopathic Medicine must be declared and all supporting documentation must be submitted by the student no later than 45 days prior to the first day of class. The student must present all supporting documents to the College of Osteopathic Medicine Office of Student Affairs.

The student will be required to attend all classes and take all examinations until the disposition of the advanced placement request is finalized.

A student must have significant training or history of accomplishments in a basic science area that warrants consideration for advanced placement examinations. Students must pass a comprehensive examination given for the purpose of determining the student's competency in the subject involved. The passing requirement will be determined by the College of Osteopathic Medicine.

The decision regarding the request for advanced standing will be transmitted in writing to the student by the dean. The Office of the Registrar will be appropriately notified. Courses for which advanced standing is granted will be designated as advanced placement on the student’s transcript and will not show a grade or contribute to the student’s grade point average.

Course of Study
The 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 the state 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 of training primary-care physicians. 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 semester, 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 a rural practice setting. In rural clinics throughout the state of Florida, 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, nursing, and medical science students.

### Curriculum Outline

**M1**

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Electives may be taken in half-month or one-month increments. No more than four half-month electives may be taken in the fourth year.
Course Descriptions

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.
6.0 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.
3.0 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 immunodeficiencies, 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.
2.0 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.

2.0 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. The IGC Preceptorship I and II courses expose first-year medical students to clinical settings by matching each student with a community-based physician mentor for a primary care rotation. 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 College of Osteopathic Medicine in Community Service (COMServe) site, a clinical subspecialty 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. The IGC Preceptorship I and II courses expose first-year medical students to clinical settings by matching each student with a community-based physician mentor for a primary care rotation. 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 College of Osteopathic Medicine in Community Service (COMServe) site, a clinical subspecialty 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

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1.0 Credit Hour

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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.

2.0 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.

2.0 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 covering the following topics: (1) health effects of tobacco use; (2) pharmacology and drug delivery systems in tobacco cessation; (3) nicotine addiction; and (4) attitude and behavioral changes in tobacco cessation.

0.5 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 M1 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 M1 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 6030—Principles of Radiology

This course provides an overview of common imaging modalities used in clinical practice. The course syllabus, as well as selected course content and radiological images, will be posted on the student Blackboard throughout the duration of the course. It is the students’ responsibility to visit the Blackboard prior to and after each lecture and the final exam. Students are responsible for knowing and understanding all posted content and being able to interpret all posted radiological images. Students are also expected to complete the required reading prior to each lecture.

1.0 Credit Hour

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.

6.0 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.

2.5 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 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.

**0.5 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.

**2.0 Credit Hours**

**COM 6103—Cardiovascular System**
This course covers pathophysiology, diagnosis, and management of common cardiovascular disorders. It teaches electrocardiography and includes training in the use of “Harvey.”

**3.0 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.

3.0 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.

1.0 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.

2.0 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 Practice.

2.0 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.

3.0 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.

2.0 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 osteopathic 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.

2.0 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 College of Osteopathic Medicine in Community Service (COM’serve) 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 COM’serve 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 Nova Southeastern University 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.

3.0 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 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

COM 7091—Family Medicine I
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.

4.0–24.0 Credit Hours

COM 7092—Family Medicine II
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.

4.0–24.0 Credit Hours

COM 7093—Geriatrics
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.

4.0–24.0 Credit Hours

COM 7094—Psychiatry
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.

4.0–24.0 Credit Hours

COM 7095—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.

4.0–24.0 Credit Hours

COM 7102—Internal Medicine I
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.

4.0–24.0 Credit Hours

COM 7103—Internal Medicine II
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.

4.0–24.0 Credit Hours

COM 7104—General Surgery I
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. It will also provide experience and help acquire skills in a surgical setting.

4.0–24.0 Credit Hours

COM 7105—General Surgery II
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.

4.0–24.0 Credit Hours

COM 7106—Internal Medicine III
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.

4.0–24.0 Credit Hours

COM 7110—Obstetrics and Gynecology
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.

4.0–24.0 Credit Hours
COM 7131—Pediatrics/Ambulatory
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.

4.0–24.0 Credit Hours

COM 7132—Pediatrics/Hospital
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.

4.0–24.0 Credit Hours

COM 7151—Rural Medicine I
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.

4.0–24.0 Credit Hours

COM 7152—Rural Medicine II
Rural medicine incorporates family medicine training into the rural setting and stresses the development of the independent practitioner who, with a minimum use of sophisticated technical and ancillary services, will have the ability to diagnose and formulate a treatment plan based on the data gathered through history, physical examinations, and minimal laboratory work. The core medical knowledge and practical experience gained in the didactic years and in family medicine rotations will provide the platform for learning to diagnose and provide cost-effective treatment and education for patients within the rural setting.

4.0–24.0 Credit Hours

COM 7153—Rural Medicine Selective III
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.

4.0–24.0 Credit Hours

COM 7990—Clinical Board Review Course
COMLEX 2CE
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 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.

6.0 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 8009—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.

4.0–24.0 Credit Hours

COM 8011—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.

4.0–24.0 Credit Hours

COM 8012—Family 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.

4.0–24.0 Credit Hours

COM 8014—Surgery—General
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.

4.0–24.0 Credit Hours

COM 8015—Geriatric 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.

4.0–24.0 Credit Hours
COM 8018—Internal 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.
4.0–24.0 Credit Hours

COM 8020—Radiation Oncology
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.
4.0–24.0 Credit Hours

COM 8021—Medical Genetics
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.
4.0–24.0 Credit Hours

COM 8022—Nuclear 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.
4.0–24.0 Credit Hours

COM 8023—Neurology
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.
4.0–24.0 Credit Hours

COM 8024—Neurological 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.
4.0–24.0 Credit Hours

COM 8025—Obstetrics and Gynecology
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.
4.0–24.0 Credit Hours

COM 8027—OPP 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.
4.0–24.0 Credit Hours

COM 8028—Ophthalmology
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.
4.0–24.0 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.
4.0–24.0 Credit Hours

COM 8030—Preventive Medicine
Pain management is considered an elective rotation to be taken during fourth-year clerkships. COM students performing this elective clerkship will be exposed to patients with chronic pain syndromes and the management of these unique diseases by a physician who specializes in this area of medicine.
4.0–24.0 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.
4.0–24.0 Credit Hours

COM 8032—Pediatrics
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.
4.0–24.0 Credit Hours

COM 8035—Plastic 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.
4.0–24.0 Credit Hours

COM 8036—Psychiatry
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.
4.0–24.0 Credit Hours
COM 8037—Radiology—Diagnostic
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.
4.0–24.0 Credit Hours

COM 8038—Physical Medicine and Rehabilitation
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.
4.0–24.0 Credit Hours

COM 8040—Rural/International Medicine
Rural medicine incorporates family medicine training into the rural setting and stresses the development of the independent practitioner who, with a minimum use of sophisticated technical and ancillary services, will have the ability to diagnose and formulate a treatment plan based on the data gathered through history, physical examinations, and minimal laboratory work. The core medical knowledge and practical experience gained in the didactic years and in family medicine rotations will provide the platform for learning to diagnose and provide cost-effective treatment and education for patients within the rural setting.
4.0–24.0 Credit Hours

COM 8042—Thoracic 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.
4.0–24.0 Credit Hours

COM 8044—Urology
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.
4.0–24.0 Credit Hours

COM 8103—Allergy and 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.
4.0–24.0 Credit Hours

COM 8104—Anesthesiology
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.
4.0–24.0 Credit Hours

COM 8105—Colon and Rectal 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.
4.0–24.0 Credit Hours

COM 8108—Dermatology
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.
4.0–24.0 Credit Hours

COM 8170—Public Health
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 to the solution of community health problems.
4.0–24.0 Credit Hours

COM 9100—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—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 College of Osteopathic Medicine (COM). 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 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 9502—Integration of Biomedical and Clinical Sciences
Review of basic science as it pertains to osteopathic medical knowledge considered essential for osteopathic generalists to practice medicine without supervision.
1.0 Credit Hour

COM 9600—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 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.
2.0 Credit Hours

Affiliated Hospitals
The 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
North Miami, Florida
Bethesda Health, Inc.
Boynton Beach, Florida
Broward Health System
South Florida locations
Florida Medical Center
Fort Lauderdale, Florida
GEO Care, Inc.
Pembroke Pines, Florida
Good Samaritan Hospital
West Islip, New York
Jackson Memorial Hospital
Miami, Florida
Jackson North Medical Center
Jacksonville, 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
Naples Community Hospital
Naples, Florida
Northwest Medical Center
Margate, Florida
IGC Business of Medicine/Managed Care Program
Students learn the business aspects of practice as well as the various components of managed care organizations (MCOs). Each student is either assigned to an MCO teaching partner, or attends a special conference or seminar on health care systems, policies, and access. Students learn how a managed care organization operates by participating in seminars and small group discussions led by professionals representing various departments/experiences such as medical operations, physician committee meetings, utilization management, quality management, and provider/practice management.

IGC COM²Serve Program
This is the community service component of the IGC preceptorship, in which second-year medical students are involved in service learning with community health centers, public health departments, homeless assistance centers, migrant farmworker clinics, and other subsidized community clinics. The COM²Serve partner organizations provide health care and other needed services to medically underserved, minority, and at-risk populations.

Osteopathic Principles and Practice Laboratories
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. During the two years, each student will palpate, in the laboratory setting, a variety of people, representing both genders and individuals 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. Each student is required to actively participate in all skills development laboratory...
sessions. These skills are taught by treating and being treated by a cadre of students of both genders and with varying body types to simulate a medical practice setting.

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 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 the inner city of northern Miami-Dade 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.

Consortium for Excellence in Medical Education (CEME)
In January 1999, the College of Osteopathic Medicine established an innovative program to revolutionize clinical education and postgraduate medical training. The Consortium for Excellence in Medical Education (CEME), in affiliation with NSU College of Osteopathic Medicine, was formed to increase opportunities for postdoctoral medical training, including internships, residencies, fellowships, and continuing education programs.

The CEME is an alliance of affiliated clinical training sites linked through electronic networks; teaching, research, and community health collaborations; and a shared commitment to excellence in the education of tomorrow’s physicians. CEME partners are joining forces on postgraduate clinical education, research initiatives, and public health and preventative medicine programs to benefit Florida’s elderly, indigent, and minority patient populations. The CEME creates a unified medical education system composed of Nova Southeastern University College of Osteopathic Medicine and its multiple affiliated teaching hospitals and hospital systems spanning the state of Florida and includes ambulatory centers, county health departments, and veterans administration health care centers. Several additional affiliated programs are located in Georgia and Mississippi.

The CEME, as a dynamic consortia of affiliated regional academic training centers, uses distance learning systems to strengthen teaching, research, and community health collaboration while also nurturing a shared commitment to excellence in the education of tomorrow’s physicians.

West Palm Beach Veterans Affairs Medical Center
The College of Osteopathic Medicine has a major affiliation with the West Palm Beach Veterans Affairs Medical Center (VAMC). This state-of-the-art health care facility’s close academic ties with the college includes sharing academic positions, granting faculty appointments to VAMC staff members, a shared residency training program in preventive medicine, and major participation in the clinical program of the college. The VAMC employs a computerized paperless patient record system. It also permits X rays to be visualized with high resolution, includes laboratory and other reports that can be retrieved and tracked, has systems that ensure the selection of appropriate drugs for patient safety, and facilitates arrangements for specialist consultations. Students may spend as much as six months at the facility during their clinical years.

Rural and Urban Underserved Medicine Program
Since its establishment in 1979, the 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 fourth-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. Training sites include community health centers, private physicians’ offices, ambulatory care facilities operated by the West Palm Beach Veterans Affairs Medical Center, and leading health care institutions of the Florida Department of Corrections.

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.
Preventive Medicine

Prevention, in its broadest sense, is practiced by all physicians and other health professionals who help their patients to stay healthy. Preventive medicine, however, is also a distinct medical specialty, one of 25 recognized by the American Board of Medical Specialties.

The specialty of preventive medicine is based on our knowledge that promoting health and preventing disease requires work with both individuals and communities. Preventive medicine physicians are trained in both clinical medicine and public health. They have the skills to understand and reduce the risks of disease, disability, and premature death both in individuals and population groups. The distinctive aspects of preventive medicine include knowledge and competence in

- biostatistics
- bioterrorism
- epidemiology
- environmental and occupational health
- planning, administration, and evaluation of health services
- the social and behavioral aspects of health and disease
- the practice of prevention in clinical medicine

The American Osteopathic Association grants certificates to physicians who have successfully completed three years of supervised training and a written examination in any one of three areas: general preventive medicine/public health, occupational medicine, or aerospace medicine. Specialists in general preventive medicine/public health focus their skills on population groups, such as the residents of a particular community or state or the patient population of a health center, hospital, or managed care organization.

Preventive medicine specialists work in a wide variety of settings, including primary care and managed care settings, public health and community agencies, industry, and academia. These physicians usually engage in multiple activities, including planning, administration and evaluation of disease prevention and health promotion programs, research, teaching, and direct patient care. The varied career paths include managed care, public health, occupational medicine, aerospace medicine, clinical medicine, informatics, policy development, academic medicine, international medicine, and research, covering all levels of government, educational institutions, organized medical care programs in industry, as well as voluntary health agencies and health professional organizations. About 6,000 physicians nationally are board-certified in preventive medicine.

In addition to the need for more physicians trained in the specialty of preventive medicine, there is a need for more training in prevention in all the other medical specialties, especially in primary care. Toward this end, the Department of Preventive Medicine is initiating efforts to strengthen prevention education, particularly in relation to individual patient care. This will be accomplished by weaving the distinctive aspects of preventive medicine throughout all coursework offered to medical students at the College of Osteopathic Medicine. Specialists in preventive medicine, who have skills in population-based prevention as well as individual preventive interventions, can assist the other specialties in the further development of education in prevention and the population-based health sciences for residents and medical students alike.

Geriatric Teaching Program

The College of Osteopathic Medicine has a strong commitment to teaching students, residents, and physicians about the care of the geriatric patient. As a result, the college requires a didactic geriatric course in the M-2 year, which addresses “successful aging.” Attention is given to elderly populations and their diverse profiles and circumstances. During the M-3 year, students participate in a monthlong, required geriatric clerkship, where they care for elders in a variety of settings under the supervision of a geriatric specialist.

The College of Osteopathic Medicine also provides clinical teaching in geriatrics for second-year family medicine residents from its Palmetto Family Medicine Residency during a one-month rotation. The College of Osteopathic Medicine, along with the North Broward Hospital District, sponsors a geriatric fellowship training program for family medicine physicians who successfully complete an American College of Osteopathic Family Physicians (ACOFP) approved family medicine residency program. This will prepare the physician for a Certificate of Added Qualifications (CAQ) in geriatrics. We are excited about what we are doing in geriatrics and are looking for ways to expand our programs and teaching facilities.

M.B.A. Program

The Master of Business Administration program is available to all students who are academically in good standing and have completed the first semester of their first year. The H. Wayne Huizenga School of Business and Entrepreneurship administers the M.B.A. degree. Students may contact the Huizenga School program representative for details on this program. Participation in this program is at the discretion of the dean of the College of Osteopathic Medicine.
M.P.H. Program
The Master of Public Health Program is available to students who are academically in good standing and have completed the first semester of the first year. This degree program is administered by the College of Osteopathic Medicine. Students may contact the public health program director for further information. Participation is at the discretion of the dean of the College of Osteopathic Medicine.

M.P.H. Dedicated Tuition Reduction
All College of Osteopathic Medicine students who have completed the first semester of their first year and are currently enrolled in NSU-COM 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 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 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 College of Osteopathic Medicine affiliated institutions. All tuition reductions require renewal by the College of Osteopathic Medicine each academic year.

Master of Health Law
Students in good academic standing matriculated at the College of Osteopathic Medicine may, with the permission of the dean, apply for admission to the NSU Shepard Broad College of Law for the 30-credit Master of Health Law Program. This program, available to students upon completion of their first year of study, is designed to prepare future physicians to identify legal issues within their health professional responsibilities. It will help them acquire in-depth knowledge of the laws and regulations governing medical care and health professional practice. Students who complete the D.O./M.H.L. dual degree also will be especially qualified for leadership positions in managed health care environments as well as other organizations and programs that continue to evolve in the complex world of health care.

D.O. Program for Doctors of Podiatric Medicine (D.P.M.)
A program has been established leading to the D.O. degree for D.P.M.s in an accelerated period of time. It is designed for students from podiatric medical schools accredited by the Council on Podiatric Medical Education who have been accepted to a podiatric medical and surgery residencies. Particular interest is in those applicants who intend to acquire the D.O. degree to provide added value to podiatric medical practice. A limited number of D.P.M.s will be accepted each year. The program leads to a D.O. degree and a license to practice osteopathic medicine in states requiring one year of internship as well as to eligibility for certification by the American Board of Podiatric Orthopedics and Primary Podiatric Medicine (ABPOPPM). Applicants admitted to the program will be granted credit for the core basic sciences courses in the D.O. curriculum. The ABPOPPM will determine the amount of credit it will grant toward the completion of the two-year residency in podiatric medicine and surgery. Applicants may apply from all states but preference will be granted to those who are legal residents of Florida. Additional information about the program, including details about the curriculum, may be obtained by contacting the associate dean of education, planning, and research, NSU College of Osteopathic Medicine, 3200 South University Drive, Fort Lauderdale, Florida 33328-2018.

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 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.
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, including preventive medicine specialists, 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, 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.

Program Vision
The Master of Public Health Program of the College of Osteopathic Medicine fully embraces the vision and core values of Nova Southeastern University.

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

Goal: Education
To provide quality education in public health

Objectives
- Maintain a progressive and innovative Master of Public Health curriculum that addresses the essential knowledge and skills for a qualified public health workforce.
- Contribute to the education of public health professionals, health care providers, and alumni.
- Provide prevention-based educational initiatives to address community-determined public health needs.

Goal: Research
To contribute to the discovery and application of knowledge in public health

Objectives
- Conduct research activity as primary investigators or collaborators.
- Participate in collaborative research initiatives with other disciplines.
- Engage in scholarly activities, such as research publications and presentations.

Goal: Service
To provide public health leadership and service in the community

Objectives
- Provide leadership in service initiatives that promote community health.
- Contribute to the improvement of health through community service, with attention to underserved and culturally diverse populations.
- Provide consultation and technical assistance to the community on matters of public health interest.

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 semester hours of study. This consists of 27 semester hours of required core courses, including a public health field experience (6 semester hours), a minimum of 15 semester hours of public health elective courses, and a written comprehensive examination. 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. A Spanish-language version of the online program is available for those who wish to complete their M.P.H. in Spanish.
The curricula for the three options are identical, although the modality of instruction is different. On-site classes are offered in the evening, with each class generally scheduled one evening per week. Up to 15 credits of online courses are allowable to complete the on-site option. A face-to-face 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 culminating public health experiences at the end of the program include a supervised field experience (with an oral evaluation) and a written comprehensive examination. There are supervised elective field-based courses, projects, and research opportunities available to students. The on-site orientation session is available prior to each semester. Graduating students have the opportunity to participate in a commencement exercise in May of each year. Each M.P.H. student must pass a written comprehensive examination to successfully complete the course of study. A capstone session for graduating students is held annually, in May, just prior to commencement.

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

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

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

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.

Admissions Requirements
The M.P.H. Program evaluates the overall quality of its applicants, including academic achievement, personal motivation, knowledge about the public health profession, health care and life experience, and recommendations. Criteria for admission 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.
- Public health or health-care related experience is desirable, but not required.
- Evidence of having taken one of the following standardized tests: GRE, PCAT, OAT, AHPAT, MCAT, DAT, GMAT, or LSAT, if the applicant does not hold a health-related graduate or professional degree. The scores must be no more than five years old. Applicants with a health-related graduate or professional degree may be required to submit official test scores upon evaluation of their application.
- 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.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 Office of Admissions processes applications on a year-round basis. Applicants may apply for matriculation into any one of three semesters (fall, winter, summer), and may contact the Office of Admissions at (954) 262-1101 or 877-640-0218 or access the M.P.H. Program website (www.nova.edu/ph) for the exact deadline and start dates.

All application materials should be sent to
Nova Southeastern University
Enrollment Processing Services
College of Osteopathic Medicine, M.P.H. Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905

Applicants must provide the following:
1. a completed online application, along with a $50, nonrefundable application fee (online application can be found at www.nova.edu/ph/admissions/procedures.html)
2. 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.)
3. official scores of one of the following standardized tests taken by the applicant: GRE, PCAT, OAT, AHPAT, MCAT, DAT, GMAT, or LSAT, if the applicant does not hold a health-related graduate or professional degree (The scores must be no more than five years old. Applicants with a health-related graduate or professional degree may
be required to submit official test scores upon evaluation of their application.)

4. official scores from the Test of English as a Foreign Language, Pearson Test of English—Academic, or International English Language Test System (IELTS), if applicable.

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.
  Attn: Documentation Center
  Bowling Green Station
  P.O. Box 5087
  New York, New York 10274-5087
  (212) 966-6311
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616 • (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 (GPA) must be sent directly from the evaluation service to NSU's Enrollment Processing Services.

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 6.0 on the IELTS, or a score of 54 on the Pearson Test of English—Academic. An official set of scores must be sent directly from the testing service to NSU's EPS.

5. two letters of recommendation, one of which must be from a health professional (The other letter of evaluation must be 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.)

Upon receipt of the completed application and required material, the committee on admissions will review the application and make recommendations to the program director. The committee may request a phone interview to gather additional information before a recommendation is submitted. The director submits his or her recommendation on admission to the dean. The final decision on admission is made by the dean of the NSU College of Osteopathic Medicine.

Graduate Certificate Programs

The M.P.H. Program offers graduate certificates in public health and health education.

Criteria for admission 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 must provide the following:

- completed online application form
- official transcripts
- nonrefundable application fee of $50
- one letter of recommendation (professional)

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, and a comprehensive examination. 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 and a capstone session is successfully completed. If, after taking classes in the M.P.H. Program, a certificate-seeking student decides to pursue the M.P.H. degree, 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 M.P.H. Degree Program. Previous coursework taken may be transferable if performance equals or exceeds the grade of B in the course.
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 6604 Research Methods in Public Health**
  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 and the comprehensive examination is successfully completed. A student who wishes to pursue National Certification (Certified Health Education Specialists) may take 10 additional credits of recommended coursework to meet the 25 credits, with 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 (www.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 admission requirements in order to take classes in the M.P.H. Program:

- completed online application form
- official transcripts
- nonrefundable application fee of $50
- one letter of recommendation (academic)

Undergraduate students must have a minimum cumulative GPA of 3.0 with at least 90 hours of coursework, 30 hours of which must be upper level courses. An official transcript showing the coursework is required.

Application for nondegree status by students holding a bachelor's degree or higher will be considered by the admissions committee, through a review of the required records.

Tuition and Fees

Tuition for the M.P.H. Degree Program for 2015–2016 is $575 per credit hour. 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 $1,050 is also required annually.

Tuition for the Graduate Certificate Programs for 2015–2016 is $575 per credit hour. An NSU student service fee of $1,050 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 $17,647 (on campus) and $22,212 (off campus) per year for living expenses.

Transfer of Credits

Applicants to or enrollees of the NSU-COM M.P.H. Program may petition for transfer of a maximum of 12 credit hours of elective or core courses from a regionally accredited graduate program toward their M.P.H. degree. The core courses must have been taken at a program, school, or college accredited by the Council on Education for Public Health (CEPH).
Any courses taken at another academic program or institution that the student wants to transfer to meet the requirements of this M.P.H. degree program must have the prior approval of the program director. All courses considered for transfer into the program must have been successfully completed with a grade of B (80 percent) or better and must not have been applied to another awarded degree. Transfer course grades are not calculated toward the student’s grade point average.

The course transfer applicant must submit a written request to the program director, along with the appropriate verification documents (i.e., official transcripts, syllabi, and catalogs). The Curriculum Committee will review all applications for transfer of credit, including the documents provided on the petitioned courses. The committee will submit its recommendations to the program director who makes the final decision. The program does not give course credit for prior work experience.

### 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, 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, and 15 hours of electives)
- successfully pass the comprehensive examination
- complete an exit survey
- satisfactorily meet all 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 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>Instruction</th>
<th>Practice</th>
<th>Semester Hours</th>
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<td>PUH 5220 Environmental and Occupational Health</td>
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<td>PUH 5301 Biostatistics</td>
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<td>PUH 5512 Health Policy, Planning, and Management</td>
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<td>PUH 6001 Social and Behavioral Sciences Applied to Health</td>
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<td>PUH 6604 Research Methods in Public Health</td>
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<tr>
<td>PUH 5003 Public Health Seminar</td>
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<td>3</td>
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<td>PUH 5004 Public Health Grant Writing</td>
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<tr>
<td>PUH 5014 Principles and Practice of Clinical Trials</td>
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<td>PUH 5050 Substance Abuse Prevention and Intervention</td>
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<td>PUH 5110 Culture, Ethnicity, and Health</td>
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<td>Public Health Issues of the Elderly</td>
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<td>PUH 5112</td>
<td>All-Hazards Preparedness</td>
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<td>0</td>
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<td>Foundations of Public Health</td>
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<td>PUH 5305</td>
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<td>PUH 5431</td>
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<td>PUH 5502</td>
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<td>PUH 5503</td>
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<td>PUH 5513</td>
<td>Public Health Nutrition</td>
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<td>Public Health Informatics</td>
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<td>Special Studies in Public Health</td>
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<td>PUH 6022</td>
<td>Community Health Project</td>
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<td>PUH 6025</td>
<td>Interprofessional Leadership</td>
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<td>PUH 6101</td>
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<td>PUH 6104</td>
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<td>PUH 6201</td>
<td>Tropical Diseases</td>
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<td>PUH 6521</td>
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<td>PUH 6605</td>
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<tr>
<td>PUH 6606</td>
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<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 detriments, and community resources. (45-0-3)

PUH 5003—Public Health Seminar
This course requires viewing a minimum of 45 public health special lectures—some live at NSU, others accessed from online sources preapproved by the course director. A written report and reaction is required following each lecture. (45-0-3)

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. (45-0-3)

PUH 5014—Principles and Practice of Clinical Trials
This course introduces students to the principles and practice of clinical trials and their application to public health. Ethical issues and the role of the Institutional Review Board will also be addressed. Prerequisites: PUH 5430, PUH 5301 (45-0-3)

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. (45-0-3)

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. (45-0-3)

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. (45-0-3)

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. (45-0-3)

PUH 5115—Principles of Health Education
Historical and philosophical foundations of health education, focusing on the principles of the discipline and preparation for service as a professional. Theoretical models will be discussed. (45-0-3)

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. (45-0-3)

PUH 5210—Public Health Communications
This course provides an overview of basic principles of communication as applied to health behaviors. Attention will be given to the theories, design, and implementation of health communication used to reach the public. The course involves practice and offers feedback to students in the effective use of major modes of communication in public health work. Students will acquire skills in writing reports, speaking in public, and applying various media to publications. (15-60-3)

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. (45-0-3)

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. (45-0-3)
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/health research questions. Three types of regressions (linear, logistic, and time-to-event) are taught. **Prerequisite:** PUH 5301 (45-0-3)

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. (45-0-3)

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. (45-0-3)

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. (45-0-3)

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 (45-0-3)

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. (45-0-3)

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. **Prerequisite:** PUH 5430 (45-0-3)

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. (45-0-3)

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. (45-0-3)

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. (45-0-3)

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. (45-0-3)

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. (45-0-3)

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. (45-0-3)

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. (45-0-3)

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 (45-0-3)

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. (45-0-3)
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 (30-30-3)

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. (45-0-3)

PUH 6002—Public Health Field Experience
The field experience is a culminating experience for all M.P.H. students. This required course (200 hours of structured activities) takes place at a public health agency or public health-related institution. The student will work under the supervision of a site-based preceptor and a faculty adviser, who identify the appropriate educational objectives for the experience. The student is expected to acquire skills and experiences in the application of basic public health concepts and specialty knowledge to the solution of community health problems. A comprehensive written report and an oral presentation will be required upon completion of the field experience. **Prerequisites:** PUH 5430, PUH 5301, PUH 5512, PUH 5220, PUH 6001 (0-200-6)

PUH 6008—Public Health Advocacy
This course will enable students to develop tools and skills to influence the political processes at the national, state, and community levels to enhance the public's health and welfare. A number of faculty and guest lecturers will share their insights and strategies. Speakers will include elected officials, public health leaders, and community advocates. Students will analyze their own attitudes and insights and enhance their political advocacy skills. Case study methods will be used with emphasis on communication, marketing, and education. (45-0-3)

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 (30-30-3)

PUH 6017—Special Studies in Public Health
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 also approved and monitored by the course director. (0-90-3)

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. (0-90-3)

PUH 6025—Interprofessional Leadership
This course covers best practices in interprofessional education and practice in public health. Students will learn and practice competencies included in the four core competency domains of interprofessional collaborative practice, as well as leadership skills for team-based, community-oriented health care. (45-0-3)

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 (45-0-3)

PUH 6104—Health Service 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 using multiple international examples and experiences. The course covers the interdependence between policy and planning and management. It consists 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. (45-0-3)
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. Prerequisites: PUH 5430, PUH 6001 (45-0-3)

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. (45-0-3)

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. (45-0-3)

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. (45-0-3)

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. (45-0-3)

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 (30-30-3)

PUH 6605—Grant Proposal Writing Practicum
In this course, the student will prepare a grant proposal for a public health project of utility to an existing organization. The student will be guided individually by the course director in the planning, writing, and submission of the grant proposal. (15-60-3)

PUH 6606—Introduction to SAS
This course introduces students to the basic data concepts and the structure of the SAS programming language. The course will cover both SAS data management and the statistical programming features. A review of those statistical procedures to be programmed in SAS will occur prior to the actual SAS programming. Students will learn how to manipulate actual data sets as well as how to analyze sample data. SAS will be briefly compared with SPSS. Prerequisites: PUH 5301, PUH 5430, (15-60-3)

PUH 6608—Public Health Research
Students conduct supervised research in any of the major areas of public health. The student and faculty adviser define the project and its objectives. Prerequisites: PUH 5301, PUH 5430 (0-90-3)

PUH 6690—Comprehensive Examination
Each M.P.H. student must take, and pass, the comprehensive examination at the end of his or her course of study. The purpose of the exam is to assess the individual student's competency to begin work in public health. This short-answer written examination requires critical thinking to integrate learning and apply it to public health scenarios. The student writes the examination with appropriate references during a scheduled, two-week period of the registered semester. (0-60-0)
Biomedical Informatics Program

Nova Southeastern University 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 (CNIOs)
- 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
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

Admissions Requirements

The M.S. in 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 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.

- eHealth companies
- health insurance companies
- pharmaceutical companies
- academic institutions
- consulting services

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.

Course of Study

The Master of Science in Biomedical Informatics 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.B.I. 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

College of Osteopathic Medicine—Biomedical Informatics Program
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 letter of recommendation (must be from someone that knows applicant professionally or academically, on letterhead, specific to the program, and contain a handwritten signature with contact information)
- submit official transcripts of all undergraduate, graduate, and professional education

Please mail all supplemental admissions material to

Nova Southeastern University
Enrollment Processing Services
College of Osteopathic Medicine
Biomedical Informatics Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 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 College of Osteopathic Medicine.

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

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 taking classes in the program as a nondegree-seeking student, the student wishes to become degree seeking, he or she must apply to the M.S.B.I. 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.

Nondegree Certificates and Other Degree Options

Graduate Certificates in Medical Informatics and Public Health Informatics are now available. Certificates consist of six courses (18 credit hours) at the graduate-level. Courses, presented using online technology, are within the M.S.B.I. degree curriculum. Specific certificate curricula are located at www.medicine.nova.edu/msbi/medicalinformatics.html and www.medicine.nova.edu/msbi/publichealth.html.

Certificate-seeking students are not guaranteed acceptance into the Master of Science in Biomedical Informatics degree-seeking program. If, after taking courses in the program, a certificate-seeking student decides to pursue the M.S.B.I. degree, the student must apply to the M.S.B.I. program as a new student and meet all requirements for admission. If accepted into the degree program, credits with the prefix MI that were taken as a certificate-seeking student will be automatically applied toward the degree.

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 www.nova.edu/internationalstudents/prospective/credentialservices.html.). 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 1,000 (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

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.

**Tuition and Fees**
Tuition is $670 per credit hour at the College of Osteopathic Medicine. Students taking courses at other NSU schools or colleges may be subject to varying tuition rates. An NSU student services fee of $1,050 and a Health Professions Division student 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-COM M.S. in Biomedical Informatics program may petition for a transfer of a maximum of 12 credit hours toward their degree from a regionally accredited institution for degree-seeking students and a maximum of 6 credit hours toward their certificate for certificate-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 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 M.S.B.I. 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 five years of matriculation, the course of study required for the M.S.B.I. degree (minimum of 43 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**
To develop a comprehensive biomedical informatics program at NSU-COM, a curriculum has been developed that includes teaching, clinical care, research, and development. 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.

### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MI 5120</td>
<td>Management Information Systems in Health Care</td>
</tr>
<tr>
<td>MI 5121</td>
<td>Information Systems Project Management in Health Care</td>
</tr>
<tr>
<td>MI 5130</td>
<td>Database Systems in Health Care</td>
</tr>
<tr>
<td>MI 5152</td>
<td>Information Security in Health Care</td>
</tr>
<tr>
<td>MI 5160</td>
<td>System Analysis and Design in Health Care</td>
</tr>
<tr>
<td>MI 5200</td>
<td>Survey of Medical Informatics</td>
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<tr>
<td>MI 5204</td>
<td>Clinical Decision Support Systems</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>MI 5205</td>
<td>Program Evaluations in Health Information Technology</td>
</tr>
<tr>
<td>MI 5401</td>
<td>Managing Organizational Behavior for Medical Informatics</td>
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<tr>
<td>MI 7000</td>
<td>Health Informatics Practicum</td>
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<td><strong>Subtotal</strong></td>
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**Elective Courses (12 credits required)**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MI 5153</td>
<td>Telecommunications and Computer Networking in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 5180</td>
<td>Human-Computer Interaction in Health Care Settings</td>
<td>3</td>
</tr>
<tr>
<td>MI 6401</td>
<td>Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>MI 6403</td>
<td>Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>MI 6404</td>
<td>Special Topics in Health Informatics</td>
<td>3</td>
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<tr>
<td>MI 6405</td>
<td>Public Health Informatics</td>
<td>3</td>
</tr>
<tr>
<td>MI 6407</td>
<td>Grant Writing</td>
<td>3</td>
</tr>
<tr>
<td>MI 6408</td>
<td>Health Policy, Planning, and Management</td>
<td>3</td>
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<tr>
<td>MI 6409</td>
<td>Health Services Planning and Evaluation</td>
<td>3</td>
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<tr>
<td>MI 6410</td>
<td>Consumer Health Informatics</td>
<td>3</td>
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<tr>
<td>MI 6411</td>
<td>Health Information Technology Acquisition and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>MI 6412</td>
<td>Leadership in Health Information Technology</td>
<td>3</td>
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<tr>
<td>MI 6413</td>
<td>Lean Six Sigma Yellow Belt for Health Care</td>
<td>3</td>
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<tr>
<td>MI 6414</td>
<td>Basic Skills for Clinical Analysts</td>
<td>3</td>
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<tr>
<td>MI 6415</td>
<td>Information Technologies in Medicine and Telehealth</td>
<td>3</td>
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<tr>
<td>MI 6416</td>
<td>Lean Six Sigma Green Belt for Health Care</td>
<td>3</td>
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<tr>
<td>MI 6417</td>
<td>Meaningful Use of Electronic Health Record Systems—A NextGen Approach</td>
<td>3</td>
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<tr>
<td>MI 6418</td>
<td>App Development for Health Information Technology Projects</td>
<td>3</td>
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<tr>
<td>MI 6420</td>
<td>Medical Image Processing and Analysis</td>
<td>3</td>
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<tr>
<td>MI 6421</td>
<td>Geographical Information Systems: Fundamentals for Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 6422</td>
<td>Workflows and Process Improvements in Health Care Settings</td>
<td>3</td>
</tr>
<tr>
<td>MI 6423</td>
<td>Maximizing Talents in the Health Technology Workforce</td>
<td>3</td>
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</table>

**Total Credits 49**

**Additional Required Courses (These courses will be required for students who do not have sufficient health care background or computer science knowledge.)**

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>MI 4201</td>
<td>Medical Terminology</td>
<td>3</td>
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<tr>
<td>MI 4202</td>
<td>Health Care Organization and Administration</td>
<td>3</td>
</tr>
<tr>
<td>MI 4203</td>
<td>Introduction to Information and Communication Technologies in Health Care</td>
<td>3</td>
</tr>
</tbody>
</table>
Core Courses

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. (3 credits)

MI 5121—Information Systems Project Management in Health Care
This course introduces the fundamental principles of project management from an information technology perspective, with an emphasis on health care industry applications. Fundamental aspects of project management are covered including project integration, the management of scope, time, cost, quality, human resources, communications, and risks. Discussion also includes project management software as well as organizational management aspects such as project planning, team building, organizational structure, and control mechanisms. (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 system. Topics include introduction, design principles, intrusion detection, policy assurance, attacks and penetration, access control, risks and vulnerabilities, database security, web security, cryptography, identity theft, viruses, authentication technologies, 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 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 5200—Survey of Medical Informatics
This online, interactive 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. 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 5204—Clinical Decision Support Systems
With the increasing complexity of clinical medicine, clinical decision support systems (CDSS) will become essential for diagnostic and treatment purposes. In fact, the Meaningful Use provisions of the HITECH Act now require all health care providers to implement five clinical decision support rules per year in order to qualify for EHR implementation incentive payments.

Clinical decision support systems have been utilized in many areas of clinical medicine, nursing, pharmacy, health care administration, and research. This course introduces students to theoretical, statistical, and practical concepts underlying modern medical decision making. It then proceeds to review the multiple methods for knowledge generation for CDSS. The course provides hands-on experience to students in creating their own prototype of CDSS. Current implementations of stand-alone and integrated CDSS will be evaluated. Techniques for planning and evaluation of CDSS implementation will be reviewed. Human factors, including work-flow integration and the ethical, legal, and regulatory aspects of CDSS use will be explored. (3 credits)
MI 5205—Program Evaluation in Health Information Technology
This online, 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 5401—Managing Organizational Behavior for Medical Informatics
This online course is an introduction to the management of employees in health care organizations. 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. Through experiential learning, students will learn to integrate home, work, and educational observations and experiences and to convert them into proactive, practical applications for growth and renewal. (3 credits)

MI 7000—Health Informatics Practicum
This is a required course for all M.S.B.I. 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 goals and measurable learning outcomes will be determined by the student, the site preceptor, and the NSU-based faculty adviser. These goals 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.

**Elective Courses**

**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 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 6401—Biostatistics**
This course enhances student knowledge about principles and practice of biostatistics through applied statistical methods in health/clinical study designs, and the appropriate use of health information system (collection, storage, retrieval, analysis, and interpretation of health data). (3 credits)

**MI 6403—Epidemiology**
Epidemiology is the core science of public health. This course will cover the fundamentals of epidemiology including basic concepts in epidemiology concerning the distribution and determinants of disease frequency in human populations and their investigation. Familiarity with epidemiologic principals is essential to the student’s understanding of the important health problems faced by our society; scientific and clinical activities designed to ameliorate these problems; strategies to promote health
and prevent disease; and the lifestyle-related behaviors, disease-producing agents, and environmental exposures related to serious health problems. Topics to be covered will include basic demography, measures of disease frequency, disease screening and surveillance, descriptive and analytic study design, introduction to clinical trials, analysis of epidemiologic studies, and sources of error in investigations and investigation of disease outbreaks. (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 public health. 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. (3 credits)

**MI 6408—Health Policy, Planning, and Management**
This course discusses the principles and logic involved in health policy and the application of strategies in 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 provides an in-depth study of basic planning and evaluation techniques for the implementation of a community health care program. It addresses 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**
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 to lead 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 acceleration. The course also covers how to map out processes and identify sources of variation, as well as to gain a basic understanding of
MI 6414—Basic Skills for Clinical Analysts
This class will provide students with introductory understanding of clinical analysts’ daily responsibilities and functions within hospitals. Students will be introduced to the daily operations of clinical software systems and lead to understand how such systems are used by health care organizations to provide quality care services. (3 credits)

MI 6415—Information Technologies in Medicine and Telehealth
Medical data transmission using wireless technology plays an increasing role in the health care industry. This course introduces fundamental knowledge of telemedicine technology. Essential aspects of wireless technology in patient care, medical information processing, telemedicine systems deployment, safeguarding medical data and privacy, and future trends in health care technology are covered. Discussions also include technical perspectives, an overview of telemedicine, planning and deployment considerations, scalability to support future growth, integration with existing infrastructure, information security, cryptography, and other critical components of telemedicine technology. (3 credits)

MI 6416—Lean Six Sigma Green Belt for Health Care
Lean Six Sigma for Health Care (Green Belt) participants learn the skills, tools, and techniques to deliver breakthrough business improvements and cost reductions and prepare for the Lean Six Sigma Green Belt certification exam. Lean Six Sigma Green Belt candidates will learn to function simultaneously inside two frameworks, the business framework and the Six Sigma cultural framework. They will learn to develop a comprehensive set of 15–20 Lean Six Sigma process improvement toolsets by focusing on the define, measure, analyze, improve, and control (DMAIC) approach to process improvement. They will learn techniques for both quantitative and nonquantitative 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 and how to gain a basic understanding of statistical analysis. Finally, students will learn how to perform basic experiments and analyze data, in order to determine the most effective way to improve and stabilize a process. Candidates work on either an integrated health care case study or an actual business project, which they will apply classroom techniques to. (3 credits)

MI 6417—Meaningful Use of Electronic Health Record Systems—A NextGen Approach
This course will provide students with the opportunity to learn the fundamentals of set-up and using the applications of one of the most commonly used electronic health record systems in the United States, NextGen, in clinical settings. Students will be required to complete the NextGen e-learning modules before the on-campus, hands-on training sessions. This course is required for the competitive internship opportunity in the NSU clinics. (3 credits)

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, Objective C 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 digital image processing, image analysis, image compression, and recognition. (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 talents, as well as group talents and how these evolve in individuals. Students will develop a better self-awareness of what talents and strengths they possess and how this affects personal and work performance. It demonstrates how leaders continue to grow and how they develop each of the group's talents to maximize the performance of the organization. The Affordable Care Act will be emphasized and students will discover what individual and organizational talents must be used to improve patient care and cut health care costs. (3 credits)

### Additional Required Courses

These courses will be required for students who do not have sufficient health care background or computer science knowledge.

**MI 4201—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. (3 credits)

**MI 4202—Health Organization and Administration**

This course provides students with an overview of health care management, organization behavior, marketing operations, organizational strategy, quality assurance, information systems, and financial management. The importance of integrating these components is emphasized. (3 credits)

**MI 4203—Introduction of Information and Communication Technologies in Health Care**

This online, interactive course will provide students with an overview of information technology in the health care environment. Students will gain a basic understanding of information and communication technologies relevant to patient care delivery. Course content covers health information technology (HIT) terminology, basics of computing (hardware and software), HIT applications, and introductory topics in biomedical informatics, including databases, decision support systems, networks, program evaluation, and information security/privacy in health care. The course is designed to build a solid information baseline regarding communications technology knowledge relevant to the Master of Science in Biomedical Informatics Program curriculum. (3 credits)
Disaster and Emergency Preparedness Program

Program Overview
The Master of Science degree in Disaster and Emergency Preparedness (M.S. DEP) in the College of Osteopathic Medicine will provide students with the knowledge, skills, and basic research capabilities to enter one of the fastest-growing academic disciplines with both a national and an international perspective. This interprofessional degree is designed to provide students with the theoretical knowledge and applied skills to be part of the rapidly growing, interdisciplinary field of emergency management and disaster preparedness. 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, asynchronous activities. In addition, all students in the program will be required to participate in a cohort orientation at the beginning of the program and a final presentation at the conclusion of their studies. The concentrations for the Master of Science degree include maritime safety and security, cyber security, criminal justice, public health, environmental hazards, and fire administration. Distinct concentrations will allow the students to apply the principles of emergency preparedness to these areas of particular interest and need.

The M.S. in Disaster and Emergency Preparedness 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 preparedness 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 sectors, the program in disaster and emergency preparedness can help to create an environment in which all-hazards initiatives include preparedness, mitigation, response, and recovery as the standard. As natural hazards continue to increase, environmental and meteorological experts are being called upon more and more for their input related to these disasters.

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 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 preparedness 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 preparedness 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, and state 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. DEP program consists of five core courses (15 credit hours), including a required community research practicum (3 credit hours). Along with the core requirements, the student can choose one of several specialization concentrations or elect to pursue a general track. These concentrations require four core courses (12 credit hours) in the chosen discipline. To complete the degree, an additional 9 credit hours will be taken from general electives or electives in one of the six areas of specialization (i.e., concentrations) that include maritime safety and security, cyber security, criminal justice, public health, environmental hazards, and fire administration. Students also have the option of choosing from the electives list for the Master of Science in National Security Affairs, a partner degree program offered by the College of Arts, Humanities, and Social Sciences.

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 biostatistics and an introductory course in all-hazards preparedness, as well as the practicum in their chosen specialization concentration. In addition to the three 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 preparedness 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, sociology, or psychology, as a substitute for up to 6 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 Preparedness program evaluates the overall quality of its applicants, including academic achievement, life experience, recommendations, knowledge of the field of emergency management, and personal motivation.

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 by the 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, or a score of 6.0 on the IELTS. An official set of scores must be sent directly from the testing service to NSU’s EPS.

GRE or MAT 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. An applicant who does not provide a GRE or MAT 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 Preparedness program accepts applications year-round. Applicants may apply for matriculation into any one of three semesters (fall, winter, or summer). Application deadline will be 30 days prior to the start of each semester.

For an application to be considered by the admissions committee, applicants must submit
• the online application found at https://webSTAR.nova.edu/pls/PROD/buskalog.P_DisploginNonP (Payment of a nonrefundable application fee of $50 is required to complete your application.)
College of Osteopathic Medicine—Disaster and Emergency Preparedness Program

• official transcripts of all coursework attempted by the applicant from all colleges and universities attended, including undergraduate, graduate, and professional education

• evidence of GRE or MAT 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. 24319, or visit our website (http://osteopathic.nova.edu/msdep/index.html) 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 Preparedness (DEP) 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. DEP 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 the 2015–2016 academic year is $550 per credit hour for all M.S. DEP courses, with the exception of courses in the Cyber Security concentration or National Security Affairs electives. Courses with the MMIS, ISEC, or NSAM designation are offered at tuition rates determined by the college or program through which the courses are offered. Tuition for 2016–2017 will subsequently be posted on our website (http://osteopathic.nova.edu/msdep/index.html). A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 is also required annually. All tuition and fees are subject to change by the board of trustees without notice.

Program discounts are available to full-time law enforcement officers, fire fighters, and emergency service personnel. 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 Preparedness 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 (15 credit hours)

<table>
<thead>
<tr>
<th>Required Courses (9 credit hours)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEP 5001 Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>DEP 5050 Bioterrorism and All-Hazards Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6010 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>DEP 5010</td>
<td>Leadership and Organizational Behavior for Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEP 5020</td>
<td>Preparedness, Planning, Mitigation, and Continuity Management</td>
<td>3</td>
</tr>
<tr>
<td>DEP 5030</td>
<td>Executive Leadership and Administration</td>
<td>3</td>
</tr>
<tr>
<td>DEP 5040</td>
<td>Security Management in a Global Society</td>
<td>3</td>
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</table>

Threats, Hazards, and Impacts Cluster (3 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>DEP 5060</td>
<td>Environmental Hazards in Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEP 5070</td>
<td>Risk Assessment and Mitigation</td>
<td>3</td>
</tr>
<tr>
<td>DEP 5080</td>
<td>Agroterrorism and Food System Disasters</td>
<td>3</td>
</tr>
<tr>
<td>DEP 5090</td>
<td>Weapons of Mass Threat and Communicable Diseases</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses (21 credit hours)
(Students must take four courses from the chosen concentration, plus three additional courses selected from the entire curriculum.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>DEP 6110</td>
<td>Community Vulnerability Assessment</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6120</td>
<td>Psychosocial Dimensions of Disaster</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6130</td>
<td>Risk and Crisis Communications</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6150</td>
<td>Grant Writing for Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6160</td>
<td>Leadership Topics in Disaster and Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6170</td>
<td>Elective Practicum</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6180</td>
<td>Exercise Design</td>
<td>3</td>
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</tbody>
</table>

Maritime Safety and Security Concentration 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>DEP 6210</td>
<td>Introduction to Maritime Safety</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6220</td>
<td>Maritime Safety and Security Leadership</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6230</td>
<td>Maritime Safety for the Cruise and Yachting Industries</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6240</td>
<td>Concepts in Shipboard Safety Management</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6250</td>
<td>History of Maritime Disasters</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6260</td>
<td>Maritime Environmental Responsibilities</td>
<td>3</td>
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</table>

Cyber Security Concentration 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>MMIS 653</td>
<td>Telecommunications and Computer Networking</td>
<td>3</td>
</tr>
<tr>
<td>ISEC 615</td>
<td>Fundamentals of Security Technologies</td>
<td>3</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>ISEC 635</td>
<td>Information Security Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>ISEC 655</td>
<td>Information Security Governance</td>
<td>3</td>
</tr>
<tr>
<td>ISEC 675</td>
<td>Information Systems Auditing</td>
<td>3</td>
</tr>
<tr>
<td>ISEC 695</td>
<td>Information Security Management Project</td>
<td>3</td>
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**Criminal Justice Concentration Electives (12 credit hours)**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>DEP 6423</td>
<td>Interagency Disaster Communication</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6424</td>
<td>Community Disaster Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6404</td>
<td>Community Planning, Response, and Recovery for Families and Children</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6410</td>
<td>Emergency Preparedness Public Policy and Law</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6440</td>
<td>Conflict Management in Times of Crisis</td>
<td>3</td>
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**Public Health Concentration 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>DEP 6500</td>
<td>Epidemiology of Disasters</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5201</td>
<td>Foundations of Public Health</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6510</td>
<td>Public Health Issues in Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6520</td>
<td>Veterinary Challenges in Disasters</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6141</td>
<td>Social Vulnerability: Implications in the Disaster Cycle</td>
<td>3</td>
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</tbody>
</table>

**Environmental Hazards Concentration 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>DEP 5060</td>
<td>Environmental Hazards in Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>DEP 5080</td>
<td>Agroterrorism and Food System Disasters</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5201</td>
<td>Foundations of Public Health</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6260</td>
<td>Maritime Environmental Responsibilities</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6710</td>
<td>Weather and Disaster and Emergency Preparedness</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5220</td>
<td>Environmental and Occupational Health</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fire Administration Concentration 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>DEP 5030</td>
<td>Executive Leadership and Administration</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6610</td>
<td>Fire Service Operations</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6423</td>
<td>Interagency Disaster Communication</td>
<td>3</td>
</tr>
<tr>
<td>DEP 6424</td>
<td>Community Disaster Preparedness</td>
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<td>DEP 6410</td>
<td>Emergency Preparedness Public Policy and Law</td>
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<tr>
<td>DEP 6440</td>
<td>Conflict Management in Times of Crisis</td>
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Course Descriptions

DEP 5001—Biostatistics
This course focuses on the principles and reasoning underlying modern biostatistics and on 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. The examples utilized will be derived from issues involved in all-hazards preparedness. (3 credit hours)

DEP 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)

DEP 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

DEP 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)

DEP 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)

DEP 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)

DEP 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

DEP 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)

DEP 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)

DEP 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)
DEP 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: DEP 5050/PUH 5112/CJI 6121 (3 credit hours)

General Electives Concentration
DEP 6110—Community Vulnerability Assessment
This course will review the components of a community vulnerability assessment. Students will be actively involved in a community assessment and develop a report for recommended steps for action. (3 credit hours)

DEP 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)

DEP 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)

DEP 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)

DEP 6160—Leadership Topics in Disaster and Emergency Preparedness
This is a didactic course in a specific area of interest in emergency preparedness. (3 credit hours)

DEP 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)

DEP 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, statement of purpose, objectives, narrative scenario, major and detailed event schedule, and expected actions) utilizing a building block approach that will ensure successful progression in exercise complexity and execution, allowing for appropriate training and preparation to occur in the community conducting the exercise. At the completion of the course, students will have developed an individual, tabletop exercise with all the requisite components. Additionally, students will incorporate various evaluation methods to facilitate the development of viable after action reports and improvement plans.

Maritime Safety and Security Concentration Electives
DEP 6210—Introduction to Maritime Safety and Security
This course offers basic shipboard safety awareness, covering topics such as personal safety techniques and use of firefighting and other onboard equipment to protect one's self, the crew, and a vessel at sea. (3 credit hours)

DEP 6220—Maritime Safety and Security Leadership
A ship's officers are responsible for the safety of their crew. This course will introduce the student to concepts such as crew leadership, target identification, the decision-making risk matrix, and safety drilling. Students will learn to develop a vessel safety plan. Prerequisite: DEP 6210 (3 credit hours)

DEP 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: DEP 6210 (3 credit hours)

DEP 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)
DEP 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)

DEP 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)

Cyber Security Concentration Electives
(Note: This concentration will be facilitated in partnership with NSU's College of Engineering and Computing.)

MMIS 653—Telecommunications and Computer Networking
This course provides the framework for understanding computer network functionality, characteristics, and configurations. Topics include network topologies, protocols, and architectures, as well as emerging trends in network technologies and services. The role of optical technologies in supporting national and international implementations is explored. Strategies for network planning, implementation, management, and security are introduced. Recent advances in standardization; Internet working; and deployment of LANs (local area networks), MANs (metropolitan area networks), and WANs (wide area networks) are introduced. (3 credit hours)

ISEC 615—Fundamentals of Security Technologies
This course provides an overview of the technical aspects of information security. Issues discussed include authentication, confidentiality, access control, trust, and non-repudiation. Investigation of fundamental assurance technologies that can be applied to interface specifications, architectures, and implementations of information security mechanisms will be discussed. The selection of appropriate security applications, security lifecycles, and interoperability issues will also be covered. Prerequisite: MMIS 653 (3 credit hours)

ISEC 635—Information Security Operations Management
This course provides an understanding to implement effectively the information security vision and strategy set forth by the executive management. The emphasis will be on the management of an information security program. Focus is on the implementation of information security policy, information security planning, development of information security processes, and establishment of information security measures. Concepts and techniques from the management and organizational behavior disciplines will be integrated to identify and propose solutions to the problems of information security administration. Prerequisite: MMIS 683 (3 credit hours)

ISEC 655—Information Security Governance
This course is designed to bring to the forefront the challenges and opportunities of effectively governing an organization's information security requirements and resources. Information specific to security governance lays out the vision for the information security program. Discussions include what constitutes good information security governance and the development of an effective information security strategy and policy. Attention is also focused on how to improve information security accountability, regulatory compliance, and maturity. Prerequisite: MMIS 684 (3 credit hours)

ISEC 675—Information Systems Auditing
Fundamental concepts related to an information systems audit are explained. Principles and practices relate to the secure operation of existing information technology, information security accountability, development of internal control objectives and framework, and identification of appropriate audit procedures for a secure information system. Prerequisite: MMIS 684 (3 credit hours)

ISEC 695—Information Security Management Project
This project course integrates all of the knowledge accumulated through the previous courses and serves as a capstone for the Concentration in Information Security Management. The course focuses on integrating best practices demonstrated through case studies and systems assessment in order to help students develop a final information security management capstone project. Students may enroll in this class only after completing all of the information security management concentration courses. Upon request, the course may be taken concurrently with one of the prerequisite courses. Such a request will only be approved in the last term of a student's matriculation, and students taking a prerequisite concurrently are subject to the same expectations as those who have completed all prerequisites. (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.)

DEP 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)

DEP 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)

DEP 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)

DEP 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)

DEP 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 College of Osteopathic Medicine)

DEP 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)

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)

DEP 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)

DEP 6520—Veterinary Challenges in Disasters
This course will identify the planning, mitigation, response, and recovery issues and challenges for pets and animals in both confined and unconfined areas. (3 credit hours)

DEP 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)

Environmental Hazards Concentration Electives

DEP 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)

DEP 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)

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)

DEP 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)

DEP 6710—Weather and Disaster and Emergency Preparedness
This course will include basic meteorological principles, methodologies, and terms as well as introduce the student to a variety of weather-related resources and surveillance systems used in planning for disasters. The basic meteorological processes causing disasters such as hurricanes, tornadoes, floods, droughts, blizzards, and heat waves will be discussed. Students will learn how meteorology and understanding the science of weather can be used in disaster risk reduction. (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
DEP 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)

DEP 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)

DEP 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)

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DEP 6410—Emergency Preparedness
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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
• PUH 5512—Health Policy Planning and Management
• PUH 5430—Epidemiology
• MI 5152—Information Security
• 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 5004—Border Protection and Military Issues
• NSAM 6640—Critical Incident Response
• NSAM 6643—Social Aspects of Terrorism
• NSAM 6654—Islam, Conflict, and Peacemaking

Graduate Certificate in Social Medicine

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 2015–2016 is $550 per credit hour. Tuition for 2016–2017 will subsequently be posted on our website (www.osteopathic.nova.edu/masters). A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $350 per semester for two or more courses and $175 per semester for one course, not to exceed $1,050 annually, is also required.
## 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)

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<th>Course Code</th>
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<tr>
<td>PUH 5512</td>
<td>Health Policy Planning and Management</td>
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<td>PUH 5430</td>
<td>Epidemiology</td>
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<tr>
<td>PUH 5301</td>
<td>Biostatistics</td>
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<td>PUH 6120</td>
<td>Public Health Program Planning and Evaluation</td>
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### Biomedical Informatics Concentration (choose one for 3 credits)

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<tr>
<td>MI 5200</td>
<td>Survey of Medical Informatics</td>
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<tr>
<td>MI 5120</td>
<td>Management Information Systems in Health Care</td>
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<tr>
<td>MI 6405</td>
<td>Public Health Informatics</td>
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<tr>
<td>MI 6415</td>
<td>Information Technologies in Medicine and Telehealth</td>
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<tr>
<td>MI 6416</td>
<td>Lean Six Sigma for Health Care</td>
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### Disaster and Emergency Preparedness Concentration (choose one for 3 credits)

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<td>Community Planning, Response, and Recovery for Families and Children</td>
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<tr>
<td>PUH 5201</td>
<td>Foundations of Public Health</td>
</tr>
<tr>
<td>DEP 6510</td>
<td>Public Health Issues in Disaster and Emergency Preparedness</td>
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<tr>
<td>DEP 6500</td>
<td>Epidemiology of Disasters</td>
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### 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)

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<tr>
<td>PUH 5314</td>
<td>Global Health</td>
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- 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 can be applied to a master’s degree in any of the following three programs:

- Master of Public Health
- Master of Science in Biomedical Informatics
- Master of Science in Disaster and Emergency Preparedness

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

Medical education is at a crossroads. Physicians and other health professionals are thrust into careers as educators of current and future members of their profession. While they have strong recognition as experts in their clinical discipline, typically, they have little or no formal training in the educational process. Students no longer merely watch, listen, and memorize information. Those who choose to teach in the health professions must be guided by contemporary innovations and new understanding about 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. As such, 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, Nova Southeastern University College of Osteopathic Medicine (NSU COM) has developed a Master of Science (M.S.) in Medical Education Program. This online degree program is 36 credit hours. It is designed to help clinical faculty members and community preceptors 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 six courses of 6-credit-hours each and includes

- assessment and evaluation
- educational methodologies
- instructional strategies
- research
- technology in education
- curriculum/program development

The rich interprofessional platform of the College of Osteopathic Medicine and the Health Professions Division provide for 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, six-course program. The program is designed to be completed in two years. However, students have up to a maximum of seven years to complete it.

Faculty members for the M.S. 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 not only united in their desire to educate, but to motivate students to use what they learn in the program to inspire others.

M.S. 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 and associate deans, designated institutional officers, and directors of medical education. The program provides graduates with an educational framework to pursue academic leadership positions as well as strengthen credentials for academic promotion.

Course of Study

The course of study was designed to develop a cadre of interprofessional clinical educators with the knowledge and skills to lead in a dynamic and changing health care system. The program includes completion of the six 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.

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
- develop a project that applies the knowledge of concepts, skills, and attitudes acquired during the Master of Science in Medical Education program
Admissions Requirements
The M.S. program evaluates the overall quality of its applicants, looking at prior academic achievement, personal motivation, knowledge of health care, and profession-related experience. Proof of a professional degree from a regionally accredited college or university in a health care field, or equivalent, is required for admission.

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)
College of Osteopathic Medicine, Medical Ed. Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 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 College of Osteopathic Medicine.

Should you have any questions, please email shazel1@nova.edu or call (954) 262-1786.

Nondegree-Seeking Students
A nondegree-seeking student is one who wishes to take courses in the Master of Science in Medical Education 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 Master of Science in Medical Education program:

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

Nondegree-seeking students are not guaranteed future acceptance into the Master of Science in Medical Education 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 M.S. program as a new student and meet all the requirements for admission. If accepted into the degree program, courses or credits that were taken as a nondegree-seeking student will be automatically applied toward the degree. Nondegree-seeking students can enroll in a maximum of three courses or 18 credit hours.

Tuition and Fees
Tuition for 2015–2016 is $550 per credit hour. Tuition for 2016–2017 will subsequently be posted on our website (http://osteopathic.nova.edu/msme). A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 is also required annually. All tuition and fees are subject to change by the board of trustees without notice.

Transfer of Credits
No transfer credits from coursework completed at another institution will be accepted in this program.

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 seven years of matriculation, the course of study required for the M.S. (minimum of 36 semester hours of coursework) or graduate certificates (minimum of 18 semester 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 COM, 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 Practicum in Teaching Medical and Other Health Professions Students in a Diverse Learning Environment</td>
<td>6</td>
</tr>
<tr>
<td>MED 0610 Practicum in Implications of the Domains of Human Development on Health Professions Students</td>
<td>6</td>
</tr>
<tr>
<td>MED 0620 Practicum in Technology Resources for Health Professions Education</td>
<td>6</td>
</tr>
<tr>
<td>MED 0630 Practicum in Effective Instruction Strategies in Health Professions Education</td>
<td>6</td>
</tr>
<tr>
<td>MED 0640 Practicum in Assessment and Measurement in Health Professions Education</td>
<td>6</td>
</tr>
<tr>
<td>MED 0650 Practicum in Research in Health Professions Education</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>

**Course Descriptions**

**MED 0600—Practicum in 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. *(6 credit hours)*

**MED 0610—Practicum in Implications of the Domains of Human Development on Health Professions Students**
This course will address the nuances of adult learning, with specific emphasis on the relationship between knowledge of diversity and human development as significant variables in devising effective learning environments. The course will address the theoretical and applied aspects of human development and learning theory as a means to incorporate such knowledge into academic planning and programming. *(6 credit hours)*

**MED 0620—Practicum in 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. *(6 credit hours)*

**MED 0630—Practicum in 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. *(6 credit hours)*
In response to a growing need for nutrition professionals at the graduate level throughout the United States, the College of Osteopathic Medicine has developed a Master of Science (M.S.) degree in Nutrition. The passage of the 2010 Patient Protection and Affordable Care Act in the U.S. Congress has put increased demand on the health care delivery system for preventive services, which includes nutrition in almost all of the areas in primary care. Nutrition assessment and nutrition intervention for chronic diseases are important components of the new health care reform mandates.

This 42-credit-hour, online degree program incorporates the most recent technologies, including Livescribe pens, Blackboard, and interactive video. In addition, all students are required to spend time on campus at the beginning of the program of study for orientation and at the end of the program to present their final projects/research and to participate in graduation ceremonies. The rich, interprofessional platform of NSU's College of Osteopathic Medicine and Health Professions Division provides an excellent environment for this degree program. Nutrition is an essential part of medicine and health care delivery. Elective course offerings in the new program are open to students in osteopathic medicine, public health, and all of the other health professions. Nutrition is an important, interprofessional enhancement to any curriculum, given the increasing attention to nutrition in health care delivery, and is a critically important component in primary care. Given the growth worldwide in people over age 65, nutritionists play a key role in senior health, both in preventing medical and health-related challenges and in managing diseases and in preventing and controlling chronic diseases.

This degree is intended to educate and prepare nutritionists and dietitians (upon completion of an approved internship) to work in a variety of settings including hospitals, food service establishments, 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 dietitians and nutritionists is better than the average for other health-related disciplines. Employment forecasts for dietitians and master's degree-prepared nutritionists are expected to be at 21 percent annually for the next 10 years. According to the U.S. Bureau of Labor Statistics (2010), employment in the nutrition field is expected to increase 30 percent during the 2010–2020 decade projection. Job growth is expected to increase, due to an increased emphasis on wellness, prevention of disease through better food choices and dietary habits, and greater integration of nutrition in primary care. The Patient Protection and Affordability Care Act increases the need for nutrition professionals as a result of required wellness checks and emphasis on health promotion and disease prevention.

Possible career options include
- research, health center, public health, or school nutritionist
- county or state nutritionist
- private health consultant
- WIC coordinator
- health/lifestyle coach
• spa director
• instructor at the technical or baccalaureate level
• corporate wellness consultant
• employee health nutrition/wellness coordinator
• media and communications professionals
• personal trainer/health and fitness instructor

The program will be a source of continuing graduate education for students from the athletic training program and physical education. Students in medicine, public health, and other health disciplines may also select a minor in this new program or may obtain a dual degree. The M.S. in Nutrition provides for an excellent interprofessional graduate degree for students in other health professions, such as medicine, dentistry, optometry, or pharmacy.

The degree does not provide for an internship leading to eligibility to become a registered dietitian. Students completing the M.S. in Nutrition can apply for an approved internship. If successfully completed, students are then eligible to take the National Registered Dietitian Examination.

Course of Study
The curriculum is designed so that all students receive a 15-credit-hour core. All students are also required to complete a 6-credit-hour special project (thesis or nonthesis research option) focused on a current area of research or a community-based project that incorporates nutrition. Students select from one of two concentrations (community nutrition or sports nutrition) and choose three electives, which are 3-credit-hours each, to complete the program. Entering and completing the program as a cohort, they are required to come to the NSU main campus both to begin their studies—meeting with program advisers—and at the completion of the program of study—to present their final projects and meet with faculty members prior to graduation. The program was designed to further the education of those who want to integrate nutrition into other health professions and to enable those who want to practice in the profession of nutrition and dietetics to meet their academic requirements so that they can enter the nutrition or dietetics field.

To develop a cadre of interprofessional nutrition and dietetics leaders for a global society that will have the knowledge and skills to respond to a dynamic and changing system of care, the program emphasizes the

1. interprofessional role of nutrition in health care and sports

2. future of primary health care and the role of nutrition throughout the life span
3. health promotion, disease prevention, and achievement of optimal wellness through proper nutrition
4. use of technology in education and nutrition care
5. current and emerging issues in nutrition in a global society to better serve the population’s health care needs through proper nutrition
6. cultural competencies and health disparities critical to the delivery of nutrition services for all ages
7. incorporation of functional nutrition to optimize prevention and wellness

The Master of Science in Nutrition was developed to provide students from varied undergraduate disciplines, or from other graduate areas of study, with the knowledge and applicable skills to function successfully in the profession of nutrition and dietetics. Nutrition is the science and study of nutrients and the impact and interaction of nutrients in the body. Dietetics is the branch of therapeutics concerned with the practical application of diet in relation to health and disease. Dietary guidelines for Americans emphasize the relationship between food choices, disease management, and prevention. Successful education of the public and interprofessional health care practitioners will require nutrition professionals with advanced training in nutrition as it relates to health promotion and disease prevention. The importance of nutrition in primary health care is further reinforced in the Patient Protection and Affordable Care Act of 2010.

Program Objectives
• demonstrate the knowledge and skills to conduct comprehensive nutrition assessment, planning, and ongoing follow-up care
• demonstrate leadership skills in comprehensive community nutrition planning and program development
• demonstrate the knowledge and skills to work with diverse populations throughout the life span
• demonstrate the skills to educate individuals and population groups on the role of nutrition and health
• demonstrate the skills necessary to evaluate nutrition research and participate in community-based nutrition research projects
• demonstrate the knowledge and skills needed to integrate nutrition care into primary care, public health, and related community health environments such as centers, continuum of care retirement communities, fitness centers, etc.
Learning Objectives

- participate in a variety of community-based settings to document nutrition assessments and ongoing follow-up care using the Academy of Nutrition and Dietetics (AND) assessment, diagnosis, intervention, monitoring, and evaluation system
- participate in community-based environments using nutrition diagnosis codes to provide medical nutrition therapy based on federal diagnosis-related guidelines
- develop and deliver presentations for community groups on a variety of topic areas related to interprofessional community nutrition
- develop the skills to conduct a comprehensive community nutrition education initiative
- exhibit the knowledge and skills to become a culturally competent nutrition professional able to work with individuals throughout the life span, who have varied educational, socioeconomic, cultural, and religious backgrounds
- conduct basic community-based nutrition research
- identify nutrition misinformation and demonstrate the ability to differentiate fact from fallacy
- exhibit the knowledge and skills to effectively integrate nutrition education and care into a variety of environments, with a focus on primary care throughout the life cycle

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.
- Applicants who are concurrently enrolled in a Health Professions Division program can enter the Master of Science in Nutrition program as dual-degree students. The program can be taken concurrently online with other health professions programs. There is no tuition waiver for these students.
- A completed GRE with no targeted score is required.
- One letter of recommendation is required. A five-point Likert scale checklist will be provided and will include areas such as leadership skills, interpersonal skills, stress management, etc. The letter must be from an instructor from the applicant’s institution of higher learning or from an employer or work colleague who is not a relative or spouse.

Prerequisites

For those without a nutrition-related degree, the courses below must be taken at a regionally accredited college or university. Applicant must have received a grade of C or higher in the courses.

- Anatomy and Physiology (lecture and lab)
- Biochemistry
- General Chemistry/Inorganic Chemistry (lecture and lab)
- Organic Chemistry (lecture and lab)
- General Biology (lab preferred)
- General Statistics

University policy will be followed in terms of acceptance of transfer credits.

Application Procedures

The Office of Admissions processes applications on a year-round basis. Students are admitted as a cohort annually each fall. 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 (The letter must be from someone who knows the applicant professionally or academically, on letterhead, specific to the program, and contain a handwritten signature with contact information. The letter must be from an instructor from the applicant’s institution of higher learning or from an employer or work colleague who is not a relative or spouse.)
- submit official transcripts of all undergraduate, graduate, and professional education

Please mail all supplemental admissions material to

Nova Southeastern University
Enrollment Processing Services (EPS)
College of Osteopathic Medicine, Nutrition Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 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 the College of Osteopathic Medicine. Should you have any questions, please call (954) 262-1850.

**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. 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 NTR 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 www.nova.edu/internationalstudents/prospective/credentialservices.html.) 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

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.

**Tuition and Fees**

Tuition for 2015–2016 is $550 per credit hour. Tuition for 2016–2017 will subsequently be posted on our website (http://osteopathic.nova.edu/ms-nutrition). A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 is also required annually. All tuition and fees are subject to change by the board of trustees without notice.

**Transfer of Credits**

Applicants or enrollees of the NSU COM 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. 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. 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.
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 5100</td>
<td>World Culture, Food, and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5130</td>
<td>Nutrition Counseling**</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5200</td>
<td>Nutritional Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6200</td>
<td>Evidence-Based Outcomes Research in Nutrition</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 6800</td>
<td>Special Project (Thesis and Nonthesis)</td>
<td>6</td>
</tr>
</tbody>
</table>

Two concentrations are outlined below. Either one of these concentrations can provide students with the foundational courses to enter a registered dietitian program that requires kitchen and laboratory work and an internship.

Community Nutrition Concentration Requirements
(four required courses and three elective courses)

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUT 5400  Psychology of Eating</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5500  Health Disparities/Health Literacy</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5600  Models of Health Behavior</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5201  Foundations of Public Health</td>
<td>3</td>
</tr>
</tbody>
</table>

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 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 at NSU COM, a curriculum has been developed that includes teaching, interprofessional care, research, and nutrition 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. Courses will incorporate the most recent technologies, including Livescribe pens, Blackboard, and interactive videos.
### Sport Nutrition Concentration Requirements

(four required courses and three elective courses)

#### Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUT 5050</td>
<td>Nutrition and Exercise Performance**</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5060</td>
<td>Dietary and Sports Supplements</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6100</td>
<td>Nutrition, Physical Activity, Wellness, and Weight Management</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6700</td>
<td>Advanced Sports Nutrition</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Elective Courses (choose three courses minimum)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI 5200</td>
<td>Survey of Biomedical Informatics</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5010</td>
<td>Alternative Nutrition and Complementary Therapies</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5020</td>
<td>Anthropology of Food</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5030</td>
<td>Food Policy</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5040</td>
<td>Functional Foods in Society Today</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5070</td>
<td>Introduction to Functional Nutrition and Herbal Therapy</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5110</td>
<td>Gender Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5120</td>
<td>Nutrition Advocacy and Interprofessional Leadership</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5140</td>
<td>Nutrition for Geriatrics/Vulnerable Populations**</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5300</td>
<td>Functional Nutrition and Herbal Therapy Principles in the Gastrointestinal, Pancreatic, Gallbladder, and Liver Systems</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5310</td>
<td>Functional Nutrition and Herbal Therapy Principles in the Endocrine, Immune, and Nervous Systems</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5320</td>
<td>Functional Nutrition and Herbal Therapy Principles in Nervous, Cardiovascular, and Musculoskeletal Systems and Special Populations</td>
<td>3</td>
</tr>
<tr>
<td>NUT 5330</td>
<td>Clinical Applications in Functional Nutrition and Herbal Therapy</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6110</td>
<td>Pediatric Nutrition**</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6120</td>
<td>Nutrition and Art: A Historical Perspective Through Art</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6130</td>
<td>Nutrition in Disaster and Emergency Preparedness, Mitigation, and Recovery</td>
<td>3</td>
</tr>
<tr>
<td>NUT 6900</td>
<td>Special Topics Course (offered as necessary or on demand as new topics arise)</td>
<td>3</td>
</tr>
<tr>
<td>PUH 0625</td>
<td>Interprofessional Leadership</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5430</td>
<td>Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>PUH 5513</td>
<td>Public Health Nutrition</td>
<td>3</td>
</tr>
</tbody>
</table>

** denotes a clinical observation requirement
Course Descriptions

NUT 5010—Alternative Nutrition and Complementary Therapies
This course will focus on providing graduate students with an in-depth understanding of alternative nutrition and complementary therapies not generally used in conventional Western medicine or integrated with conventional medicine. General characteristics and cultural and historical backgrounds of popular therapies will be emphasized. Students will develop the knowledge and skills needed to analyze appropriately and to incorporate what they learn into medical nutrition therapy as necessary and appropriate. (3 credit hours)

NUT 5020—The Anthropology of Food
You are what you eat. Food represents an integral part of human livelihoods, biology, identity, and culture. The Anthropology of Food is an analysis of food in culture. While the primary purpose for food is nutrition, it also has a cultural dimension by which people choose what they eat not only by flavor or nutritional value, but by cultural, religious, historic, economic or social status, and environmental factors. This course will study the complex interactions between food and culture by specifically analyzing how individuals, communities, and societies identify themselves through food and through the relationships between food and gender, health, socioeconomics, race, and ethnicity. (3 credit hours)

NUT 5030—Food Policy
This course will enable students to explore the billion-dollar food industry and the policies and politics behind it. The course will review the impact of politics on what foods are made available to us, where we shop for food, how much we pay, how safe it is, what standards of quality are met, and what messages we are taught about nutrition, health, the American way of life, and the role of nutrition in the overall health of the American throughout the life span will be discussed. (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—Sports and Dietary 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 5070—Introduction to Functional Nutrition and Herbal Therapy
This course will provide students with a historical perspective of herbal therapies. It will teach the pharmacology and phytotherapy in herbal therapy, which includes plants (herbs and whole foods), animal tissues, sea, bee, and orthomolecular supplements in clinical practice. It will describe “functional nutrition,” which relates the biochemistry and physiology to the functionality of body systems and the etiology of diseases. Students will discuss the patient-centered care model and demonstrate how to develop interprofessional relationships in the context of team-based care to address the needs of integrative medicine patients. (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 5130—Nutrition Counseling
This course will provide students with an understanding of the various counseling methods, including motivational interviewing, along with practical skills that can be used to help clients understand their eating patterns and themselves better, while working with them to create healthy change in their lives. The course will outline for students the nutrition counseling approaches for all age and cultural groups. Students will obtain demonstrated practical skills for nutrition counseling including how to prioritize time within a counseling session; how to create an intake, assessment, and progress form that incorporates all of the key areas; and how to calculate the appropriate fees for services rendered. (3 credit hours)

NUT 5140—Nutrition for Geriatric and Vulnerable Populations
This course relates to nutrition evaluation for vulnerable population groups with a focus on mature populations, as well as individuals with developmental disorders who have high risk factors. Students will conduct a formal nutritional evaluation, analyzing dietary, biochemical, anthropometry, and physical signs related to the client care plan, and interpret data using reference standards for the clinical assessment, as well as an interprofessional and ongoing review for individuals throughout the life span. (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 5300—Functional Nutrition and Herbal Therapy Principles in the Gastrointestinal, Pancreatic, Gallbladder, and Liver Systems
This course will review the physiological functions and biochemical pathways of the gastrointestinal system, liver, gallbladder, and pancreas and relate it to principles of functional nutrition, herbal therapy, diet-based therapies, and probiotics. (3 credit hours)

NUT 5310—Functional Nutrition and Herbal Therapy Principles in the Endocrine, Immune, and Nervous Systems
This course will review the physiological and biochemical functions of the endocrine, nervous, and immune systems with the purpose of understanding pathways and incorporating herbal therapy to enhance homeostatic functions. (3 credit hours)

NUT 5320—Functional Nutrition and Herbal Therapy Principles in Nervous, Cardiovascular, and Musculoskeletal Systems and Special Populations
This course will review the physiological and biochemical functions of the nervous, cardiovascular, and musculoskeletal systems and the kidneys and special populations. The course will focus on the functional nutrition and herbal therapy principles of these systems and special populations including children, older adults, and psychiatric patients. (3 credit hours)

NUT 5330—Clinical Applications in Functional Nutrition and Herbal Therapy
This course will bring all components of the previous coursework to integrate it into an interprofessional clinical practice. The course will review environmental medicine principles. It will examine various functional tests that can be performed to help detect nutritional deficiencies, toxicities, and biological systems dysfunctions. The course brings science and evidenced-based information together with case reports that can be applied within an interprofessional team and functional nutrition and herbal therapy practice. (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 always want just one more M&M. 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 5500—Health Disparities and Health Literacy
This active online course will provide graduate students with an understanding of the sociocultural and socioeconomic factors that contribute to health disparities among racial, ethnic, gender, cultural, and disadvantaged groups, with an emphasis on diverse practices related to nutrition and health status. Students will discuss the sociocultural and socioeconomic factors that contribute to health disparities among diverse populations and identify specific dietary practices commonly associated with particular cultural groups. Best practices for interprofessional therapeutic nutrition intervention will be discussed. (3 credit hours)
NUT 5600—Models of Health Behavior
Health behavior comprises actions taken by a person to maintain, attain, or regain good health and to prevent illness. Traditional models—including the Health Belief Model, the Theory of Reasoned Action/Planned Behavior, the Social Cognitive Theory, and the Trans-Theoretical Model—will be discussed. Additionally, alternative models relevant to nutritional and consumptive behaviors will be discussed as a reflection of a person's health beliefs and motivators. Students will apply models of health behavior in real-life practice as it pertains to nutritional and health counseling. (3 credit hours)

NUT 6100—Nutrition, Physical Activity, Wellness, and Weight Management
This course will delve into an integrated and interprofessional collaborative approach to wellness, healthy weight assessment, attainment, and long-term management. Students will examine the seven dimensions of wellness and study popular weight loss methods identifying strengths, weaknesses, safety, and effectiveness long term. (3 credit hours)

NUT 6110—Pediatric Nutrition
This course will provide the graduate student with an in-depth understanding of general and high-risk pediatric nutrition. Students will apply normal and therapeutic dietary knowledge to infants and children with diseases or disorders. The course will provide students with a strong foundation to work with those who have chronic diseases or developmental disorders. Current community resources available for nutrition and assistance will be identified in the course. (3 credit hours)

NUT 6120—Nutrition and Art: A Historical Perspective
This course will review the body as reflected in art through the centuries. Body image has been a central theme in health status through the centuries and is depicted in art since the beginning of mankind. Students will be actively involved in reviewing art through the centuries as reflected by body image and discussing the role art played in health status and ideal body image. (3 credit hours)

NUT 6130—Nutrition in Disaster and Emergency Preparedness, Mitigation, and Recovery
This course examines the role of nutrition in both disaster and recovery. Students will engage in in-depth review of the special needs of vulnerable populations in disasters and strategies on mitigation to prevent or reduce impact through community nutrition planning and public health preparedness. Students will identify the role of food in disaster preparedness, mitigation, response, and recovery and be actively involved in reviewing personal and community preparedness as related to food. (3 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 medical 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. (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 6800—Special Project (Thesis and Nonthesis)
Students will participate in a research or community-action project. Students will identify their project by the second semester and a faculty member will be assigned to serve as their faculty adviser and mentor in this project, which must be approved by both the faculty member and departmental faculty members. All program faculty members will be assigned to individual students. (6 credit hours)

Special Topics Course
A special topics course will be available as determined by the faculty to address current and emerging issues in nutrition science and practice. All faculty members will have an opportunity to teach in this course and each faculty member can bring forth a new course that will need to be approved by the program’s curriculum committee. (3 credit hours)
College of Osteopathic Medicine Departments

ANATOMY
Chair and Professor: G. R. Conover | Professors: L. Dribin, N. Lufti, A. Mariassy, C. Purvis, K. Tu, R. K. Yip | Associate Professors: P. Greenman | Assistant Professor: A. Ahmadi | Instructor: D. McNally

BIOCHEMISTRY
Chair and Professor: R. E. Block | Professors: E. E. Groseclose, K. V. Venkatachalam | Associate Professor: W. G. Campbell

MICROBIOLOGY
Chair and Professor: H. Hada | Professors: D. Burris, K. Davis, H. E. Laubach | Associate Professor: B. Mayi

PATHOLOGY
Chair and Professor: E. Murdock | Professors: B. C. Jones, A. B. Trif | Assistant Professor: A. Varela

PHARMACOLOGY
Chair and Associate Professor: M. Parker | Professors: T. Panavelil, C. Powell | Assistant Professors: P. Rose, M. Zhao

PHYSIOLOGY
Chair and Professor: W. Schreier | Professors: H. Mayrovitz, S. Taraskevich, Y. Zagvazdin | Associate Professor: L. Lyons | Assistant Professor: A. Mashukova

PSYCHIATRY AND BEHAVIORAL MEDICINE
Chair and Professor: R. Ownby | Professor: S. Cohen | Associate Professors: R. Jacobs, D. Shaw

DIVISION OF MEDICAL HUMANITIES
Chair and Professor: S. Cohen

FAMILY MEDICINE

DIVISION OF COMMUNITY MEDICINE
Chair and Professor: S. Zucker | Professor: F. Lippman | Assistant Professor: D. Steinkohl

GERIATRICS
Chair and Professor: N. Pandya | Assistant Professors: E. Hames, H. Masri, K. Rivas

PREVENTIVE MEDICINE
Chair: TBA | Professor: M. Fernandez | Assistant Professor: R. Jacobs

RURAL MEDICINE
Chair and Professor: J. Howell

DIVISION OF CORRECTIONAL MEDICINE
Chair and Professor: D. Thomas

OSTEOPATHIC PRINCIPLES AND PRACTICE
Chair and Associate Professor: D. Boesler | Professor: E. Wallace | Associate Professor: D. Newman, M. Sandhouse | Assistant Professor: Y. Qureshi

DIVISION OF PHYSICAL MEDICINE AND REHABILITATION
Chair and Clinical Assistant Professor: J. Diaz
DEPARTMENT OF SPORTS MEDICINE
Chair: TBA | Assistant Professors: B. Gedrick, H. McCarthy, S. Russo

INTERNAL MEDICINE
Chair and Associate Professor: S. Snyder | Associate Professors: M. Echols, J. Hamstra, D. Penzell | Assistant Professors: A. Bhasin, K. Fenton, C. Savu, A. Thomson

DIVISION OF CARDIOVASCULAR MEDICINE
Chair and Professor: TBA | Clinical Professors: M. Chizner, R. Kaufman

DEPARTMENT OF DERMATOLOGY
Chair: TBA

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 Associate 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. Gaiano

OBSTETRICS AND GYNECOLOGY
Chair and Associate Professor: K. Johnson | Assistant Professors: R. Alexis, W. Alexis

PEDIATRICS
Chair and Professor: E. Packer | Professors: C. Blavo, H. De Gaetano, B. Peters | Clinical Professor: D. Mulligan-Smith | Assistant Professors: R. Faillace, M. Gabay, O. Marriott

SURGERY
Chair and Professor: D. Thomas | Professor Emeritus: S. Kaye

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 and Professor: D. Thomas | Clinical Assistant Professors: D. Rectine, P. Roberts

DIVISION OF GENERAL SURGERY
Chair and Clinical Associate Professor: E. Wiener

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  |  Clinical Professor: G. Ghoniem

MASTER OF PUBLIC HEALTH PROGRAM

BIOMEDICAL INFORMATICS PROGRAM
Director and Professor: J. Lou  |  Professors: P. Hardigan, L. Levy, R. Ownby  |  Associate Professors: R. Jacobs, D. Shaw  |  Assistant Professors: S. Bronsburg, V. Jaffe, A. Rana

MASTER OF SCIENCE IN DISASTER AND EMERGENCY PREPAREDNESS PROGRAM
Director and Professor: K. Davis  |  Professors: L. Levy, C. Rokusek  |  Assistant Professors: K. Messer, E. Sklar

MASTER OF SCIENCE IN MEDICAL EDUCATION
Director and Associate Professor: Marti Echols  |  Professors: Karen Bowser, Michael Simonson  |  Associate Professor: Robin Jacobs  |  Assistant Professors: Arif Rana, Hal Wiggin  |  Clinical Assistant Professor: Stacey Pinnock

MASTER OF SCIENCE IN NUTRITION
Director and Professor: C. Rokusek  |  Professors: E. Groseclose, L. Levy  |  Associate Professor: G. Alvarez  |  Assistant Professors: M. Gordon, L. Lafferty, S. Petrosky, S. Pinnock, D. Silvagni, T. Silver, K. Thomas-Purcell, P. Waziry  |  Adjunct Professor: S. Ekvall  |  Adjunct Assistant Professor: V. Ekvall  |  Adjunct Instructor: A. Navarre
Mission Statement
To educate professionals who will address the pharmacy-related needs of society.

Vision Statement
Through our programs of innovative teaching, service, research, and scholarship, we will achieve the distinction of being a premier college of pharmacy.

Values
• entrepreneurship
• excellence
• innovation
• integrity
• professionalism
• respect for diversity
• service
• teamwork

Administration
Lisa Deziel, B.S., Pharm.D., Ph.D.
Dean

Robert McGory, M.S., Pharm.D.
Associate Dean, Professional Program

Appu Rathinavelu, B.S., M.S., Ph.D.
Associate Dean, Institutional Planning and Development

Peter M. Gannett, Ph.D.
Associate Dean, Research and Graduate Education

Carsten Evans, B.S., M.S., Ph.D.
Executive Director, HPD Continuing Education and Professional Affairs

Elizabeth Frenzel Shepherd, B.S., M.B.A., Pharm.D.
Assistant Dean, Experiential Education and Student Services

Goar Alvarez, B.S., Pharm.D.
Assistant Dean, Pharmacy Services

Nile M. Khanfar, B.S., M.B.A., Ph.D.
Assistant Dean, Palm Beach Program

Blanca Ortiz, Pharm.D.
Assistant Dean, Puerto Rico Program

Manuel J. Carvajal, B.A., M.S.A, Ph.D.
Chair, Sociobehavioral and Administrative Pharmacy

Matthew J. Seamon, Pharm.D., J.D.
Chair, Pharmacy Practice

Michelle A. Clark, B.A., M.S., Ph.D.
Chair, Pharmaceutical Sciences

William D. Hardigan, B.S., M.S., Ph.D.
Dean Emeritus

Pharmacy
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 and a Ph.D. in Pharmaceutical Sciences.

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 service representatives. 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.).

Accreditation
The Accreditation Council for Pharmacy Education, 135 S. LaSalle Street, Suite 4100, Chicago, IL 60603, (312) 664-3575, 800-533-3606; Fax (312) 664-4652, website: www.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 is 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, near the Health Professions Division’s research laboratories. Experiential sites are primarily located throughout Florida and Puerto Rico. 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 northern Palm Beach County. After spending many years in a shared site, NSU was happy to move to its own four-story, 75,000-square-foot facility. Classes began at the new location in the fall of 2011. The Palm Beach Regional Campus features 26 classrooms, including four labs. It also includes a student lounge, a fitness area, a pharmacy library, and 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; student study rooms; computer, pharmaceutics, and patient care management laboratories; a Drug Information Center; and additional meeting and classroom space fully equipped for compressed interactive video. Each regional 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, online technologies, and email are available to students at all campuses. All students have access to the 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 pharmaceutical care center and pharmacy are adjacent to the health clinic in Fort Lauderdale. This is a community pharmacy with disease management services for diabetes, hypertension, hyperlipidemia, osteoporosis, and anticoagulation. It also manages pharmacy services, including drug regimen review, consultation, and teaching.

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, Professional Program. The request must include a copy of the transcript containing the course title and final grade and a course syllabus. 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 hours may be transferred from an approved graduate institution. 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, Florida 33329-9905. Electronic transcripts may be sent to electronictranscript@nova.edu.

Class Cancellation Policy
The university reserves the right to cancel any class. Students may be eligible for a refund for summer semester only (P1–P3); cancelled elective classes during the fall and winter semesters are not eligible for refund.

Doctor of Pharmacy (Pharm.D.) Entry-Level Program

Admissions Requirements for 2016 Entering Class
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 applicants must complete a minimum of 64 semester hours of coursework at a regionally accredited college or university, including the following required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Biology I and II (including laboratory)</td>
<td>6</td>
</tr>
<tr>
<td>Anatomy and 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>9*</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Electives in either discipline</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 64

* 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. Applicants must have a cumulative GPA of 2.75 or higher and a minimum science and math GPA of 2.0 on a 4.0 scale.

3. Applicants are required to submit official scores from the Pharmacy College Admission Test (PCAT).
   - 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 January prior to the expected date of matriculation.

   Candidates may register online at www.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.

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 www.PharmCAS.org. The PharmCAS application process takes four to six weeks.
   - September 8, 2015: PharmCAS submission application deadline for early decision
   - February 1, 2016: PharmCAS submission application deadline for regular admission

2. Applicants should 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)
   - letters of reference
   - PCAT scores

Early Decision
The Early Decision program is a binding option for applicants who have decided that a particular pharmacy degree program is their first choice, and they will enroll if accepted. As an Early Decision applicant, you can apply to only one pharmacy degree program. If you are offered admission as an Early Decision applicant, you are obligated to accept the offer. You will not be permitted to apply to other PharmCAS degree programs during the current cycle. However, if you are denied admission as an Early Decision applicant, you may apply to other PharmCAS degree programs for an additional fee. Visit the PharmCAS
Secondary Application Process
In addition to completing the PharmCAS application, NSU requires the completion of a supplemental application. Upon receipt of the PharmCAS application, NSU will email a link to access our supplemental application.

1. Applicants should submit the following materials electronically to NSU:
   - a completed supplemental application
   - September 25, 2015: submission application deadline for early decision
   - March 15, 2016: submission application deadline for regular admission
   - a nonrefundable application fee of $50 (U.S.)

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.
  Attn: Documentation Center
  Bowling Green Station
  P.O. Box 5087
  New York, New York 10274-5087
  (212) 966-6311
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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.

Transfer Students
Circumstances may warrant that a student enrolled in one college of pharmacy seeks to transfer to another institution. All applications submitted will be reviewed by the associate dean, Professional Program. The final 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. Students in good academic standing may apply as transfer applicants by completing the following requirements:

1. Submit the following materials electronically to NSU.
   - an NSU application (due March 15)
   - a nonrefundable application fee of $50 (U.S.)

2. Meet all entry-level or advanced-standing admissions requirements for the NSU College of Pharmacy, as applicable.

3. Submit 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. Complete an interview.

5. Submit any official standardized test scores such as PCAT, GRE, TOEFL, or IELTS to help further the evaluation of applications (recommended).

Transfer students entering the NSU College of Pharmacy may be given credit for courses that are equivalent to the courses outlined in the curriculum of the College of Pharmacy. Upon acceptance, students should submit their syllabi for review. The dean’s office will evaluate the courses for transfer credit eligibility. A minimum of 30 credit hours of didactic coursework and all Advanced Pharmacy Practice Experiences (APPE) must be completed at NSU.

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 as a regular student.

Program Requirements
All students are required to have ongoing access to a computer and an active account with an Internet service provider. Entering students must purchase an iPad for in-class online testing. 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 month of the fourth professional year, all students return to their respective campuses for a week of live instruction and board exam preparation.

Computer Requirements
In addition to an iPad, students are also required to 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.

Tuition and Fees
• Tuition—Florida* and Puerto Rico Residents

Tuition for 2015–2016 (subject to change by the board of trustees without notice) is $29,950 (U.S.) for Florida* and Puerto Rico. Tuition for 2016–2017 will be posted on the college’s website when available.

*Florida residents in the entry-level program only may qualify for in-state tuition. Information on applying for Florida residency status is available at www.nova.edu/cwis/hpdasa/florida-in-state-duation.html. Residency status will be determined at matriculation and will remain the same throughout enrollment at NSU. No tuition amounts will be adjusted as a result of change in residency.

• Tuition—Out-of-State Residents

Tuition for 2015–2016 (subject to change by the board of trustees without notice) is $33,725 (U.S.) for non-Florida and out-of-state residents. Tuition for 2016–2017 will be posted on the college’s website when available.

• A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 is also required annually.

• An acceptance and preregistration fee of $1,000 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 withdrawal. It is payable within two weeks of an applicant’s acceptance.

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 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, living expenses, iPad and computer-related expenses, health insurance, books, equipment, travel to and from experiential sites, 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 www.nova.edu/smc/health_insurance.html.

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 and Pontificia Universidad Catolica de Puerto Rico 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 specified GPA and achieve acceptable scores on the Pharmacy College Admissions Test (PCAT). 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, contact one of the following:

- Office of Admissions
  Nova Southeastern University
  3301 College Avenue
  Fort Lauderdale, Florida 33314-7796

- Office of Admissions
  Pontificia Universidad Catolica de Puerto Rico
  2250 Avenida Las Americas
  Suite 584
  Ponce, Puerto Rico 00717-0777

Pharmacy Intern

Internship hours must be completed within the guidelines of the Florida Board of Pharmacy as set forth in the Rule, Chapter 64B16-26 and also by the Board of Pharmacy in the state in which the student plans to be licensed. A Social Security number is necessary in order to obtain an intern license from the state of Florida. All efforts should be made by the student to obtain a Social Security number prior to matriculation. It is the responsibility of any student who does not have U.S. citizenship or permanent resident status to ensure that his or her visa status allows for the issue of a Social Security number. An intern license is a requirement for placement on practice experiences. Without practice experiences, a student cannot complete the curriculum or the requirements of the Pharm.D. degree program. Any student who has concerns regarding visa or Social Security status 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 isl@nova.edu. The directors of experiential education will provide assistance and guidance to students regarding pharmacy practice experiences and earning required hours.

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.

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 didactic component of the curriculum builds a foundation in the medical and pharmaceutical sciences. Traditional courses in physiology and pathophysiology, biochemistry, microbiology, research design, and statistics are provided in order to develop a solid foundation. Pharmaceutical sciences courses including Pharmacetrics, Pharmacokinetics, and Nonprescription Therapies are designed to provide students with a strong understanding of the principles of drug therapy. The innovative curriculum also includes the integration of medicinal chemistry and pharmacology into one course titled Pharmacodynamics, which runs five semesters. Insight into the business, human relations, communication, marketing, and legal aspects of pharmacy and the health care system are also provided. Students are actively involved in the two-semester Introduction to Professionalism and Leadership course that covers topics such as ethics and professionalism and promotes student advocacy in the profession and the community.

Additionally, the curriculum includes courses that focus on application of material learned in previous semesters. Pharmacotherapy addresses the use of drugs in the disease process and physical assessment provides students with hands-on opportunities to develop skills essential to monitoring and managing medication therapy. Students hone their analytical skills with courses in pharmacoconomics and outcomes research and biomedical literature evaluation. All students must complete a minimum of 6 semester hours of elective credit.

Opportunities for the students to experience pharmacy practice firsthand are provided early in the curriculum. In the first year, students participate in the Introduction to Professionalism and Leadership course, which is designed to begin the development of abilities including social and cultural awareness; active citizenship and leadership; personal, ethical, and legal judgment; and communication. In the second year of the curriculum, students spend four hours per week in a community pharmacy setting. Practice experiences in the third year involve eight hours per week in hospital pharmacy services. Patient Care Management Lab is initiated during the second year and continues through the third. This provides an opportunity for students to integrate information learned in all courses of the curriculum in order to facilitate application of the material in real-life practice settings.

During the fourth year, through experiential coursework, students will complete nine 160-hour Advanced Pharmacy Practice Experience (APPE) courses, six in direct patient care areas and three selective 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. Each term of the fourth year curriculum includes a Curricular Review course that provides resources for student-initiated review and update of calculations and case-based drug therapy evaluations. During the final month of the fourth professional year, all students return to their respective campuses for a week of live instruction and board exam preparation.
Note: The advanced pharmacy practice experiences are full-time commitments for the students (a minimum of 40 hours per week). Students are responsible for having reliable transportation (e.g., personal vehicle) to attend assigned IPPE and APPE sites. Students may be required to secure accommodation at APPE sites away from their home location. Experiences may be taken in any sequence, however students may not begin advanced pharmacy practice experiences until all didactic work, including electives, has been satisfactorily completed. The curriculum is designed so that knowledge gained in one semester becomes the foundation for material covered in subsequent semesters. Therefore, if students do not successfully complete the coursework specified for one semester, it may impede their ability to take courses in the future semesters. (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.

**Travel Study**

Opportunities for travel study programs may be provided during the summer. Students must be preapproved to participate in travel study programs.

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**Entry-Level Curriculum Outline**

### First Year—Fall Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHRC 4000</td>
<td>Medical Terminology</td>
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</tr>
<tr>
<td>PHRC 4110</td>
<td>Pharmaceutics I</td>
<td>3</td>
</tr>
<tr>
<td>PHRC 4200</td>
<td>Pharmacy Calculations</td>
<td>1</td>
</tr>
<tr>
<td>PHRC 4210</td>
<td>Pharmacodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>PHRC 4300</td>
<td>Pharmacy and the U.S. Health Care System</td>
<td>2</td>
</tr>
<tr>
<td>PHRC 4410</td>
<td>Physiology and Pathophysiology I</td>
<td>4</td>
</tr>
<tr>
<td>PHRC 4580</td>
<td>Introduction to Professionalism and Leadership I</td>
<td>1</td>
</tr>
<tr>
<td>PHRC 4700</td>
<td>Biochemistry</td>
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**Total** 18

### First Year—Winter Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHRC 4120</td>
<td>Pharmaceutics II</td>
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<tr>
<td>PHRL 4130</td>
<td>Pharmaceutics Compounding Lab</td>
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</tbody>
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**Graduation Requirements**

To receive a degree, a student must fulfill the following requirements:

- be of good moral character
- pass all required courses
- complete a minimum of 145 semester hours of coursework in the College of Pharmacy within six academic years
- satisfactorily complete the assigned curriculum requirements for the degree, including all assignments, with a GPA of 2.0 on a four-point scale or a numerical average of 70 percent or above
- satisfactorily pass a P3 capstone examination
- satisfactorily meet all financial obligations
- complete a minimum of 30 credit hours of didactic coursework in addition to five advanced pharmacy practice experiences 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
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHRC 4220</td>
<td>Pharmacodynamics II</td>
<td>3</td>
</tr>
<tr>
<td>PHRC 4250</td>
<td>Pharmacokinetics</td>
<td>4</td>
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<tr>
<td>PHRC 4420</td>
<td>Physiology and Pathophysiology II</td>
<td>4</td>
</tr>
<tr>
<td>PHRC 4550</td>
<td>Introduction to Drug Information Resources and Health Informatics</td>
<td>2</td>
</tr>
<tr>
<td>PHRC 4680</td>
<td>Introduction to Professionalism and Leadership II</td>
<td>1</td>
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<td></td>
<td><strong>Total</strong></td>
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### Second Year—Fall Semester
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<thead>
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<tbody>
<tr>
<td>PHRC 5000</td>
<td>Physical Assessment (hybrid)</td>
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<tr>
<td>PHRC 5230</td>
<td>Pharmacodynamics III</td>
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<tr>
<td>PHRC 5300</td>
<td>Social and Behavioral Pharmacy</td>
<td>2</td>
</tr>
<tr>
<td>PHRC 5350</td>
<td>Research Design and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PHRC 5380</td>
<td>Pharmacy Law</td>
<td>2</td>
</tr>
<tr>
<td>PHRC 5410</td>
<td>Pharmacotherapy I</td>
<td>3</td>
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<td>PHRC 5580</td>
<td>IPPE: Community I</td>
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</tr>
<tr>
<td>PHRC 5700</td>
<td>Microbiology</td>
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### Second Year—Winter Semester
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<td>PHRC 5150</td>
<td>Nonprescription Therapies</td>
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<td>PHRC 5330</td>
<td>Communication in Patient Care</td>
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<td>Pharmacotherapy II</td>
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<tr>
<td>PHRC 5570</td>
<td>Biomedical Literature Evaluation</td>
<td>2</td>
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<td>PHRC 5680</td>
<td>IPPE: Community II</td>
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<td>PHRL 5710</td>
<td>Patient Care Management Lab I</td>
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### Third Year—Fall Semester
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<tr>
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<td>Pharmacodynamics V</td>
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<td>PHRC 6350</td>
<td>Pharmacy Management</td>
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<td>PHRC 6370</td>
<td>Pharmacoeconomics/Outcomes Research</td>
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<tr>
<td>PHRC 6430</td>
<td>Pharmacotherapy III</td>
<td>6</td>
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<tr>
<td>PHRC 6580</td>
<td>IPPE: Health System</td>
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<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>Course Code</td>
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<td>Credits</td>
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<tr>
<td>PHRL 6720</td>
<td>Patient Care Management Lab II</td>
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<td>PHRE</td>
<td>Elective 1</td>
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**Third Year—Winter Semester**

<table>
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<td>PHRC 6380</td>
<td>Public Health and Pharmacy Practice</td>
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<td>PHRC 6440</td>
<td>Pharmacotherapy IV</td>
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<tr>
<td>PHRC 6540</td>
<td>Pharmacy Practice Seminar</td>
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<tr>
<td>PHRC 6680</td>
<td>IPPE: Pharmacy Service</td>
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<tr>
<td>PHRL 6730</td>
<td>Patient Care Management Lab III</td>
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</tr>
<tr>
<td>PHRE</td>
<td>Elective 2</td>
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</tr>
<tr>
<td>PHRE</td>
<td>Elective 3</td>
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**Fourth Year—Summer/Fall/Winter**

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<tr>
<td>PHRC 7610</td>
<td>APPE: Internal Medicine</td>
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<tr>
<td>PHRC 7620</td>
<td>APPE: Ambulatory Care</td>
<td>4</td>
</tr>
<tr>
<td>PHRC 7630</td>
<td>APPE: Community Patient Care I</td>
<td>4</td>
</tr>
<tr>
<td>PHRC 7640</td>
<td>APPE: Community Patient Care II</td>
<td>4</td>
</tr>
<tr>
<td>PHRC 7650</td>
<td>APPE: Acute Patient Care I</td>
<td>4</td>
</tr>
<tr>
<td>PHRC 7660</td>
<td>APPE: Acute Patient Care II</td>
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</tr>
<tr>
<td>PHRC 7670</td>
<td>APPE: Selective I</td>
<td>4</td>
</tr>
<tr>
<td>PHRC 7680</td>
<td>APPE: Selective II</td>
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<tr>
<td>PHRC 7690</td>
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<td>PHRC 7801</td>
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<tr>
<td>PHRC 7802</td>
<td>Curricular Review II</td>
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<tr>
<td>PHRC 7803</td>
<td>Curricular Review III</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>36</strong></td>
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</table>

IPPE = Introductory Pharmacy Practice Experience
APPE = Advanced Pharmacy Practice Experience

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.
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. degree program with advanced standing. Upon completion of the degree 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 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. Clinical Pharmacology, Pharmacotherapeutics, and Nonprescription Therapies courses provide a strong understanding of the principles of drug therapy. The business, human relation, communication, and legal aspects of pharmacy and the health care system are also studied. Courses focus on application of material learned, the use of drugs in the disease process, and developing skills essential to monitoring drug therapy. Students hone their analytical skills with courses in pharmacoeconomics and outcomes research and biomedical literature evaluation. All students must complete a minimum of 4 semester hours of elective credit.

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. International pharmacists may be awarded advanced standing based on their previous coursework. Advanced standing and the actual degree curriculum will vary based on the matriculant’s previous pharmacy coursework. The curriculum provided is representative of a typical international pharmacist entering pharmacy coursework. The curriculum provided is

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 Physiology</td>
<td>6</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>Pharmaceutics</td>
<td>6</td>
</tr>
<tr>
<td>Pharmacokinetics</td>
<td>4</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>6</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. It is required that applicants have a minimum 2.75 GPA on a 4.0 scale on all college-level coursework completed.

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)*: score of 213 or above on a computer-based test or 80 or above on the Internet-based test • www.toefl.org
- International English Language Testing System (IELTS)*: score of 6.0 or higher on the test module • www.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 grade of a 2.0 or higher on a 4.0 scale.

5. Three letters of reference are required from the dean/director of a pharmacy program, registered pharmacists, or professors.

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College of Pharmacy—International Pharmacy Graduates
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**

1. A completed international application along with a $50 (U.S.), nonrefundable application fee must be submitted electronically to NSU by February 1 of the year of anticipated entry. The application is available on our website (www.nova.edu).

2. 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.
     Attn: Document Center
     Bowling Green Station
     P.O. Box 5087
     New York, New York 10274-5087
     (212) 966-6311 • www.wes.org
   - Josef Silny & Associates, Inc.
     7101 SW 102nd Avenue
     Miami, Florida 33173
     (305) 273-1616 • (305) 273-1338 fax
     www.jsilny.com
   - Educational Credential Evaluators, Inc.
     P.O. Box 514070
     Milwaukee, Wisconsin 53203-3470
     (414) 289-3400 • www.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 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, Florida 33329-9905

4. Upon receipt of the completed application and submitted required documents, the Committee on Admissions will select applicants for a personal interview, notifying those applicants of the day and time of the interview. **Being granted an interview is not a guarantee of admission.**

**Program Requirements**

All students are required to have ongoing access to a computer and an active account with an Internet service provider.

Entering students must purchase an iPad for in-class, online testing. 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 month of the third professional year, all students return to their respective campuses for a week of live instruction and board exam preparation.

**Computer Requirements**

In addition to an iPad, students are also required to 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.

**Tuition and Fees**

- Tuition for 2015–2016 (subject to change by the board of trustees without notice) is $40,795 (U.S.). Tuition for 2016–2017 will be posted on the college’s website when available.

- A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 is also required annually.

- An acceptance and preregistration fee of $1,000 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.

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 permitted to register 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, and should include tuition, living expenses, iPad and computer-related expenses, health insurance, books, equipment, travel to and from experiential sites, 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 www.nova.edu/smc/health_insurance.html.
Graduation Requirements
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 complete a minimum of 108 credit hours of coursework at the College of Pharmacy within five academic years.

International/Immigration Information
It is the responsibility of the applicant to contact the Office of International Students and Scholars for information on immigration regulations and student visa requirements. Inquiries can be directed to

Nova Southeastern University
Attention: Office of International Students and Scholars
3301 College Avenue
Fort Lauderdale, Florida 33314-7796

(954) 262-7240
800-541-6682, ext. 27240
Fax: (954) 262-3846
Email: intl@nsu.nova.edu
www.nova.edu/internationalstudents/index.html

Pharmacy Intern
Internship hours must be completed within the guidelines of the Florida Board of Pharmacy as set forth in the Rule, Chapter 64B16-26.2032 and also by the Board of Pharmacy in the state in which the student plans to be licensed. A Social Security number is necessary in order to obtain an intern license from the state of Florida. All efforts should be made by students to obtain a Social Security number prior to matriculation. It is the responsibility of any student who does not have U.S. citizenship or permanent resident status to ensure that his or her visa status allows for the issue of a Social Security number. An intern license is a requirement for placement on practice experiences. Without these experiences, a student can not complete the curriculum or the requirements of the Pharm.D. degree program. Any student who has concerns regarding visa or Social Security status should contact the Office of International Students and Scholars by phone at (954) 262-7240 or 800-542-6682, ext. 27240, or by email at intl@nova.edu. The directors of experiential education will provide assistance and guidance to students regarding pharmacy practice experiences and earning required intern hours.

Advanced Standing Curriculum Outline

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<thead>
<tr>
<th>First Year—Fall Semester</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHRC 4000 Medical Terminology</td>
<td>0</td>
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<tr>
<td>PHRC 4200 Pharmacy Calculations</td>
<td>1</td>
</tr>
<tr>
<td>PHRC 4300 Pharmacy and the U.S. Health Care System</td>
<td>2</td>
</tr>
<tr>
<td>PHRC 4580 Introduction to Professionalism and Leadership I</td>
<td>1</td>
</tr>
<tr>
<td>PHRC 5300 Social and Behavioral Pharmacy</td>
<td>2</td>
</tr>
<tr>
<td>PHRC 5350 Research Design and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PHRC 5380 Pharmacy Law</td>
<td>2</td>
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<tr>
<td>PHRC 5410 Pharmacotherapy I</td>
<td>3</td>
</tr>
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<td>PHRC 5580 IPPE: Community I</td>
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<tr>
<td>PHRC 6260 Clinical Pharmacology</td>
<td>4</td>
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**First Year—Winter Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHRC 4550</td>
<td>Introduction to Drug Information Resources and Health Informatics</td>
<td>2</td>
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<tr>
<td>PHRC 4680</td>
<td>Introduction to Professionalism and Leadership II</td>
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<td>PHRC 5150</td>
<td>Nonprescription Therapies</td>
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<td>PHRC 5330</td>
<td>Communication in Patient Care</td>
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<tr>
<td>PHRC 5420</td>
<td>Pharmacotherapy II</td>
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<tr>
<td>PHRC 5680</td>
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<td>PHRL 5710</td>
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**Second Year—Fall Semester**

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<td>PHRC 5000</td>
<td>Physical Assessment (hybrid)</td>
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<tr>
<td>PHRC 6250</td>
<td>Pharmacodynamics V</td>
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<td>PHRC 6350</td>
<td>Pharmacy Management</td>
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<td>PHRC 6370</td>
<td>Pharmacoeconomics/Outcomes Research</td>
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<td>PHRC 6430</td>
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<td>PHRC 6580</td>
<td>IPPE: Health System</td>
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**Second Year—Winter Semester**

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<td>PHRC 6380</td>
<td>Public Health and Pharmacy Practice</td>
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<td>PHRC 6440</td>
<td>Pharmacotherapy IV</td>
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### Third Year—Summer/Fall/Winter

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<td>APPE: Community Patient Care I</td>
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<td>APPE: Community Patient Care II</td>
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<td>APPE: Acute Patient Care I</td>
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**Total** 36

IPPE = Introductory Pharmacy Practice Experience  
APPE = Advanced Pharmacy Practice Experience

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.
Entry-Level and Advanced Standing Course Descriptions

Note: Listed at the end of each entry are lecture clock hours, laboratory clock hours, and credit hours.

**Basic Medical Sciences**

**PHRC 4410—Physiology and Pathophysiology I**
This two-semester course reviews the physical and chemical processes occurring in the human body that are responsible for the maintenance of health and the pathophysiology of disease. Topics covered during the first semester include membrane and cellular physiology, genetic diseases, and the physiology and pathophysiology of the integumentary, musculoskeletal, nervous, lymphatic, and cardiovascular systems. The second semester (PHRC 4420) addresses the physiology and pathophysiology of the digestive, urinary, respiratory, endocrine, and reproductive systems. \((64-0-4)\)

**PHRC 4420—Physiology and Pathophysiology II**
This two-semester course reviews the physical and chemical processes occurring in the human body that are responsible for the maintenance of health and the pathophysiology of disease. The second semester reviews the physiology and pathophysiology of the digestive, urinary, respiratory, endocrine, and reproductive systems. \((64-0-4)\)

**PHRC 4700—Biochemistry**
This course covers the structure, function, and metabolism of lipids, proteins, carbohydrates, and nucleic acids. Their interactions to compose body systems and their relevance in pharmaceutical applications will be emphasized. \((64-0-4)\)

**PHRC 5700—Medical Microbiology**
Covers the underlying nature of infectious microorganisms. Emphasizes cause, prevention, and control of infectious diseases; immunology; mycology; parasitology; bacteriology; virology. \((48-0-3)\)

**Pharmacy—Required Courses**

**PHRC 4000—Medical Terminology**
This online course will provide an overview of medical terminology. Upon completion, students will demonstrate proficiency in the medical terminology required to be successful in pharmacy education. \((8-0-0)\)

**PHRC 4110—Pharmaceutics I**
Pharmaceutics I emphasizes the theories and applications of underlying physicochemical principles in preparation of pharmaceutical dosage form. It also emphasizes biopharmaceutics principles, as well as drug development and approval processes. \((48-0-3)\)

**PHRC 4120—Pharmaceutics II**
This course deals with the study of traditional and basic pharmaceutical dosage forms, their fundamental characteristics, and their routes of administration. The dosage forms that are examined in the course include oral liquids, parenterals, solids, molded solids, semi-solids, nasal, pulmonary, buccal, sublingual, otic, ophthalmic, transdermal, and controlled release dosage forms and systems. **Prerequisites:** PHRC 4110 and 4200. **Corequisite:** PHRC 4130 \((32-0-2)\)

**PHRL 4130—Pharmaceutics Compounding Laboratory**
This course is a compounding laboratory for the basic pharmaceutical formulations that can be prepared and dispensed in a pharmacy setting. Preparation and dispensing of pharmaceutical solutions, emulsions, suspensions, semi-solids, and solid dosage forms are studied in the laboratory. Basic parenteral procedures and calculations are included. **Prerequisites:** PHRC 4110 and 4200. **Corequisite:** PHRC 4120 \((16-48-1)\)

**PHRC 4200—Pharmacy Calculations**
Pharmacy Calculations includes the study of different methods used by the pharmacist in the process of solving the mathematical problems typically found in the practice of the profession of pharmacy. This course also emphasizes metric and common systems conversions, fundamentals of measurements, percentages, dose calculation, specific gravity, dilution, concentration, and dosage adjustment. \((16-0-1)\)

**PHRC 4210—Pharmacodynamics I**
This is the first course in the pharmacodynamics sequence. This course applies the principles of organic chemistry in order to understand drug actions at the molecular level. It introduces students to the basic pharmacokinetic principles (absorption, distribution, metabolism, and elimination) as it pertains to pharmacology. The remainder of the course covers physiological receptors and key pharmacogenomic concepts. \((48-0-3)\)

**PHRC 4220—Pharmacodynamics II**
This is the second course in the pharmacodynamics sequence. This course applies the principles of biochemistry, physiology, and pathophysiology to help students understand drug actions at the receptor, cellular, and system levels under normal physiological and pathological conditions. It focuses on the drugs that act on the autonomic nervous system, cardiovascular system, and blood components. **Prerequisites:** PHRC 4210 and 4110. **Corequisite:** PHRC 4420 \((48-0-3)\)
PHRC 4250—Pharmacokinetics
The principles involved in drug absorption, distribution, metabolism, and elimination in the body are discussed. Mechanisms and rates of these processes are covered. Examines how the fate of drugs in the body is influenced by physiologic and biochemical processes. Examines the mathematical techniques involved in the graph analysis of drug-blood-level kinetic curves to determine pharmacokinetic parameters. This course describes the application of basic pharmacokinetic principles in therapeutic drug monitoring and in toxicology. (64-0-4)

PHRC 4300—Pharmacy and the U.S. Health Care System
This course covers concepts related to the structure and function of the United States health care system. Emphasis is placed on the analysis of issues associated with personnel; the finance, organization, and regulation of the health care system; and the provision of pharmacy services in the context of the health care enterprise. (32-0-2)

PHRC 4550—Introduction to Drug Information Resources and Health Informatics
Drug information resources provides a detailed review of the fundamental tools necessary to identify the quality of health care information available in primary, secondary, and tertiary resources. 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 drug information requests. Students also learn fundamental aspects of health informatics including basic terminology and tools (e.g., electronic health records, eprescribing, and clinical decision support systems), the role of data analytics and visualization, and both the benefits and limitations associated with the use of health information technology. (32-0-2)

PHRC 4580—Introduction to Professionalism and Leadership I
Students will achieve a basic understanding of leadership, service, and professional activities as they relate to the practice of pharmacy. This course will provide an introduction to, and overview of, organized pharmacy on a local, state, and national level, with a focus on leadership. Students will be exposed to opportunities for community engagement hours within the profession and the university and will be expected to become involved in areas that support their future professional goals. Students will learn from a combination of lectures, service activities, and reflective exercises. Students are expected to participate as team members, to improve listening and observation skills, and to improve professional demeanor. (16-0-1)

PHRC 4680—Introduction to Professionalism and Leadership II
Students will achieve a basic understanding of leadership, service, and professional activities as they relate to the practice of pharmacy. This course will provide an introduction to, and overview of, organized pharmacy on a local, state, and national level, with a focus on leadership. Students will be exposed to opportunities for community engagement hours within the profession and the university and will be expected to become involved in areas that support their future professional goals. Students will learn from a combination of lectures, service activities, and reflective exercises. Students are expected to participate as team members, to improve listening and observation skills, and to improve professional demeanor. (16-0-1)

PHRC 5000—Physical Assessment
This course is intended to teach patient assessment in ambulatory and inpatient settings. Clinical interview and physical examination techniques will be explained and demonstrated, with a video lecture series assessed via an electronic course management system. During the active learning portion of the course, students will demonstrate these techniques. Charting, interpretation of findings, and evaluation of common clinical entities, especially related to medications, will be integrated into these activities. This course is taught as an institute. (15-48-2)

PHRC 5150—Nonprescription Therapies
This course discusses the use of nonprescription therapies including drug and nondrug treatments. Patient education information, potential drug interactions, and recommended treatments will also be discussed. (48-0-3)

PHRC 5230—Pharmacodynamics III
The third course in the pharmacodynamics sequence of classes, this course applies the principles of biochemistry, physiology, and pathophysiology to help students understand drug actions at the receptor, cellular, and system levels under normal physiological and pathological conditions. It covers agents used to treat metabolic disorders, such as diabetes, and drugs influencing the endocrine system. This course also introduces CNS pharmacology as it pertains to the pharmacological treatment of psychological disorders. Prerequisites: PHRC 4210, 4410, and 4420 (64-0-4)

PHRC 5240—Pharmacodynamics IV
The fourth course in the pharmacodynamics sequence of classes, this course applies the principles of biochemistry, physiology, and pathophysiology to help students understand drug actions at the receptor, cellular, and system levels under normal physiological and pathological conditions. This course initially focuses on drugs acting either peripherally or centrally to treat pain and inflammation. The remainder of the course covers anti-infective agents including the antibacterials, antifungals,
and antiviral drugs. **Prerequisites:** PHRC 4210, 4410, and 4420 (64-0-4)

**PHRC 5300—Social and Behavioral Pharmacy**
Sociological, psychological, and behavioral aspects of pharmacy practice are discussed to help students understand patients' perspectives of health and illness, as well as their implications for pharmacists' roles. Variability in patients' individual needs, relationships with health care providers, and medication use behavior are explored. **Prerequisite:** PHRC 4300 (32-0-2)

**PHRC 5330—Communication in Patient Care**
This course focuses on communication models, effective patient interaction, and the role of communication in modern pharmacy practice. Specific communication strategies to help foster therapeutic relationships with patients in various settings are presented. Issues related to conflict resolution, active listening, distortion and bias, and cultural competency are explored. **Prerequisites:** PHRC 4300 and 5300 (32-0-2)

**PHRC 5350—Research Design and Statistics**
Different aspects of research methodology and design are covered in this course. Students are expected to survey statistical applications to understand and evaluate clinical, biomedical, and health care services research. (48-0-3)

**PHRC 5380—Pharmacy Law**
This course provides a framework for students to gain knowledge of the interplay between pharmacy and the law. It provides practical guidance to act lawfully, professionally, and ethically. The material covers federal and state statutes, rules and regulations, and case law with emphasis on understanding the laws affecting the practice of community and institutional pharmacy. **Corequisite:** PHRC 4300 (32-0-2)

**PHRC 5410—Pharmacotherapy I**
The overarching goal of the pharmacotherapy curricular component is to integrate concepts from previous courses in the Doctor of Pharmacy curriculum—including pathophysiology, pharmacokinetics, calculations, biopharmaceutics, and pharmacodynamics—into the selection of pharmacotherapy for specific disease states in specific patients and populations. The pharmacotherapy curricular components are divided into four courses. Pharmacotherapy I is the prerequisite for the remainder of the sequence, as it provides the foundation in clinical pharmacokinetic theory and application; introductory concepts required to develop, evaluate, monitor, and document a pharmacotherapeutic plan; and common health promotion areas pertinent to pharmacists. **Prerequisites:** PHRC 4200, 4210, 4220, 4250, 4410, and 4420 (48-0-3)

**PHRC 5420—Pharmacotherapy II**
Pharmacotherapy II is the second of four courses 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 course. 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. **Prerequisites:** PHRC 4550 and 5410 (80-0-5)

**PHRC 5570—Biomedical Literature Evaluation**
This course provides a framework to guide the student through the thought processes necessary to evaluate and synthesize primary literature using an evidence-based approach. Through didactic and application-based learning, students become proficient in literature evaluation techniques to assess therapeutic value and applicability in patient care. **Prerequisites:** PHRC 4550 and 5350 (32-0-2)

**PHRC 5580—IPPE: Community I**
Students are exposed to the role and responsibilities of the professionally oriented community pharmacist and the importance of effective communication among pharmacist, patients, and other health care providers. On-site experience provides basic knowledge of the drug distribution process in a community pharmacy. Legal, ethical, and practice issues in pharmacy are discussed during classroom activities. (8-60-1.5)

**PHRC 5680—IPPE: Community II**
This course is a continuation of PHRC 5580. Students are exposed to the role and responsibilities of the professionally oriented community pharmacist and the importance of effective communication among pharmacist, patients, and other health care providers. On-site experience provides basic knowledge of the drug distribution process in a community pharmacy. Legal, ethical, and practice issues in pharmacy are discussed during classroom activities. (8-60-1.5)

**PHRL 5710—Patient Care Management Laboratory I**
This is the first of three in the patient care management (PCM) sequence of laboratories. PCM I covers the following specific pharmacotherapeutic topics (parallel to those in PHRC 5420): anticoagulation, cardiovascular disease, renal disease (including anemia), pediatrics, medication safety, and critical care (including adult cardiac life support). 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. The weekly classroom component of the course theory provides students with interprofessional interactions, patient encounters, and additional active learning exercises to complement laboratory activities. Students are assessed for their knowledge of commonly used medications throughout the course. (0-28-0)

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. Prerequisites: PHRC 4210, 4410, and 4420 (48-0-3)

PHRC 6260—Clinical Pharmacology
This course provides the student with the background necessary for the clinical sciences and helps students acquire a body of knowledge about the drugs that will provide the foundation by which pharmacists practice pharmaceutical care. (64-0-4)

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 help students develop the skills needed to operate a pharmacy effectively. Prerequisite: PHRC 4300 (48-0-3)

PHRC 6370—Pharmacoeconomics and Outcomes Research
This course provides an overview of the theories and methodologies of pharmacoeconomics and outcomes research. Application of the allocation of limited health care resources in clinical practice, the pharmaceutical industry, and managed care are explored using examples from the primary literature. 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. Prerequisites: PHRC 4300 and 5300 (32-0-2)

PHRC 6430—Pharmacotherapy III
Pharmacotherapy III is the third of four courses 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. Prerequisite: PHRC 5410 (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. Prerequisites: PHRC 5410 (96-0-6)

PHRC 6540—Pharmacy Practice Seminar
The College of Pharmacy Seminar course is the culmination of the student's medical information evaluation skills pathway. This seminar includes research of a given topic, a scientific paper describing research outcomes, a professional poster, and platform presentations. Presentations will be made to peers and health care professionals, providing valuable experience in presentation ability and in medical information resource utilization. Prerequisites: PHRC 4550, 5350, and 5570 (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
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 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 covers the following specific pharmacotherapeutic topics (parallel to those in PHRC 6430): genitourinary conditions, arthritis, diseases affecting special populations such as geriatric patients, asthma and COPD, endocrine disorders, and mental health. Pain management is also addressed. There is a focus on ambulatory and community pharmacy. The weekly classroom component of the course theory exposes students to interprofessional interactions, patient encounters, and additional exercises to 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 of commonly used medications throughout the course. (0-28-0)

PHRC 7610/7620/7630/7640/7650/7660—Required Advanced Pharmacy Practice Experiences
Each required advanced pharmacy practice experience consists of a four-week, full-time (40 hours per week), off-campus experience in a supervised pharmacy practice environment. In these settings, students apply didactic instruction, develop competencies, and enhance their knowledge of patient care management. The required experiences include internal medicine, ambulatory care, community patient care, and acute patient care. Prerequisite: Successful completion of all didactic coursework (0-160-4)

PHRC 7610—APPE: Internal Medicine
The Internal Medicine Advanced Pharmacy Practice Experience (APPE) is a four-week, full-time (minimum 40 hours per week), out-of-classroom, supervised, inpatient experience emphasizing nondistributive, direct patient care and clinical aspects of pharmacy practice. The Internal Medicine APPE is designed to further refine skills in therapeutics, pharmacokinetics, drug information retrieval and evaluation, verbal and written communication, patient assessment, and case presentations as they apply to adult patients. Students apply therapeutic knowledge; identify drug-related problems; develop competency in pharmacy practice; and enhance knowledge of disease management of common diseases such as hypertension, congestive heart failure, diabetes, renal failure, etc. As members of a health care team, students apply these principles while developing effective, least-toxic, most-economical pharmacological regimens and establishing caring patient relationships in an inpatient setting. Prerequisite: Successful completion of all didactic coursework (0-160-4)
PHRC 7620—APPE: Ambulatory Care

The Ambulatory Care Pharmacy Practice Experience (APPE) is a four-week, full-time (minimum 40 hours per week), out-of-classroom, supervised, experience emphasizing nondistributive, direct patient care and clinical aspects of caring for pharmacy patients in an ambulatory care setting. Students will actively participate in obtaining patient medical and medication histories, evaluating drug therapies, developing pharmacy care plans, assessing patients, monitoring patients’ therapeutic outcomes, consulting with other health care providers, and providing education to patients and health care professionals. Students will apply and synthesize didactic information to the activities of a pharmacist as they develop their professional maturity and judgment skills. Students will apply therapeutic knowledge, identify drug-related problems, develop competency in pharmacy practice, and enhance knowledge of disease management of common diseases such as hypertension, venous thromboembolism, diabetes, hyperlipidemia, etc. As members of a health care team, students will apply these principles while developing effective, least-toxic, most-economical pharmacological regimens and establishing caring patient relationships in an ambulatory care setting. Prerequisite: Successful completion of all didactic coursework (0-160-4)

PHRC 7630—APPE: Community Patient Care I

The Community Patient Care I Advanced Pharmacy Practice Experience is the first of two four-week, full-time (minimum 40 hours per week), out-of-classroom, supervised, experiences emphasizing nondistributive, direct patient care in the outpatient, community setting. In this APPE, students will apply and synthesize didactic information to the activities of a pharmacist as they develop their professional maturity and judgment skills. Students will select one specialty from multiple offerings to complete this requirement. The course focuses on technical skills in the distribution of prescriptions and the practice of medication therapy management. Prerequisite: Successful completion of all didactic coursework (0-160-4)

PHRC 7640—APPE: Community Patient Care II

The Community Patient Care II Advanced Pharmacy Practice Experience is the second of two four-week, full-time (minimum 40 hours per week), out-of-classroom, supervised, experiences emphasizing direct patient care in the outpatient, community setting. In this APPE, students will apply and synthesize didactic information to the activities of a pharmacist as they develop their professional maturity and judgment skills. Students will select one specialty from multiple offerings to complete this requirement. The course focuses on technical skills in the distribution of prescriptions and the practice of medication therapy management. Prerequisite: Successful completion of all didactic coursework (0-160-4)

PHRC 7650—APPE: Acute Patient Care I

The Acute Patient Care I Advanced Pharmacy Practice Experience is the first of two four-week, full-time (minimum 40 hours per week), out-of-classroom, supervised, experiences emphasizing direct patient care in the inpatient, acute setting. In this APPE, students will apply and synthesize didactic information to the activities of a pharmacist as they develop their professional maturity and judgment skills. Students will select one specialty from multiple offerings to complete this requirement. Students will be exposed to the role and responsibilities of a pharmacist as they develop their professional maturity and judgment skills. Prerequisite: Successful completion of all didactic coursework (0-160-4)

PHRC 7660—APPE: Acute Patient Care II

The Acute Patient Care II Advanced Pharmacy Practice Experience is the second of two four-week, full-time (minimum 40 hours per week), out-of-classroom, supervised, experiences emphasizing direct patient care in the inpatient, acute setting. In this APPE, students will apply and synthesize didactic information to the activities of a pharmacist as they develop their professional maturity and judgment skills. Students will select one specialty from multiple offerings to complete this requirement. Students will be exposed to the role and responsibilities of a professionally oriented pharmacist. Students participate as active members of a health care team. Prerequisite: Successful completion of all didactic coursework (0-160-4)

PHRC 7670/7680/7690—Required Advanced Pharmacy Practice Experience: Selectives

The Selective Advanced Pharmacy Practice Experience is a four-week, full-time (minimum 40 hours per week), out-of-classroom, supervised experience that may emphasize direct or nondirect patient care in an outpatient, inpatient, or office-based setting. Students complete a total of three elective experiences in a pharmacy practice specialty area that will allow them to obtain broader experiences. Elective experiences include, but are not limited to, administration, advanced hospital cardiology, critical care, drug information, geriatrics, home infusion, informatics, managed care, medication therapy management, nutritional support, pediatrics, pharmacokinetics, psychiatry, research, and veterinary pharmacy. Prerequisite: Successful completion of all didactic coursework (0-160-4)

PHRC 7801—Curricular Review I

The primary goal for the Curricular Review course series is to assess and strengthen student knowledge and skills developed during the four-year pharmacy curriculum. In Curricular Review I, students will start preparing for the NAPLEX by completing assigned practice questions and doing a practice NAPLEX-like exam. Prerequisite: PHRC 6440 (16-0-0)
PHRC 7802—Curricular Review II
In this course, students will continue preparing for the NAPLEX by completing assigned practice problems in the areas of pharmacotherapy and by completing several practice NAPLEX-like examinations. **Prerequisite:** PHRC 6440 (16-0-0)

PHRC 7803—Curricular Review III
Students will continue preparing for the NAPLEX by completing assigned practice problems and by completing a required pre-NAPLEX examination. Students will be provided with an individual pre-NAPLEX ID for one-time use. During the on-campus portion of the course, a NAPLEX review course is provided. **Prerequisite:** PHRC 6440 (16-0-0)

Elective Courses

PHRE 5105—Overview of Consulting Pharmacy Practice
This course is intended to provide an overview of geriatric consulting statutes that regulate the activity of the consultant pharmacist, the HCFA survey guidelines, the types of facilities required to have a consultant pharmacist, and monitoring of patient’s medication. **Prerequisite:** PHRC 5420 (48-0-3)

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 is designed to provide the student with the background knowledge necessary for the clinical sciences, information related to cardiovascular risk factors, and the foundation from which pharmacists practice pharmaceutical care. The course reviews all major classes of cardiovascular risk factors and discusses evidence-based therapy. The rationale of prevention, lifestyle modifications, and current therapies for the treatment of common and silent cardiovascular risk factors are also addressed. Attention is given to specific clinical studies regarding new strategies to prevent and treat risk factors associated with cardiovascular disease. (32-0-2)

PHRE 5121—Entrepreneurship and Strategic Management
This course provides the students with complementary knowledge in management and leadership by familiarizing students with topics such as operation management, value creation in pharmacy services, labor law, and emotional intelligence, helping them to become more cognizant of the legal, ethical, social, and business aspects of decision making. The student will have the opportunity to think in concrete terms and to propose solutions to common situations encountered during the course of delivering pharmacy services. At the same time, students will be able to identify their own strengths and areas in need of improvement and define their roles as future entrepreneurs. (32-0-2)

PHRE 5123—Individualized Pharmacotherapy
This course will give 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 individual patient’s needs. **Prerequisites:** PHRC 4210, 4220, 5230, and 5240 (16-0-1)

PHRE 5203—Consumer Health Informatics and Web 2.0 in Health Care
This course provides an introduction to, and overview of, the consumer health informatics and Web 2.0 applications used in health care. It explores the development of consumers as ePatients and health information seekers, using tools such as patient-controlled electronic health records as well as the fluid nature of Web 2.0 in medicine. **Prerequisite:** PHRC 4550 (32-0-2)

PHRE 5215—Advanced Pharmaceutical Compounding
The course will provide advanced training in the art, science, and technology of pharmaceutical compounding. **Prerequisite:** PHRL 4130 (32-0-2)

PHRE 5221—Introduction to Molecular Medicine
This course discusses gene defects and diseases that originate at the molecular level, basic principles of gene expression, recombinant DNA-derived pharmaceuticals, and modern diagnostic and therapeutic approaches that are currently used to fight genetically determined diseases. (32-0-2)

PHRE 5223—Drugs of Abuse
The primary purpose of this elective course is to provide pharmacy students with an understanding of
the pharmacology of drugs of abuse. Specifically, the
types of substances abused, the patterns of abuse, the
methods/routes of drugs of abuse, the pertinent
toxicokinetics of these substances, the pharmacologic/
toxicologic mechanism(s), the clinical manifestations
of intoxication and/or withdrawal, the treatment of drug
intoxication/withdrawal, and the societal impact of drug
abuse will be discussed. Prerequisites: PHRC 5410 and
5420 (32-0-2)

PHRE 5225—Principles of Neuropharmacology
This course covers the principles of membrane support
and bioelectricity, synaptic transmission, and recent
molecular biological approaches and techniques that have
revolutionized the understanding of membrane channels.
Prerequisites: PHRC 5410 and 5420 (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 explore
issues arising from advances in biotechnology, resource
allocation, research using human subjects, informed
counsel, the function of ethics committees, and the right
to privacy as they affect the legal rights and responsibilities of
patients, health care providers, and policy makers. (32-0-2)

PHRE 5241—Advances in Central Nervous
System Pharmacology
This course reviews recent developments in the
understanding of selected CNS neurotransmitter/
neuropeptide receptor systems with particular emphasis
on their relevance to the actions of psychopharmacological
agents. It focuses on the neuroanatomy, neurophysiology,
and pathophysiology of specific neurotransmitter/
neuropeptide systems and examines the interaction of these
systems in the expression of CNS effects. Prerequisites:
PHRC 4210, 4220, and 5230 (32-0-2)

PHRE 5245—Geriatric Patient Care Management
This course is to address 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. (32-0-2)

PHRE 5311—Pharmaceutical Marketing
An overview of drug and pharmaceutical care development
and distribution systems is provided in this course. It
gives students knowledge of the practice of marketing,
develops market research skills, and shows how to
formulate marketing plans and strategies as they apply
to the profession of pharmacy and the pharmaceutical
industry. Prerequisite: PHRC 4300. (32-0-2)

PHRE 5321—Strategic Marketing
This course places emphasis on application of marketing
theory and methods in the profession of pharmacy and
the pharmaceutical industry. The aims of the course are to
improve students’ knowledge of the practice of marketing,
to develop market research skills, and to formulate
marketing plans and strategies. (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. (32-0-2)

PHRE 5385—Pharmacy Law Seminar
This seminar of pharmacy law topics is designed to promote
the application of law to practice and enhance critical
thinking, communication, writing, and social perspective.
It will cover timely and controversial issues including
controlled substances, duty to warn, the FDA, and the
pharmaceutical industry. Prerequisites: PHRC 4300 and
5380 (32-0-2)

PHRE 5389—Pharmacy Law of Puerto Rico
This course teaches the laws and regulations governing
pharmacy in Puerto Rico, including the material
manufacturing, distribution, and dispensing of medications
in the commonwealth. (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
ranges, methods of compounding, and ultimate role in the
diagnosis and treatment of diseases. (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 explores the most common animal diseases encountered in veterinary medicine and presents current pharmacotherapeutic approaches for these conditions as they relate to the practice of community and clinical pharmacy. (32-0-2)

PHRE 5427—Introduction to Pharmacometrics: Modeling and Simulation
Introduction to Pharmacometrics: Modeling and Simulation (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 in the 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. (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 5445—Leadership, Engagement, and Development (LEAD)
This course provides an in-depth look at the behaviors and skills needed to be effective as leaders. 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. Prerequisites: PHRC 4580 and PHRC 4680 (16-0-1)

PHRE 5511—Survey of Complementary Therapies
In this course, students will be provided with information about complementary therapies, which are frequently seen or could be recommended for various disease states. Nutritional supplements, herbal remedies, homeopathic remedies, and others will be studied in this course. The proper dosing, side effects, and drug and disease state interactions will also be considered in recommending these therapies. (32-0-2)

PHRE 5563—Rounding with Pharmacy Residents
The course will expand the student’s knowledge base on selected topics covered in therapeutics and pathophysiology I and II, as well as other related hospital topics. This will be achieved by working through patient and hospital management problems and developing individual pharmacotherapeutic plans while taking into consideration therapeutic, economic, and operational aspects. Prerequisite: PHA 5610 (32-0-2)

PHRE 5613—Pediatric Pharmacotherapy
This course introduces the student to pharmacotherapy of common pediatric diseases. The course will expand on topics addressed in therapeutics/pathophysiology II and present more complex pharmacotherapy issues relating to pediatrics. Prerequisites: PHRC 4300, 5300, and 6430 (32-0-2)

PHRE 5633—Introduction to Health Promotion and Education
This course explores why and how pharmacists get involved with health promotion and education programs. It identifies the steps involved in the development of these programs, as well as resources needed. Applicability to vulnerable populations is emphasized. Students are expected to develop a health promotion and education program. Prerequisite: PHRC 4300 (32-0-2)

PHRE 5637—History of Pharmacy
This course reveals the proud heritage of the profession of pharmacy and its service to humanity. Significant drug discoveries will be examined and individuals who contributed to the evolution of pharmacy will be discussed. Minerals, selected drugs, and plants of historical value will be described. Evolution of pharmacy associations, education, pharmaceutical research, and manufacturing will be presented. (32-0-2)

PHRE 5639—Clinical Neuropsychopharmacology
This course will incorporate lecture, classroom discussion, 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 of the mentally ill patient. Prerequisites: PHRC 5410 and 5420 (32-0-2)
PHRE 5641—Applied Secondary Database Analysis
This course will give students the opportunity to apply the skills learned in the research design and biostatistics course by completing a retrospective research project using a federal secondary database. By the end of the course, students will have written a basic research protocol, completed a mock Institutional Review Board application, become familiarized with the basic structure and methodology of the United States National Health and Nutrition Examination Survey (NHANES) database, prepared a dataset, conducted descriptive and basic statistical analyses, written an abstract, and presented a scientific poster to a small audience. Prerequisite: PHRC 5350 (32-0-2)

PHRE 5991—Research in Pharmacy Practice
Students, under the direction of one or more pharmacy practice faculty members, will perform individual research projects. Projects may involve direct patient care or translational research (e.g., pharmacokinetics, pharmacogenomics). Semester credits must be negotiated with the adviser and approved by the department chair prior to the start of any work. Students will be involved in both the planning and execution of the research project. (0-[48–144]-[1–3])

PHRE 5993—Literature Research in Pharmaceutical Sciences
This course provides students with an opportunity to work under the direct supervision of one or more faculty members. Students will be assigned directed readings, evaluations, and analysis of scientific literature in the fields of pharmacology, pharmaceutics, biopharmaceutics, pharmacokinetics, drug delivery systems, pharmaceutical technology, biotechnology, toxicology and others. Students will be mentored and trained on how to retrieve scientific information, build a hypothesis, write papers, and write reviews. With the professor, students are involved in planning and executing an approved research project using basic techniques of scientific research. The student will be awarded 3 or 4 semester credits on the basis of 48 laboratory hours per credit. (0-[144–192]-[3–4])

PHRE 5995—Research in Sociobehavioral and Administrative Pharmacy I
This course consists of individual work conducted by students under the direction/supervision of one or more faculty members. The research may include planning, analysis, and execution of a project. Prerequisite: PHRC 4300 (0-[48–144]-[1–3])

PHRE 5997—Research in Sociobehavioral and Administrative Pharmacy II
This course is a continuation of PHRE 5995 (Research in Sociobehavioral and Administrative Pharmacy I). Prerequisite: PHRC 4300, 5350, and 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 6703—Residency Interviewing Preparatory Seminar (RIPS)
This course is a Pass/Fail elective course offered to fourth-year pharmacy students who are applying to a residency program. The course will focus on improving a student’s interviewing and presentation skills. The course will also help students in developing their curricula vitae, personal statements, and letters of intent. Due to the interactive nature of the course, it will not be broadcasted to other sites. Prerequisite: P4 standing (16-0-1)

PHRE 6997—Travel Study Program
Special topics relevant to the profession of pharmacy will be covered. The goal of each travel study program is to provide the student with an overview, understanding, and appreciation for pharmaceutical and medical practices practiced outside the United States. (48-0-3)

PHRE 7695—Advanced Pharmacy Practice Experience: Selective IV
This is an optional Advanced Pharmacy Practice Experience for students who have completed all nine required APPEs. This option provides additional depth or breadth of practice knowledge and skills. It is an additional APPE option only and will not count as a required APPE or elective course. Prerequisite: Successful completion of all didactic coursework and college approval (0-160-4)
Doctor of Philosophy (Ph.D.) in Pharmaceutical Sciences

Admissions Requirements
Candidates will be recruited for the Ph.D. program with degrees in fields related to the sciences. Successful applicants will be required to comply with the guidelines outlined below.

1. All applicants must have earned a baccalaureate degree from an accredited institution of higher education.
2. The applicant should have earned a cumulative GPA equal to a 3.0 or better on a 4.0 scale.
3. All applicants must submit
   - a Ph.D. application
   - scores for the Graduate Record Examination (GRE)
     - Scores must be less than five years old.
     - The NSU code is 5522.
   - three letters of reference
     - Letters must be from professors or supervisors in the applicant's field of study.
   - all official transcripts and foreign evaluations, if applicable
     - 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.
Attn: Document Center
Bowling Green Station
P.O. Box 5087
New York, New York 10274-5087
(212) 966-6311 • www.wes.org

Josef Silny & Associates, Inc.
7101 SW 102nd Avenue
Miami, Florida 33173
(305) 273-1616 • (305) 273-1338 fax
www.jsilny.com

Educational Credential Evaluators, Inc.
P.O. Box 514070
Milwaukee, Wisconsin 53203-3470
(414) 289-3400 • www.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.

Application Procedures
Applicants may 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. In order to be considered for admission, students must complete the application form and submit supporting documents and a nonrefundable fee of $50 (U.S.). All applications and required documents must be submitted by March 1.

1. Applicants must apply for admissions electronically by using the interactive, web-based application at http://pharmacy.nova.edu/admissions.
2. In order to be considered for admissions, applicants must submit all required documents to the NSU Enrollment Processing Service at the address below.
   Nova Southeastern University
   Enrollment Processing Service
   3301 College Avenue
   P.O. Box 299000
   Fort Lauderdale, Florida 33329-9905
3. Upon receipt of the completed application and all required documents, the Committee on Admissions will review and select applicants for a personal interview. Applicants will be notified of the day and time of the scheduled interview. Being granted an interview does not guarantee admission into the program.

Tuition and Fees
- Tuition for 2015–2016 (subject to change by the board of trustees without notice) is $26,665 (U.S.). Tuition for 2016–2017 will be posted on the college's website when available.
- A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 is also required annually.
- An Acceptance and Preregistration Fee of $1000 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.

The financial ability of applicants to complete their training at the college is important. Applicants should have specific plans for financing their graduate education that should include tuition, living expenses, computer and computer-related expenses, health insurance, books, equipment, 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 www.nova.edu/smc/health_insurance.html.
Social and Administrative Pharmacy Program Sequence

Program Description
Nova Southeastern University College of Pharmacy (COP) offers a program of graduate study and research in Social and Administrative Pharmacy, leading to the Doctor of Philosophy (Ph.D.) degree. This sequence focuses on coursework and research skills that address the dynamic and complex nature of the use and distribution of pharmaceutical products and the provision of pharmacy services. Students who select this sequence may specialize in areas such as sociobehavioral and cultural pharmacy, pharmacy economics and outcomes, or pharmaceutical management and marketing. Students are primarily under the tutelage of faculty members in the Department of Sociobehavioral and Administrative Pharmacy, a group with expertise in development and implementation of sustainable pharmacy services, pharmacoconomics, pharmacy administration, outcomes research, health disparities and vulnerable populations, cultural competency, and related areas.

The Health Professions Division (HPD) at NSU requires all graduate students who are enrolled in health-related Ph.D. programs, including pharmacy, to take a series of core courses in their first and second years. After completing the first year of study, students will focus primarily on the Social and Administrative Pharmacy core courses, elective courses, written comprehensive and oral qualifying examinations, and research in a Social and Administrative Pharmacy area that is consistent with faculty member expertise in the College of Pharmacy. Because of its exclusive emphasis on pharmacy topics, the program does not duplicate degrees or courses offered by other NSU centers. 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.

Course of Study
Students are required to take a minimum of 60 credits, at least 36 of which must be in didactic coursework. A grade of B or better is expected in the didactic work. No less than 54 of the credits will be taken at NSU. Coursework aimed at correcting an academic deficiency in a student's background will not count toward program requirements. Graduate teaching assistants and graduate research assistants will be limited to a maximum of 13 and a minimum of 6 credits per semester during the fall and spring semesters. Other students will be limited to a maximum of 15 and a minimum of 9 credits per semester.

At the completion of this course of study and research, students will be able to
- demonstrate the knowledge base expected at the Ph.D. level in a pharmacy specialty
- design and conduct independent research that adds to the understanding of their pharmacy specialty
- prepare and defend rational and structured proposals seeking support for research efforts
- prepare and present lucid reports on their own research, as well as the research of others

Social and Administrative Pharmacy Curriculum Sequence

<table>
<thead>
<tr>
<th>First Year—Fall Semester</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HPH 7210 Bioethics: Principles of Life Science Research*</td>
<td>3</td>
</tr>
<tr>
<td>PHRP 7001 Health Economics</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7300 Biostatistics 1*</td>
<td>3</td>
</tr>
<tr>
<td>PHRP 7021 Population Health and Public Policy</td>
<td>3</td>
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<tr>
<td>PHRP 7002 Graduate Seminar</td>
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122 College of Pharmacy—Ph.D. Program
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<thead>
<tr>
<th>First Year—Winter Semester</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHRP 7023 Pharmaceutical Marketing</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7400 Research Design*</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7310 Biostatistics II*</td>
<td>3</td>
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<tr>
<td>PHRP 7025 Pharmacy Management and Finance</td>
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<td>PHRP 7008 Graduate Seminar</td>
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<tr>
<td>PHRP 7011 Research</td>
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<td>PHRP 7013 Internship</td>
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<tr>
<td>PHRP 7211 Theories of Health-Seeking Behavior</td>
<td>3</td>
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<tr>
<td>PHRP 7205 Advanced Quantitative Methods</td>
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<td>PHRP 7207 Elective: Secondary Data Analysis</td>
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<td>PHRP 7201 Graduate Research</td>
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<tr>
<td>PHRP 7209 Pharmacoeconomics</td>
<td>3</td>
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<tr>
<td>PHRP 7203 Social Measurement and Techniques</td>
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<td>HPH 7610 Scientific Writing*</td>
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<td>PHRP Elective</td>
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<td>PHRP 7210 Graduate Seminar</td>
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<td>HPH 7620 Research Funding and Proposal Development*</td>
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<td>PHRP 7221 Graduate Research*</td>
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<td>PHRP 7303 Graduate Research</td>
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### Third Year—Winter Semester

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<tr>
<td>PHRP 7325 Dissertation Research</td>
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<td>PHRP 7310 Graduate Seminar</td>
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<td>PHRP 7241 Written Comprehensive and Oral Qualifying Exams</td>
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### Fourth Year—Fall Semester

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<td>PHRP 7421 Dissertation Research</td>
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<td>PHRP 7400 Graduate Seminar</td>
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### Fourth Year—Winter Semester

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<tr>
<td>PHRP 7425 Dissertation Research</td>
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<td>PHRP 7410 Graduate Seminar</td>
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*HPD core course

The curriculum was approved by the faculty and 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.
Drug Development (Pharmaceutics) Sequence

Program Description
Nova Southeastern University College of Pharmacy (COP) offers a program of graduate study and research in Drug Development (Pharmaceutics), leading to the Doctor of Philosophy (Ph.D.) degree. This sequence emphasizes the coursework, laboratory, and literature-search skills that are integral to the theory and practice associated with the incorporation of drug entities into the forms and formulations that best deliver the drugs to the site of the intended medical action. Students who pursue this track are primarily under the tutelage of faculty members in the Department of Pharmaceutical Sciences, a group with expertise in pharmaceutics-related disciplines. Particular areas of expertise include a variety of drug formulations and novel drug delivery systems.

The Health Professions Division (HPD) at NSU requires all graduate students who are enrolled in health-related Ph.D. programs, including pharmacy, to take a series of core courses in their first and second years. After completing the first year of study, students will focus primarily on the Drug Development (Pharmaceutics) core courses, elective courses, written comprehensive and oral qualifying examinations, and research in a Drug Development area that is consistent with faculty member expertise in the College of Pharmacy. Because of its exclusive emphasis on pharmacy topics, the program does not duplicate degrees or courses offered by other NSU centers. In addition, the Ph.D. program is consistent with the criteria for accreditation set by the Southern Association of Colleges and Schools Commission on Colleges.

Course of Study
Students are required to take a minimum of 60 credits, at least 36 of which must be in didactic coursework. A grade of B or better is expected in the didactic work. No less than 54 of the credits will be taken at NSU. Coursework aimed at correcting an academic deficiency in a student’s background will not count toward program requirements. Graduate teaching assistants and graduate research assistants will be limited to a maximum of 13 and a minimum of 6 credits per semester during the fall and spring semesters. Other students will be limited to a maximum of 15 and a minimum of 9 credits per semester.

At the completion of this course of study and research, students will be able to

- demonstrate the knowledge base expected at the Ph.D. level in a pharmacy specialty
- design and conduct independent research that adds to the understanding of their pharmacy specialty
- prepare and defend rational and structured proposals seeking support for research funding
- prepare and present lucid reports on their own research, as well as the research of others

Drug Development (Pharmaceutics) Curriculum Sequence

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<tr>
<th>First Year—Fall Semester</th>
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<tr>
<td>HPH 7210 Bioethics: Principles of Life Science Research*</td>
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<td>PHRP 7004 Advanced Physical Pharmacy</td>
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<td>PHRP 7012 Clinical Drug Development: Advanced Pharmacokinetics and Biopharmaceutics</td>
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*HPD core course

The curriculum was approved by the faculty and 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.
Molecular Medicine and Pharmacogenomics Sequence

Program Description
Nova Southeastern University College of Pharmacy (COP) offers a program of graduate study and research in Molecular Medicine and Pharmacogenomics, leading to the Doctor of Philosophy (Ph.D.) degree. This sequence emphasizes the coursework, laboratory, and literature-search skills that are integral to elucidation of the mechanism of action of drugs and the extent and character of drug actions. Students who pursue this sequence are primarily under the tutelage of faculty members in the Department of Pharmaceutical Sciences, a group with expertise in pharmacology, medicinal chemistry, toxicology, cell biology, and biochemistry. Particular areas of expertise include neuropharmacology, neurophysiology, cardiovascular pharmacology, molecular pharmacology, anti-inflammatory steroids, and cancer pharmacology.

The Health Professions Division (HPD) at NSU requires all graduate students who are enrolled in health-related Ph.D. programs, including pharmacy, to take a series of core courses in their first and second years. After completing the first year of study, students will focus primarily on the Molecular Medicine and Pharmacogenomics core courses, elective courses, written comprehensive and oral qualifying examinations, and research in a Molecular Medicine and Pharmacogenomics area that is consistent with faculty member expertise in the College of Pharmacy. Because of its exclusive emphasis on pharmacy topics, the program does not duplicate degrees or courses offered by other NSU centers. In addition, the Ph.D. program is consistent with the criteria for accreditation set by the Southern Association of Colleges and Schools Commission on Colleges.

Course of Study
Students are required to take a minimum of 60 credits, at least 36 of which must be in didactic coursework. A grade of B or better is expected in the didactic work. No less than 54 of the credits will be taken at NSU. Coursework aimed at correcting an academic deficiency in a student’s background will not count toward program requirements. Graduate teaching assistants and graduate research assistants will be limited to a maximum of 13 and a minimum of 6 credits per semester during the fall and spring semesters. Other students will be limited to a maximum of 15 and a minimum of 9 credits per semester.

At the completion of this course of study and research, students will be able to

- demonstrate the knowledge base expected at the Ph.D. level in a pharmacy specialty
- design and conduct independent research that adds to the understanding of their pharmacy specialty
- prepare and defend rational and structured proposals seeking support for research efforts
- prepare and present lucid reports on their own research, as well as the research of others

Molecular Medicine and Pharmacogenomics Curriculum Sequence

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<thead>
<tr>
<th>First Year—Fall Semester</th>
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<tr>
<td>HPH 7210 Bioethics: Principles of Life Science Research*</td>
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<td>PHRP 7006 Clinical Pharmacology</td>
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<td>HPH 7300 Biostatistics I*</td>
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<td>PHRP 7012 Clinical Drug Development: Advanced Pharmacokinetics and Biopharmaceutics</td>
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<td>PHRP 7114 Molecular and Cellular Pharmacodynamics</td>
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<td>PHRP 7020 Experimental Statistics and Informatics</td>
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<td>PHRP 7204 Research Techniques and Instrumentation</td>
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<td>PHRP 7220 Advanced Pharmacogenomics and Molecular Medicine</td>
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<td>PHRP 7222 Applied Pharmacology</td>
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*HPD core course

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Ph.D. Program Course Descriptions

HPD Core Courses

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.

HPH 7300—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.

HPH 7310—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.

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.

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.

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.

Ph.D. Program Courses

PHRP 7000—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. At that point, students will begin working on a one-on-one basis with their faculty mentor to become familiar with the research interests, literature, and laboratory techniques of the mentor. ([32–48]-0-[2–3])

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. ([48-0-3])

PHRP 7004—Advanced Physical Pharmacy
This course presents application of underlying physical principles to formulate and develop various pharmaceutical products. The course 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])

PHRP 7006—Clinical Pharmacology: Pharmacodynamics Principles and Cardiovascular Pharmacology
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’
PHRP 7013—Internship
This is a course designed to provide students with an introduction to research in industry or an institutional setting. Students will work one-on-one with their supervisor to become familiar with cutting-edge research and problem-solving in industry and institutions. Ultimately, the underlying purpose of this experience is to expose students to the research and environment that exist in industry and various institutions. (48-0-3)

PHRP 7014—Graduate Research
This is a course designed to provide students with an introduction to research and is required every semester until they become degree candidates. Students will work one-on-one with faculty members to become familiar with the research interests, literature, and research techniques of their mentors. ([32–48]-0-[2–3])

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 graduate research seminar introduces Ph.D. 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. 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 should 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 7010—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. At that point, students will begin working on a one-on-one basis with their faculty mentor to become familiar with the research interests, literature, and laboratory techniques of the mentor. ([32–48]-0-[2–3])

PHRP 7011—Graduate Research
This is a course designed to provide students with an introduction to research and is required every semester until they become degree candidates. Students will work one-on-one with faculty members to become familiar with the research interests, literature, and research techniques of their mentors. (48-0-3)

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 7015—Graduate Research
This course is designed to provide students with an introduction to research in industry and various institutions. Students will work one-on-one with their supervisor to become familiar with cutting-edge research and problem-solving in industry and institutions. 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 7050—Journal Club
This course gives graduate students the opportunity to read, interpret, and present literature critically to fellow peers, postdoctoral students, and faculty members. The course will allow development of high-quality written and oral critiques of peer-reviewed journal publications. This course helps students stay abreast of current knowledge in the field, develop presentation skills, and promote department unity. (16-0-1)

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. (48-0-3)

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. Prerequisites: Clinical Pharmacology (PHRC 4230) or equivalent. (48-0-3)

PHRP 7201—Graduate Research
This course develops student skills in conducting research projects. Students will work independently, under the guidance of their faculty mentor. Skills for development may include, but are not limited to, developing research hypotheses, conducting a literature review, devising instrumentation, validating instruments, conducting an experiment, collecting data, analyzing data, and writing reports. The course may be taken more than once. Typically, students focus on hypotheses development and literature review projects in the first semester and data collection or field work for a pilot project in the second semester. ([32–48]-0-[2–3])

PHRP 7202—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. At that point, students will begin working on a one-on-one basis with their faculty mentor to become familiar with the research interests, literature, and laboratory techniques of the mentor. ([32–48]-0-[2–3])

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 computer software used 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)

PHRP 7204—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. (48-0-3)

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 7206—Pharmaceutical Formulations
This course features current information on the science and technology involved in drug formulation. Process development is discussed. The course emphasizes formulations development based on physiochemical properties of the therapeutic agent and excipients, including small molecules and polymers, and the mathematical relationships of drug disposition. This course covers the utilization of pharmaceutical principles, such as physicochemical and pharmacokinetic properties of drugs for the design and formulation of conventional pharmaceutical dosage forms such as powders, tablets, capsules, creams, ointments, suppositories, solutions, suspensions, emulsions, sterile products, and biological products that meet the requirements of therapeutic efficacy, stability, and safety. Prerequisites: First-year courses of the Ph.D. program (48-0-3)
PHRP 7207—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, socio-behavioral, 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)

PHRP 7208—Advanced Pharmacokinetics
This course will explain the model development techniques that can be utilized for complex pharmacodynamic systems. Advanced data analysis techniques and modern pharmacokinetic theory will be discussed. (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. (48-0-3)

PHRP 7211—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. (48-0-3)

PHRP 7212—Advances in Drug Delivery
This course provides current information on the science and technology of novel drug delivery systems. Particularly, it emphasizes the development and evaluation of controlled and targeted drug delivery systems based on physicochemical properties of the therapeutic agent and polymer and pharmacokinetics. Coverage includes material on the advantages, disadvantages, and limitations of advanced drug delivery over traditional methods. Recent advances in drug delivery will be presented and discussed. (48-0-3)

PHRP 7213—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)

PHRP 7214—Industrial Pharmacy and Pharmaceutical Technology
This course provides students 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 tablet, capsules, liquid dosage forms, semisolid dosage forms, and sterile products. Coverage includes the science of packaging materials, production management, quality assurance, and regulations in the pharmaceutical industry—such as validation, good manufacturing practice (GMP), and FDA guidelines for stability of pharmaceutical dosage forms. (48-0-3)

PHRP 7215—Graduate Research
This course will provide the fundamentals of writing research and program grants for funding agencies in the health field. It will include an overview of the different funding sources. The students will be introduced to a wide variety of call/announcements for applications. They will be provided with multiple hands-on experiences and exercises. They will be expected to write a grant for a research project and for a program in response to a current call for application. (48-0-3)

PHRP 7216—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)

PHRP 7217—Graduate Research
This is a course designed to provide students with an introduction to research and is required every semester until they become degree candidates. Students will work one-on-one with faculty members to become familiar with the research interests, literature, and research techniques of their mentors. ([32–48]-0-[2–3])

PHRP 7218—Graduate Research
This course is designed to provide students with an introduction to research. This course is required each semester until students become degree candidates. At that point, students will begin working on a one-on-one basis.
with their faculty mentor to become familiar with the research interests, literature, and laboratory or research techniques of the mentor. (32–48)-0-[2–3])

PHRP 7220—Advanced Pharmacogenomics and Molecular Medicine
This course is designed to give pharmacy Ph.D. students an in-depth knowledge and understanding of the cellular and molecular bases that have evolved as the basis of human diseases. The course offers state-of-the-art molecular biological concepts to apply toward understanding of molecular bases of individual variation, its application to drug response, and possible new interventions. The students will be able to understand and apply the knowledge of modern molecular biological techniques for diagnostics and detection of infection and gene defects, as well as finger printing, transgenesis, biopharming, immunotherapies, and the ever-developing field of gene therapy and regenerative medicine. (48-0-3)

PHRP 7221—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. (48-0-3)

PHRP 7222—Applied Pharmacology
This course builds on the Pharmacodynamics Principles and Cardiovascular Pharmacology course, as well as the Molecular and Cellular Pharmacology course. Students will use pharmacology 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. (48-0-3)

PHRP 7224—Elective: Advances in Central Nervous System Pharmacology
This course reviews recent developments in the understanding of select CNS neurotransmitter/neuropeptide receptor systems with particular emphasis on their relevance to the actions of psychopharmacological agents. It focuses on the neuroanatomy, neurophysiology, and pathophysiology of specific neurotransmitter/neuropeptide systems and examines the interaction of these systems in the expression of CNS effects. (48-0-3)

PHRP 7225—Graduate Research
This course is designed to provide students with an introduction to research. This course is required each semester until students become degree candidates. At that point, students will begin working on a one-on-one basis with their faculty mentor to become familiar with the research interests, literature, and laboratory or research techniques of the mentor. (32–48)-0-[2–3])

PHRP 7226—Journal Club
This course provides graduate students 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. (16-0-1)

PHRP 7228—Principles of Pharmaceutical Analysis
This course explores the fundamentals of pharmaceutical analysis. This includes the principles of pharmaceutical analysis techniques and their applications in pharmaceutical research and development (both academic and industrial). It is crafted to give students a solid conceptual ground to understand how a particular analytical technique works. The course is designed to enable students to critically evaluate instrumentation choices when needed and to select the appropriate tools. (48-0-3)

PHRP 7230—Graduate Research
This course is designed to provide students with an introduction to research. This course is required each semester until students become degree candidates. At that point, students will begin working on a one-on-one basis with their faculty mentor to become familiar with the research interests, literature, and laboratory or research techniques of the mentor. (32–48)-0-[2–3])

PHRP 7235—Elective: Cardiovascular Risk Factors
This course is designed to provide the student with the background knowledge necessary for the clinical sciences, information related to cardiovascular risk factors, and the foundation from which pharmacists practice pharmaceutical care. The course reviews all major classes of cardiovascular risk factors and discusses evidence-based therapy. The rationale of prevention, lifestyle modifications, and current therapies for the treatment of common and silent cardiovascular risk factors are also addressed. Attention is given to specific clinical studies regarding new strategies to prevent and treat risk factors associated with cardiovascular disease. (48-0-3)

PHRP 7240/PHRP 7241—Written Comprehensive and Oral Qualifying Exams
This course consists of a series of written and oral exams that are based on the didactic coursework and research that Ph.D. students have been exposed to during their first two years in the program. These exams will be prepared by the faculty members who have taught them thus far.
The underlying purpose of this course is to ascertain if the Ph.D. students are suitable candidates to continue in the program. (0-0-0)

**PHRP 7245—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. It is designed to enable students to critically evaluate instrumentation choices when needed and to select the appropriate tools. (48-0-3)

**PHRP 7002/PHRP 7008/PHRP 7200/PHRP 7210/PHRP 7300/PHRP 7310/PHRP 7400/PHRP 7410/PHRP 7510/PHRP 7500—Graduate Seminar**
The purpose of this course is to equip students with the necessary tools so that they can 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)

**PHRP 7324/PHRP 7325/PHRP 7326/PHRP 7327/PHRP 7328/PHRP 7420/PHRP 7421/PHRP 7424/PHRP 7425/PHRP 7426/PHRP 7427/PHRP 7524/PHRP 7525/PHRP 7526—Dissertation Research**
This course consists of independent, full-time research on an approved dissertation problem mentored by a major adviser. The research effort will continue until the problem is solved or resolved to the satisfaction of the mentor and the student's dissertation committee. Certification for graduation requires an oral defense of the written dissertation resulting from this research endeavor. (128-0-8)

**PHRP 7800—Dissertation Defense**
This course will serve as the concluding evaluation for all Ph.D. students. It consists of an oral defense of the dissertation that was written to present the significance, methods, and findings of the dissertation research project. The defense, which is open to the public, requires the student to demonstrate a firm grasp of the research area and to defend the dissertation and its research before the Dissertation Committee. After successful defense, the student becomes eligible for conferral of the Ph.D. degree. (0-0-0)
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 club and class activities, and working to improve the quality of life for students at the College of Pharmacy.

Other Organizations
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)
- College of Psychiatric and Neurologic Pharmacists (CPNP)
- Florida Society of Health-System Pharmacists (FSHP)
- International Pharmaceutical Students Federation (IPSF)
- International Society for Pharmacoeconomics and Outcomes Research (ISPOR)
- Jewish Pharmacy Student Organization (JPSO)
- Kappa Psi (ΚΨ)
- National Community Pharmacists Association (NCPA)
- Phi Delta Chi (PDC)
- Phi Lambda Sigma (PLS)
- Rho Chi
- Student College of Clinical Pharmacy (SCCP)
- Student National Pharmaceutical Association (SNPhA)

College of Pharmacy Faculty

Biochemistry
Chair and Professor: R. E. Block | Professors: E. E. Groseclose, K. V. Venkatachalam | Assistant Professor: W. G. Campbell

Microbiology
Chair and Professor: H. Hada | Professors: D. Burris, K. Davis, H. E. Laubach | Associate Professor: B. Mayi

Physiology
Chair and Professor: W. Schreier | Professor: Y. Zagvazdin | Assistant Professor: A. Mashukova

Pathology
Professor: B. Jones | Assistant Professors: E. Murdock, A. Villa

Pharmaceutical Sciences

Sociobehavioral and Administrative Pharmacy

Pharmacy Practice
Experiential Sites
The following institutions are affiliated with the College of Pharmacy for experiential education.

- 5th Street Pharmacy
  Okeechobee, Florida
- Advocate Lutheran General Hospital
  Parkridge, Illinois
- A.G. Holley State Hospital
  Lantana, Florida
- All-Med Infusion Services
  Miami Lakes, Florida
- All-Med Specialty Pharmacy
  West Palm Beach, Florida
- American Pharmaceutical Services
  Longwood, Florida
- Apotex Corporation
  Weston, Florida
- Arecibo, PR VA
  Arecibo, Puerto Rico
- Arnold Palmer Hospital for Women and Children
  Orlando, Florida
- Arthur's Original Pharmacy
  Tamarac, Florida
- ASCP
  Alexandria, Virginia
- Atlantic Shores
  Pembroke Pines, Florida
- Avella of Orlando/Covance Specialty Pharmacy
  Lake Mary, Florida
- Avella Specialty Pharmacy of Scottsdale
  Scottsdale, Arizona
- Aventura Hospital and Medical Center
  Aventura, Florida
- AXIUM Health Care de Puerto Rico
  Guaynabo, Puerto Rico
- Azalea Health
  Palatka, Florida
- Azalea Health
  St. Augustine, Florida
- Baptist Hospital
  Miami, Florida
- Bascom Palmer Eye Institute
  Miami, Florida
- Baxter's Pharmacy and Discount, Inc.
  Miami, Florida
- Bay Medical Center
  Panama City, Florida
- Bay Pines VAMC
  St. Petersburg, Florida
- Bayamon Medical Plaza
  Bayamon, Puerto Rico
- Bella Vista Hospital
  Mayaguez, Puerto Rico
- Bethesda Memorial Hospital
  Boynton Beach, Florida
- Boca Pharmacy & Home Health Center
  Boca Raton, Florida
- Boca Raton Regional Hospital
  Boca Raton, Florida
- Broward County Health Department
  Fort Lauderdale, Florida
- Broward Health Coral Springs
  Coral Springs, Florida
- Broward Health Imperial Point
  Fort Lauderdale, Florida
- Broward Health Medical Center
  Fort Lauderdale, Florida
- Broward Health North
  Deerfield Beach, Florida
- Buford Road Pharmacy
  Richmond, Virginia
- Cape Coral Hospital
  Cape Coral, Florida
- Cardinal Health
  Fort Myers, Florida
- Cardinal Health Fort Lauderdale
  Pompano Beach, Florida
- Carrell Discount Pharmacy
  Fort Myers, Florida
- Center for Family Care, Florida Hospital East
  Cape Coral, Florida
- Center Pharmacy
  Cape Coral, Florida
- Centers for Disease Control
  Atlanta, Georgia
- Central Admixture Pharmacy Services, Inc. (CAPS)
  Miramar, Florida
- Central Florida Family Health Center
  Sanford, Florida
• Central Florida Family Health Center East
  Orlando, Florida
• Central Florida Family Health Center—Hoffner
  Orlando, Florida
• Central Florida Family Health Center—South Side Clinic
  Orlando, Florida
• Central Florida Family Health Center—Underhill
  Orlando, Florida
• Centro Ararat
  Ponce, Puerto Rico
• Children’s Diagnostic & Treatment Center
  Fort Lauderdale, Florida
• Children’s Medical Services
  Fort Lauderdale, Florida
• Circles of Care
  Melbourne, Florida
• Cleveland Clinic Florida Health and Wellness Center
  West Palm Beach, Florida
• Cleveland Clinic Hospital
  Weston, Florida
• Cleveland Clinic Outpatient Pharmacy
  Weston, Florida
• Clinical Pharmacology Services
  Tampa, Florida
• CMC Home Infusion and Equipment
  Charlotte, North Carolina
• Commcare Pharmacy
  Fort Lauderdale, Florida
• Compounding Docs, Inc.
  Boca Raton, Florida
• Coral Gables Hospital
  Coral Gables, Florida
• Cora E. Branyon Family Health Center
  Fort Lauderdale, Florida
• COSSMA Inc.
  San Lorenzo, Puerto Rico
• COSSMA Inc.
  Yabucoa, Puerto Rico
• COSSMA Inc.—Farmacia COSSMA Cidra
  Cidra, Puerto Rico
• Covenant Hospice, Inc.
  Pensacola, Florida
• Coventry Healthcare
  Sunrise, Florida
• CuraScript Pharmacy
  Orlando, Florida
• CVS
  Florida
• Delray Medical Center
  Delray Beach, Florida
• Dent Neurologic Institute
  Amherst, New York
• Diplomat Specialty Pharmacy
  Fort Lauderdale, Florida
• Direct Pharmacy Source
  Sunrise, Florida
• Doctors Hospital
  Coral Gables, Florida
• Dr. G’s Pharmacy by the Sea
  Lauderdale-by-the-Sea, Florida
• Dr. Robert L. Yeager Health Center—Rockland County
  Pomona, New York
• Drogueria Betances, Inc.
  Caguas, Puerto Rico
• Drug Place, Inc.
  Pompano Beach, Florida
• East Coast Nuclear Pharmacy
  Palm Beach Gardens, Florida
• Eli Lilly and Company
  San Juan, Puerto Rico
• Eli Lilly and Company Corporate Office
  Indianapolis, Indiana
• EP Medical Equipment Pharmacy
  Miami, Florida
• Family Health Center of Southwest Florida
  Fort Myers, Florida
• Family Medical and Dental Center
  Palatka, Florida
• Farmacia Belmonte—Cabo Rojo
  Cabo Rojo, Puerto Rico
• Farmacia Cristina
  Bayamón, Puerto Rico
• Farmacia del Carmen
  Arecibo, Puerto Rico
• Farmacia Denirka
  Fajardo, Puerto Rico
• Farmacia El Apotecario
  Ponce, Puerto Rico
• Farmacia El Tuque
  Ponce, Puerto Rico

• Farmacia Irizarry—Cabo Rojo
  Cabo Rojo, Puerto Rico

• Farmacia La Aurora
  Yauco, Puerto Rico

• Farmacia La Concepcion
  Yauco, Puerto Rico

• Farmacia Lorraine
  Ponce, Puerto Rico

• Farmacia Lourdes—Ponce
  Ponce, Puerto Rico

• Farmacia Marce
  Corozal, Puerto Rico

• Farmacia Mediana #5 Carolina
  Río Piedras, Puerto Rico

• Farmacia Medina
  Carolina, Puerto Rico

• Farmacia Nueva Comerio
  Comerio, Puerto Rico

• Farmacia Perpetuo Socorro
  Moca, Puerto Rico

• Farmacia Profesional Adjuntas
  Puerto Rico

• Farmacia Puerto Rico
  Puerto Rico

• Farmacia San Antonio
  San Sebastián, Puerto Rico

• Farmacia San Jose
  Moca, Puerto Rico

• Farmacia Vanga
  Carolina, Puerto Rico

• Farmacia Villa Carmen
  Caguas, Puerto Rico

• FastMed Health Mart Pharmacy
  Sunrise, Florida

• Fawcett Memorial Hospital
  Port Charlotte, Florida

• FedCo Drugs
  Palm Beach, Florida

• First Hospital Panamericano
  Cidra, Puerto Rico

• Florida Atlantic University
  Boca Raton, Florida

• Florida Diabetes Camp
  Gainesville, Florida

• Florida Hospital Altamonte
  Altamonte Springs, Florida

• Florida Hospital—Celebration Health
  Celebration, Florida

• Florida Hospital—East Campus
  Orlando, Florida

• Florida Hospital—Kissimmee
  Kissimmee, Florida

• Florida Hospital—South Campus
  Orlando, Florida

• Florida Hospital—Waterman
  Tavares, Florida

• Florida Hospital Outpatient Clinic
  Orlando, Florida

• Florida I.V. Services
  Davie, Florida

• Florida Medical Center
  Lauderdale Lakes, Florida

• Florida Pharmacy Association
  Tallahassee, Florida

• Florida Poison Information Center—Miami
  Miami, Florida

• Food and Drug Administration—CDER—Medical Informatics Staff
  Rockville, Maryland

• Food and Drug Administration—Division of Communications Management
  Rockville, Maryland

• Food and Drug Administration—Office of Generic Drugs
  Rockville, Maryland

• Food and Drug Administration—Office of Special Health Issues
  Rockville, Maryland

• Fort Lauderdale Health Center
  Fort Lauderdale, Florida

• Fort Myers VA Outpatient Clinic
  Fort Myers, Florida

• Fort Thompson Health Center
  Fort Thompson, South Dakota

• Gainesville VAMC
  Gainesville, Florida

• Gardens Drugs
  Palm Beach Gardens, Florida
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<th>Name</th>
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<td>Gardens Drugs</td>
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<td>GE Healthcare</td>
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<td>Good Samaritan Medical Center</td>
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<td>Guaynabo City Pharmacy</td>
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<td>Gulf Coast Medical</td>
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• Indian Health Service
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• InfuPharma
  Hollywood, Florida
• JFK Medical Center
  Atlantis, Florida
• Jackson Memorial Hospital
  Miami, Florida
• Jackson Memorial Hospital North
  North Miami Beach, Florida
• Jackson Memorial
  Long Term Care Center
  Miami, Florida
• Jackson South Community Hospital
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  Tampa, Florida
• James Haley VAMC Tampa
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• Jerry's Medical Arts Pharmacy
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• Joe Dimaggio Children's Hospital
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• Jupiter Medical Center
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• Kala Pharmacy Inc
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• Kendall Regional Medical Center
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• Kindred Hospital—Central Florida
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  Oakland Park, Florida
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  Snohomish, Washington
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• Lakeland VA Community-Based Outpatient Clinic
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• Las Villas Pharmacy
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• Lawnwood Pavilion
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• Lawnwood Regional Medical Center
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• Leon Medical Centers
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  Ponce, Puerto Rico
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• Mallinckrodt/Tyco Healthcare
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• Manatee Memorial Hospital
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• Manati Medical Center
  Manati, Puerto Rico
• Marco Drugs & Compounding
  Miami, Florida
• Martin Memorial Medical Center
  Stuart, Florida
• Matrix Health Care Services
  Tampa, Florida
• Matrix Pharmacy
  Tampa, Florida
• Mayaguez VA
  Mayaguez, Puerto Rico
• Mease Dunedin Hospital
  Dunedin, Florida
• Med-Care Diabetic and Medical Supplies
  Boca Raton, Florida
• MedChoice
  Cooper City, Florida
• Medic Pharmacy and Surgical
  Fort Lauderdale, Florida
• Medicap Pharmacies, Inc.
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• Medicine Shoppe—Tampa
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• Medicine Shoppe Pharmacy—Winter Garden
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• Memorial Primary Care Center
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• Memorial Regional Hospital
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• Mercy Hospital
  Miami, Florida
• MGC Pharmacy
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• Miami Beach Community Health Center
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• Miami Children’s Hospital
  Miami, Florida
• Miami VA—Broward Out Patient Clinic
  Sunrise, Florida
• Miami VA—Hollywood Out Patient Clinic
  Hollywood, Florida
• Miami VA—CBOC Homestead Clinic
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• Miami VAMC
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• Mikimbin Pharmacy
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• Milton Medical Drug Co.
  Miami Beach, Florida
• Moose Professional Pharmacy
  Concord, North Carolina
• Morales Pharmacy
  Miami, Florida
• Morton Plant Hospital
  Clearwater, Florida
• Mount Sinai Medical Center
  Miami Beach, Florida
• My Community Pharmacy
  Wellington, Florida
• Naples Community Hospital
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• Natural Standard Research Collaboration
  Somerville, Massachusetts
• Navarro’s
  Florida
• North Florida South Georgia Veterans Health System
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- Raulerson Hospital
  Okeechobee, Florida
- Rite Aid Pharmacy
  Los Angeles, California
- Rite Aid Pharmacy
  Washington, District of Columbia
- Robalo Pharmacy
  Lake Park, Florida
- Romano's Pharmacy
  Coral Springs, Florida
- Royal Palm Compounding Pharmacy
  Wellington, Florida
- RXperts Pharmacy Services, INC.
  Hollywood, Florida
- Ryder Memorial Hospital
  Humacao, Puerto Rico
- Saint Joseph's Hospital
  Tampa, Florida
- Salud en el Hogar y Hospicio San Lucas
  Ponce, Puerto Rico
- San Jorge Children's Hospital
  Santurce, Puerto Rico
- San Juan VA Medical Center
  Bayamón, Puerto Rico
- San Luis Pharmacy
  San Lorenzo, Puerto Rico
- Sand Lake Hospital
  Orlando, Florida
- Sarasota Memorial Hospital
  Sarasota, Florida
- Sarasota VA Primary Care Clinic
  Sarasota, Florida
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  Pembroke Pines, Florida
- Singer Mental Health
  Rockford, Illinois
- Skip's Pharmacy
  Boca Raton, Florida
- SkyeMed Pharmacy
  Pompano Beach, Florida
- South Broward Community Health Service—Hollywood
  Hollywood, Florida
- South Florida State Hospital
  Pembroke Pines, Florida
- South Miami Hospital
  South Miami, Florida
- South Miami Pharmacy
  Miami, Florida
- Special Care Pharmacy Services
  San Juan, Puerto Rico
- Specialty Care Center
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  Wilmington, Delaware
- St. Lucie Medical Center
  Port St. Lucie, Florida
- St. Luke's Hospital
  Jacksonville, Florida
- St. Mary's Medical Center
  West Palm Beach, Florida
- St. Vincent's Medical Center
  Jacksonville, Florida
- Stuart S. Shipe D.O.M., P.A.
  Port St. Lucie, Florida
- Sunshine Health
  Sunrise, Florida
- Super Farmacia Juana Díaz
  Juana Díaz, Puerto Rico
- Super Farmacia La Rampla
  Yabucoa, Puerto Rico
- Super Farmacia Nueva, Inc
  Naranjito, Puerto Rico
- SW Florida Regional Medical Center
  Fort Myers, Florida
- Sylvester Comprehensive Cancer Center
  Miami, Florida
- Tampa General Healthcare
  Tampa, Florida
- Target
  Brooklyn, New York
• Target
Florida
• Tequesta Drugs
Tequesta, Florida
• Town Center Pharmacy
Exton, Pennsylvania
• Town Total Health
Melville, New York
• Tradition Medical Center
Port St. Lucie, Florida
• Treasure Coast Hospice
Stuart, Florida
• Tripler Army Medical Center
Honolulu, Hawaii
• Triple-S Salud
San Juan, Puerto Rico
• Truman Medical Center—Behavioral Health
Kansas City, Missouri
• Ulti-Med Pharmacy Services
Miami, Florida
• United States Naval Hospital—Jacksonville
Jacksonville, Florida
• Universal Arts Compounding Pharmacy
Miami, Florida
• Universal Arts Pharmacy
Hialeah, Florida
• University Community Hospital
Tampa, Florida
• University Hospital & Medical Center
Tamarac, Florida
• University of Central Florida Pharmacy
Orlando, Florida
• University of Miami
Miami, Florida
• USCG Academy Division
New London, Connecticut
• USCG Air Station Miami Clinic
Opa-Locka, Florida
• US Rx Care
Sunrise, Florida
• VA Caribbean Healthcare System
Ponce, Puerto Rico
• VA Caribbean Healthcare System
San Juan, Puerto Rico
• VA Central Office Pharmacy
Benefits Management SHG
Washington, D.C.
• VH Pharmacy
Miami, Florida
• Walgreens
Bellevue, Washington
• Walgreens
Florida
• Walgreens
New Lenox, Illinois
• Walgreens
Puerto Rico
• Walgreens
Tulsa, Oklahoma
• Walgreens Infusion Services
Miramar, Florida
• Walgreens Pharmacy Services
Deerfield, Illinois
• Wal-Mart
Florida
• Wal-Mart
Puerto Rico
• Wellington Regional Medical Center
West Palm Beach, Florida
• West Boca Medical Center
Boca Raton, Florida
• West Kendall Baptist Hospital
Miami, Florida
• West Palm Beach Veterans Affairs Medical Center
West Palm Beach, Florida
• West Palm Hospital
West Palm Beach, Florida
• Westside Regional Medical Center
Plantation, Florida
• Winn-Dixie
Florida
• Winships Prescription Center
North Palm Beach, Florida
• Woodward Pharmacy
Bloomfield Hills, Michigan
• Xcenda, L.L.C.
Palm Harbor, Florida
• Yamato Pharmacy
Boca Raton, Florida
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
David Loshin, O.D., Ph.D., FAAO
Dean
Josephine Shallo-Hoffmann, Ph.D., FAAO
Associate Dean for Academic Affairs
Michael Bacigalupi, O.D., M.S., FAAO
Assistant Dean for Student Affairs
Linda Rouse, O.D., FAAO
Assistant Dean for Finance and Operations
Barry Frauen, O.D., FAAO
Chair, Clinical Education
Joseph Sowka, O.D., FAAO
Chair, Didactic 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
College of Optometry

- 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 www.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 15.

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: https://www.ada.org/oat/index.html

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?

**Tuition and Fees**

• Tuition for 2015–2016 (subject to change by the board of trustees without notice) is $30,240 for Florida residents and $33,972 for out-of-state residents. A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 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 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 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, Florida 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 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, Florida 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 2015–2016 (subject to change by the board of trustees) is $24,250 for Florida residents and $27,307 for out-of-state residents for the first three years. 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)
- 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)
- Student Volunteer Optometric Services to Humanity (VOSH)
- Honors Program

Master of Science in Clinical Vision Research Graduate Program

NSU College of Optometry has a two-year, 45-credit, all-online Master of Science in Clinical Vision Research (CVR) program. This program is designed to help optometrists, optometric educators, optometric students, and other professionals enhance their ability to perform clinical research. This innovative program includes curricula leading to a master of science in CVR. The program requirements may be completed at home or a library at times convenient to the student.

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 in 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 http://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, Florida 33329-9905

Tuition for 2015–2016 (subject to change by the board of trustees without notice) is $545 per credit hour.
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.

<table>
<thead>
<tr>
<th>First Year—Fall Term</th>
<th>Lecture</th>
<th>Laboratory</th>
<th>Semester Hours</th>
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<td>OPT 1323  Microbiology</td>
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<td>OPT 1511* Psychophysical Methodology</td>
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Total Semester Hours: 21.0

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<td>OPTC 2144  General Physiology</td>
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<td>OPT 2223* Theoretical Optics II</td>
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<td>OPT 2323* Visual Optics</td>
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<td>OPT 2422* Ocular Anatomy</td>
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<td>OPT 2522* Visual Neurophysiology</td>
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<td>OPT 2622* Ocular Motility</td>
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Total Semester Hours: 22.0

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<th>First Year—Summer Term</th>
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<td>OPT 3122* Ocular Physiology</td>
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<td>OPT 3344* Psychophysics/Monocular Sensory Processes I</td>
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Total Semester Hours: 5.0
### Second Year—Fall Term

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<td>OPT 3434*</td>
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<td>Ophthalmic Optics I Lab</td>
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<td>Ocular Disease of the Anterior Segment: Diagnosis and Pharmacological Management</td>
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<td>Optometric Theory and Methods III</td>
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<td>Optometric Theory and Methods III Lab</td>
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<td>OPT 4322*</td>
<td>Introduction to Binocular Vision</td>
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<td>OPT 4951A</td>
<td>Community Outreach I</td>
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**Total Semester Hours: 23.5**

### Second Year—Winter Term

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<td>OPT 4234*</td>
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<td>OPTL 4234*</td>
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<td>OPT 4433</td>
<td>Anomalies of Binocular Vision I</td>
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<td>Optometric Theory and Methods IV</td>
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<td>OPT 4634</td>
<td>Diagnosis and Pharmacological Management of Glaucoma and Vitreoretinal Disease</td>
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**Total Semester Hours: 20.0**

### Second Year—Summer Term

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<td>Health Systems, Economics, Policy, and Ethics</td>
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<td>OPT 4721</td>
<td>Nutrition in Eye Care</td>
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<td>OPT 5411</td>
<td>Clinical Gerontology</td>
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<td>OPT 7111</td>
<td>Primary Care Clinic I</td>
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<td>OPT 7112</td>
<td>Clinic Conference</td>
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<td>OPT 7151</td>
<td>Optical Services Rotation I</td>
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<td>OPT 7181</td>
<td>Seminars in Laser and Surgical Ophthalmic Care</td>
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<td>OPT 9997**</td>
<td>Advanced Care Clinic</td>
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**Total Semester Hours: 9.0/10.0***
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<td>Anomalies of Binocular Vision II</td>
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<td>Contact Lenses I</td>
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<td>Clinical Medicine: Diagnostic and Pharmacologic Management of Systemic Diseases</td>
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<td>Physical Diagnosis Laboratory: Testing, Pharmacological Aspects, and Injection Technique</td>
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<td>OPT 6233</td>
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<td>Rehabilitative Optometry Low Vision</td>
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<td>Rehabilitative Optometry Low Vision Laboratory</td>
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<td>Primary Eye Care Clinic II</td>
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<tr>
<td>OPT 7214</td>
<td>Cornea and Contact Lens Externship</td>
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<td>OPT 7501</td>
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**Total Semester Hours:** 34.5

### Fourth Year—Fall and Winter Terms***

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<tr>
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<td>Pediatric and Binocular Vision Externship</td>
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<td>240</td>
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<td>OPT 7233</td>
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**Fourth Year Total Semester Hours:** 33.0

*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.

### Extended Program Curriculum Outline

#### First Year—Fall Term

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>OPT 1011</td>
<td>Histology/Embryology</td>
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<td>OPTC 1134</td>
<td>Gross Anatomy/Anatomy of the Head and Neck</td>
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<tr>
<td>OPT 1233</td>
<td>Biochemistry</td>
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<td>OPT 1323</td>
<td>Microbiology</td>
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<td>OPT 1511*</td>
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**Total Semester Hours:** 13.0

#### First Year—Winter Term

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<td>OPTC 2023</td>
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<td>OPT 2422*</td>
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<td>OPT 2522*</td>
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**Total Semester Hours: 13.5**

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<tr>
<td>OPT 1443*</td>
<td>Theoretical Optics I</td>
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<tr>
<td>OPT 3033</td>
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<td>OPTC 3244</td>
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**Total Semester Hours: 16.0**

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<tbody>
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<td>OPT 2223*</td>
<td>Theoretical Optics II</td>
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<td>OPT 3122*</td>
<td>Ocular Physiology</td>
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<tr>
<td>OPT 3344A*</td>
<td>Psychophysics/Monocular Sensory Processes I</td>
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<tr>
<td>OPT 4811</td>
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<td>OPT 3344B*</td>
<td>Psychophysics/Monocular Sensory Processes II</td>
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<td>OPT 3434*</td>
<td>Ophthalmic Optics I</td>
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<tbody>
<tr>
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<td>Ocular Disease of the Anterior Segment: Diagnosis and Pharmacological Management</td>
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<td>OPT 3624</td>
<td>Optometric Theory and Methods III</td>
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<td>OPTL 3624</td>
<td>Optometric Theory and Methods III Lab</td>
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<tr>
<td>OPT 4322*</td>
<td>Introduction to Binocular Vision</td>
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### Third Year—Winter Term

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<td>OPT 4433</td>
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<td>OPT 5411</td>
<td>Clinical Gerontology</td>
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<td>OPT 7111</td>
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<td>OPT 7112</td>
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<td>OPT 7151</td>
<td>Optical Service Rotation I</td>
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<td>OPT 7181</td>
<td>Seminars in Laser and Surgical Ophthalmic Care</td>
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<td>OPT 9997**</td>
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<td>Contact Lenses I Lab</td>
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<td>OPT 5322</td>
<td>Clinical Medicine: Diagnostic and Pharmacological Management of Systemic Diseases</td>
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<td>Course Code</td>
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<td>OPTL 5412</td>
<td>Physical Diagnosis: Testing, Pharmacological Aspects, and Injection Technique</td>
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<td>Neuro-Eye Disease: Diagnostic, Medical and Pharmacological Management</td>
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**Total Semester Hours: 17.5/18.5**

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<td>OPT 7171</td>
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**Total Semester Hours: 17.5/18.5**

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<td>OPT 7146</td>
<td>Primary Care Clinical Externship</td>
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<td>OPT 7214</td>
<td>Cornea and Contact Lens Externship</td>
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<td>OPT 7224</td>
<td>Pediatric and Binocular Lens Externship</td>
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<td>Vision Rehab. and Geriatric Externship</td>
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<td>OPT 7308</td>
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<td>OPT 7408</td>
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**Total Semester Hours: 37.5**
### Fifth Year—Fall and Winter Terms

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<td>OPT 7214</td>
<td>Cornea and Contact Lens Externship</td>
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<td>OPT 7224</td>
<td>Pediatric and Binocular Vision Externship</td>
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<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 7501</td>
<td>Current Topics in Practice Management</td>
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Total Semester Hours: **33.0**

*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.*
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.

OPT 1011—Histology and Embryology
This course presents a general overview of microscopic anatomy with an emphasis on the basic cells and tissues morphology necessary for the understanding of the histology of the eye and surrounding tissues. The microscopic anatomy is correlated with both gross anatomy and physiological processes. This course also serves as a foundation for understanding diseased cells and tissues. Lectures are supplemented with light and electron microscopic projection slides. The slides are used to train students to recognize the tissues by their microscopic appearance. Slide sets are available to students on CDs distributed by the student government. (18-0-1)

OPT 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. (54-36-4)

OPT 1233—Biochemistry
This course will enable the student to describe and understand the biochemical components of the human body and the metabolism of these components. The biochemical basis of ocular functions will be emphasized where appropriate. (54-0-3)

OPT 1323—Microbiology
Microbiology is taught using several approaches. The basic biology of microorganisms is covered followed by a general medical approach to each disease. Special emphasis is placed on taxonomy, physiology, pathogenesis, diagnosis, and treatment. Infectious agents are presented in specific groups: bacteria, viruses, fungi, and parasites, with an emphasis on infections of the eye. (54-0-3)

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 the physical and chemical factors and processes responsible for the development, progression, and procreation of life. The course will be presented from an organ systems approach. The areas covered will be basic cellular physiology, skeletal muscle, the cardiovascular system, the nervous system, the renal system, the respiratory system, the gastrointestinal system, and the endocrine system. (72-0-4)

OPTC 3033—General Pathology
The course consists of a study of fundamental concepts of pathology (general pathology) and systemic pathology (consideration of particular organ systems such as cardiovascular diseases, pulmonary diseases, etc.), supplemented by demonstrations and clinicopathological discussions on selected diseases. The emphasis will be given in this course on ocular manifestations of systemic diseases whenever relevant. (54-0-3)

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. (72-0-4)

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; prism; refraction at curved surface; object-image relationship in thin lenses, cylindrical lenses, thick lenses, and lens systems; reflection at plane; and curved surfaces. The emphasis is to use required laws, principals, relationships, and formulas to solve problems. (54-0-3)

OPTL 1443—Theoretical Optics I Lab
The purpose of this course is to learn how to set up an experiment in the area of geometrical optics, the collection and plotting of data, the use of that data in calculations to identify some unknown variables, and to write an adequate lab report. There will be applications and demonstration of concepts and material presented in the Theoretical Optics I lecture OPT 1443. (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 theory and Fourier analysis and spatial vision are introduced in terms of their application to the 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
The course is designed specifically for the extended optometry students during the winter semester of their first year. It includes didactic introduction and clinical application of basic optometric skills such as visual acuity, pupillary distance, extraocular motilities, color vision, stereopsis, case history, noncontact tonometry, autorefraction, confrontation visual fields, and hand neutralization. The students are also assigned to clinic observation of the third- or fourth-year students. (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, extra ocular 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 will introduce contemporary issues in optometry, allowing future doctors of optometry to familiarize themselves with the opportunities and challenges ahead. (18-0-1)

OPT 2223*—Theoretical Optics II
This course is a continuation of Theoretical Optics I. The primary emphasis will be given to the wave theory of optics including light and light sources, radiometry and photometry, light absorption, light as waves, interference, diffraction, polarization, aberrations, and image quality of the eye. The emphasis is to use required laws, principals, relationships, and formulas to solve problems. (54-0-3)

OPTL 2223*—Theoretical Optics II Lab
The purpose of this course is to learn how to set up an experiment in the area of physical optics, collect and plot data, use that data in calculations to identify some unknown variables, and write an adequate lab report. There will be application and demonstration of concepts and material presented in the Theoretical Optics II lecture. (0-18-1)

OPT 2323*—Visual Optics
The eye as optical system: 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. (36-0-2)

OPT 2422*—Ocular Anatomy
Gross and microscopic anatomy of the eye and adnexa. Relationships between tissues; the vascular supply to the eye; the anatomy of the visual pathway; and the embryonic origin of ocular tissues. Eye dissections teach the functional relations between ocular tissues. (36-0-2)

OPT 2522*—Visual Neurophysiology
Concepts of visual neurophysiology needed to understand normal visual perception, probable source of visual symptoms associated with various eye and CNS disorders, underlying principles of new clinical diagnostic tests for eye and CNS disease, 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 to establish clinical entry-level knowledge and competence in this area. The ocular motor system and the laws relating to it are detailed in terms of normal neurophysiology and neuroanatomy. Information from basic research is synthesized in a form that is directly applicable to the interpretation of clinical disorders of eye movements. (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 tonometry, 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)
OPT 3122*—Ocular Physiology
General physiological principles and processes. Typical physiologic function of ocular tissues are discussed and contrasted with the outcomes of abnormal physiology as well as the physiological relationship of ocular tissues and the mechanisms of ocular functions. (36-0-2)

OPT 3344A*—Psychophysics/Monocular Sensory Processes I
This course is a survey of spatial and temporal monocular visual performance, emphasizing perceptual aspects of brightness, contrast sensitivity, spatial and temporal resolution, and flicker. Color vision—both theoretical and practical aspects—are covered in depth. Various testing techniques and frequently encountered abnormalities are discussed in the context of clinical optometric practice. (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 measuring frame dimensions, pupillary distance, segment height, fitting-center height, and vertex distance. 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. (72-0-2)

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, dilation and irrigation, exophthalmometry, and trial frame refraction. 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. (0-54-1.5)

OPT 4122*—Ocular Pharmacology
Drugs used in the eye or capable of exerting a pharmacological or toxicological effect on the eye; routes of administration, pathophysiological 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 anisotropic 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 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 4951A—Community Outreach I
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, and evaluation. (18-0-1)

OPT 4951 B—Community Outreach II
Continuation of Community Outreach I (18-0-1)

OPT 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)

OPT 5122—Contact Lenses I
The primary goal of this course is to provide an introduction to contact lens evaluation and fitting with emphasis on clinical experiences encountered in a primary care optometric practice. A laboratory is an integral adjunct to the course. Refractive surgery alternatives will supplement the curriculum. (36-0-2)

OPT 5122—Contact Lenses I Lab
Training will be provided in prescription assessment (autorefractor), corneal testing (autokeratometry, topography, and pachymetry), hydrogel (HG) contact lens (CL) care, insertion and removal of HG CLs, evaluation of spherical and toric HG CLs on the eye, the use of specialty HG CLs, and verification of gas permeable (GP) CLs. (0-36-1)

OPT 5233—Ocular and Systemic Eye Disease: Diagnostic, Medical, and Pharmacological Management
This course covers systemic diseases that may present with ocular findings, including key systemic clinical manifestations. Physical presentation, laboratory and imaging evaluation, spectrum of treatment modalities (including ocular and systemic pharmacologic treatment and nutritional supplementation), and interdisciplinary management are covered in detail. (54-0-3)

OPT 5322—Clinical Medicine: Diagnostic and Pharmacologic Management of Systemic Diseases
Clinical overview of the pathophysiological process of various systemic diseases, their diagnosis, and their pharmacological management. (36-0-2)
OPTL 5412—Physical Diagnosis Laboratory: Testing, Pharmacologic Aspects, and Injection Techniques
Physical Diagnosis Laboratory offers a hands-on experience in many of the diagnostic techniques employed in the work-up of the systematic conditions covered in the Clinical Medicine course, with emphasis on those conditions that occur in the primary eye care setting. These include the physical examination, neurological screening, in-office lab tests, and imaging techniques. Injection procedures and anaphylaxis management is covered. (0-18-0.5)

OPT 5411—Clinical Gerontology
Discuss aging from sociological, psychological, and biophysiological perspectives; reviews diagnosis, management of visual conditions, ocular diseases of older adults, and role of optometrists as members of multidisciplinary health care team providing services to community-based, institutionalized geriatric patients. (18-0-1)

OPT 6122—Contact Lenses II
Advanced lens applications in specialty cornea and contact lens practice. Options for presbyopia, astigmatism, anterior segment disease, myopia, corneal thinning disorders, keratoconus, and corneal surgery. (36-0-2)

OPT 6122—Contact Lenses II Lab
Training will be provided in GP CL care, insertion, and removal of corneal and mini-scleral GP CLs; evaluation of spherical GP CLs on the eye; verification of toric GP CLs; and modification of GP CLs. (0-36-1)

OPT 6233—Neuro-Eye Disease: Diagnostic, Medical, and Pharmacological Management
This course covers the diagnosis, management, and treatment of ocular abnormalities seen in patients with neurological disease. Clinical diagnostic imaging studies—including nuclear magnetic imaging, computerized tomography, and vascular ultrasonography—are presented for both ocular and central nervous system neuropathology. Clinical work-up, surgical referral indications, and systemic/ocular pharmaceutical treatment are covered in detail. (54-0-3)

OPT 6322—Rehabilitative Optometry: Low Vision
This course will present low vision topics, including etiology, demographics, case history, acuity measurement, magnification, magnifiers, telescopes, psychosocial implications, functional testing, functional implications, technology, and driving implications. Lectures, laboratories, and assigned reading will be used to explore an interdisciplinary approach to low vision rehabilitation, including the role of the optometrist in examination, prescribing, fitting, and training of low vision devices, as well as the role of many other professionals and resources. (36-0-2)

OPTL 6322—Rehabilitative Optometry: Low Vision Lab
Application and demonstration of concepts and material presented in Rehabilitative Optometry lecture OPT 6322. (0-36-1)

OPT 6522—Practice Management
This course provides the student with an introduction to basic business concepts and the application of these concepts to optometric practice management. Topics covered include accounting, finance, marketing, management, human resources, operations management, business law, practice valuation and purchase, practice start up, and financial planning. Students will also learn the value of networking and how to create a resume and cover letter. (36-0-2)

OPT 6633—Pediatric Optometry and Learning-Related Vision Problems
An introduction to the theory and methods of examining, diagnosing, and managing children and individuals suffering from learning-related vision problems. (54-0-3)

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 9997—Special 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 pathophysiology, differential diagnoses, and patient-appropriate management. Integration of didactic knowledge with clinical care is emphasized. (0-8-1)

OPT 9998—Board Review
(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. (0-16-0.5)

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 7162—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. (0-16-0.5)

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 a practice, or joining a practice. 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.
College of Health Care Sciences
College of Health Care Sciences

Vision
The 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 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
Stanley Wilson, Ed.D., PT, CEAS
Dean

Guy M. Nehrenz, Ed.D., RRT
Executive Associate Dean

Peter Taylor, Ph.D.
Associate Dean, Academic Affairs

William H. Marquardt, M.A., PA-C
Associate Dean and Chair, Department of Physician Assistant

Sandeep Dunbar, D.P.A., OTR/L, FAOTA
Assistant Dean, Professional Development and Education Chair, Department of Occupational Therapy

Sandrine Gaillard-Kenney, M.A., Ed.D.
Assistant Dean, Undergraduate Studies

Terry Morrow, M.S., Ph.D.
Assistant Dean, Student Affairs

Christine M. Kircher, B.S.
Budget Manager

Chrystal L. Randle, B.A., M.S.
Employee Services Manager

Lisa Farach, M.S., R.N., RRT
Chair, Department of Cardiopulmonary Sciences

Erica B. Friedland, B.A., M.S., Au.D.
Chair, Department of Audiology

Madeleine Hellman, M.H.M., Ed.D., PT
Chair, Department of Physical Therapy Director, Ph.D. Program

Brianna Black Kent, R.N., M.Ed., Ph.D.
Chair, Department of Health Science Director, Ph.D. in Health Science Program

Wren Newman, SLP.D.
Chair, Department of Speech-Language Pathology

Elizabeth Swann, Ph.D.
Chair, Department of Health and Human Performance

Robert S. Wagner, M.M.Sc., AA-C
Chair, Director, and Assistant Professor, Anesthesiologist Assistant
Director, Master of Science in Anesthesia Program—Fort Lauderdale

Lorilee H. Butler, M.P.A.S., M.Ed., PA-C, DFAAPA
Program Director, Physician Assistant—Orlando

Ricardo C. Carrasco, Ph.D., OTR/L, FAOTA
Director, Occupational Therapy—Tampa

M. Samuel Cheng, PT, M.S., Sc.D.
Director, Physical Therapy Doctor of Philosophy Program

Program Director, Physician Assistant—Fort Lauderdale

Rachelle Dorne, Ed.D., OTR
Director, Master of Occupational Therapy Program

Anthony Dyda, M.P.A.S., D.H.Sc., PA
Director, Master of Health Science Program

Jorge Han, M.D., RVT, RDCS, RDMS
Director, Bachelor of Science—Medical Sonography—Fort Lauderdale

Patricia E. Kelly, Ed.D., PA-C
Director, Doctor of Health Science Program

Stanley Wilson, PT, Ed.D.
Dean
College of Health Care Sciences
The College of Health Care Sciences 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
• Anesthesiology Assistant, M.S., Fort Lauderdale
• Anesthesiology Assistant, M.S., Tampa

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.

Department of Health Sciences
• Cardiovascular Sonography, B.S., Tampa
• 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, Dr.O.T.
• Occupational Therapy, M.O.T.
• Occupational Therapy, O.T.D., Tampa
• Occupational Therapy, Ph.D.

Department of Physical Therapy
• Entry-Level D.P.T., Fort Lauderdale
• Entry-Level D.P.T., Tampa
• Hybrid Entry-Level D.P.T., Tampa
• Physical Therapy T-D.P.T.
• Physical Therapy, Ph.D.

Department of Physician Assistant
• Physician Assistant, Fort Lauderdale
• Physician Assistant, Fort Myers
• Physician Assistant, Jacksonville
• Physician Assistant, Orlando

Department Speech Language Pathology
• Speech-Language and Communication Disorders, B.S., Fort Lauderdale
• Speech-Language Pathology, M.S., Fort Lauderdale
• Speech-Language Pathology, SL.P.D., Fort Lauderdale

Expenses and Financial Aid
Students should anticipate spending approximately $3,000 for books and $19,000 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 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 College of Health Care Sciences Office of Admissions
- 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 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: 1361 Park Street, Clearwater, Florida 33756, 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 (two semesters)
- General physics (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 www.gre.org. Information for the MCAT is at www.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—A) 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 admissions 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, https://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 below.

- World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, New York 10274-5087
  (212) 966-6311
  www.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, College of Health Care Sciences, Department of Anesthesia Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

6. complete resume 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 packet)
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 2015–2016 (subject to change by the board of trustees without notice): $39,500. A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 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: 102  
Total Clinical Hours: 2,000

All courses with the MHS prefix (except MHS 5103) will be taken online.

## Summer—Semester I Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANES 5048</td>
<td>Medical Terminology</td>
<td>1</td>
</tr>
<tr>
<td>ANES 5081</td>
<td>Introduction to Clinical Anesthesia</td>
<td>2</td>
</tr>
<tr>
<td>ANES 5301</td>
<td>Anesthesia Laboratory I</td>
<td>3</td>
</tr>
<tr>
<td>PHS 5400</td>
<td>Physiology</td>
<td>3</td>
</tr>
<tr>
<td>ANA 5420</td>
<td>Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>ANES 5621</td>
<td>Principle of Airway Management I</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours  **16**

## Fall—Semester II Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANES 5302</td>
<td>Anesthesia Laboratory II</td>
<td>3</td>
</tr>
<tr>
<td>ANES 5462</td>
<td>Pharmacology for Anesthesia I</td>
<td>2</td>
</tr>
<tr>
<td>ANES 5601</td>
<td>Applied Physiology for Anesthesia Practice I</td>
<td>3</td>
</tr>
<tr>
<td>ANES 5622</td>
<td>Principle of Airway Management II</td>
<td>2</td>
</tr>
<tr>
<td>ANES 5801</td>
<td>Instrumentation and Monitoring</td>
<td>2</td>
</tr>
<tr>
<td>ANES 5901</td>
<td>Anesthesia Principle and Practices I</td>
<td>2</td>
</tr>
<tr>
<td>ANES 5328</td>
<td>Principles of Perioperative Life Support*</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5205</td>
<td>Writing for Medical Publication</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours  **20**

*Basic Life Support Certification and Advanced Cardiac Lifesaving will be obtained during this semester.

## Winter—Semester III Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANES 5001</td>
<td>Clinical Anesthesia I</td>
<td>3</td>
</tr>
<tr>
<td>ANES 5303</td>
<td>Anesthesia Laboratory III</td>
<td>3</td>
</tr>
<tr>
<td>ANES 5463</td>
<td>Pharmacology for Anesthesia II</td>
<td>2</td>
</tr>
<tr>
<td>ANES 5602</td>
<td>Applied Physiology for Anesthesia Practice II</td>
<td>3</td>
</tr>
</tbody>
</table>
ANES 5802 Instrumentation and Monitoring II 1
ANES 5902 Anesthesia Principle and Practices II 2
ANES 5101 Student Lecture Series I 1

Total Credit Hours 15

Minimum clinical experience: 150 hours (anesthesia rotations in hospital)

Summer—Semester IV Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANES 5002</td>
<td>Clinical Anesthesia II</td>
<td>3</td>
</tr>
<tr>
<td>ANES 5304</td>
<td>Anesthesia Laboratory IV</td>
<td>3</td>
</tr>
<tr>
<td>ANES 5903</td>
<td>Anesthesia Principle and Practices III</td>
<td>2</td>
</tr>
<tr>
<td>ANES 5102</td>
<td>Student Lecture Series II</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credit Hours 9

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>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANES 6001</td>
<td>Clinical Anesthesia III</td>
<td>13</td>
</tr>
</tbody>
</table>

Total Credit Hours 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>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANES 6002</td>
<td>Clinical Anesthesia IV</td>
<td>15</td>
</tr>
<tr>
<td>ANES 6110</td>
<td>Anesthesia Review</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours 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>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANES 6003</td>
<td>Clinical Anesthesia V</td>
<td>12</td>
</tr>
</tbody>
</table>

Total Credit Hours 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 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 5621—Principle 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)

ANES 5622—Principle of Airway Management II
This course is a continuation of ANES 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, lightwands, fiberoptic intubations, double lumen tubes, surgical airways, and application of laryngeal mask airway. (2 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 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 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 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—Principles of Perioperative Life Support
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. This course will satisfy American Heart Association requirements for ACLS and BLS certification. (3 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)
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 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. (3 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. 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. 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)

ANES 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)

ANES 6200—Clinical Practice in Anesthesia
This course is a continuation of ANES 6130. Developed for the student who requires additional clinical training. Developmental skills and foundations of the clinical aspects 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. (12 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)

ANES 5101—Student Lecture Series I
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 goal of the student. Possible topics involve clinical and nonclinical aspects of the practice of medicine in the United States. (1 credit)

ANES 5102—Student Lecture Series II
This course is a continuation of ANES 5101. (1 credit)

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, Florida 33328-2018
(954) 262-1101 or 877-640-0218
www.nova.edu/mhs/anesthesia

Master of Science in Anesthesia—Tampa

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, cardiology, 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: 1361 Park Street, Clearwater, Florida 33756, 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 (AAAAA) 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)
• 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 www.gre.org. Information for the MCAT is at www.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—A) 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
- 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, New York 10274-5087
  (212) 966-6311
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 Health Care Sciences, Department of Anesthesia Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

5. complete resume 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 Nova Southeastern University Tampa Campus and are by invitation only. Interviews will be held from December 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 2015–2016 (subject to change by the board of trustees without notice): $39,500. A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 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.

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 Curriculum

Start Date: June
Length: 27 months
Degree: Master of Science in Anesthesia
Total Credit Hours: 128
Total Clinical Hours: 2,000
Note: All courses with the MHS prefix will be taken online.

<table>
<thead>
<tr>
<th>Summer—Semester I Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANET 5048 Medical Terminology</td>
<td>1</td>
</tr>
<tr>
<td>ANET 5621 Principle of Airway Management I</td>
<td>2</td>
</tr>
<tr>
<td>ANET 5081 Introduction to Clinical Anesthesia</td>
<td>2</td>
</tr>
<tr>
<td>ANET 5328 ECG for Anesthesiologist Assistants</td>
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<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>ANA 5420</td>
<td>Anatomy</td>
</tr>
<tr>
<td>PHS 5400</td>
<td>Physiology</td>
</tr>
<tr>
<td>ANET 5301</td>
<td>Anesthesia Laboratory I</td>
</tr>
<tr>
<td>MHS 5507</td>
<td>Ethical, Legal, and Cultural Trends in Today’s Health Care Environment</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
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**Fall—Semester II Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANET 5302</td>
<td>Anesthesia Laboratory II</td>
<td>3</td>
</tr>
<tr>
<td>ANET 5601</td>
<td>Applied Physiology for Anesthesia Practice I</td>
<td>3</td>
</tr>
<tr>
<td>ANET 5462</td>
<td>Pharmacology for Anesthesia I</td>
<td>2</td>
</tr>
<tr>
<td>ANET 5901</td>
<td>Anesthesia Principle and Practices I</td>
<td>2</td>
</tr>
<tr>
<td>ANET 5622</td>
<td>Principle of Airway Management II</td>
<td>2</td>
</tr>
<tr>
<td>ANET 5801</td>
<td>Principles of Instrumentation and Patient Monitoring I</td>
<td>2</td>
</tr>
<tr>
<td>ANET 5101</td>
<td>Student Lecture Series I</td>
<td>1</td>
</tr>
<tr>
<td>MHS 5205</td>
<td>Writing for Medical Publication</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5103</td>
<td>Principles of Life Support*</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</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.

**Winter—Semester III Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANET 5001</td>
<td>Clinical Anesthesia I</td>
<td>4</td>
</tr>
<tr>
<td>ANET 5463</td>
<td>Pharmacology for Anesthesia II</td>
<td>2</td>
</tr>
<tr>
<td>ANET 5303</td>
<td>Anesthesia Laboratory III</td>
<td>3</td>
</tr>
<tr>
<td>ANET 5602</td>
<td>Applied Physiology for Anesthesia Practice II</td>
<td>3</td>
</tr>
<tr>
<td>ANET 5902</td>
<td>Anesthesia Principle and Practices II</td>
<td>2</td>
</tr>
<tr>
<td>ANET 5102</td>
<td>Student Lecture Series II</td>
<td>1</td>
</tr>
<tr>
<td>MHS 5511</td>
<td>Statistics and Research Methods in Health Care</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td><strong>19</strong></td>
</tr>
</tbody>
</table>

Minimum clinical experience: 150 hours (anesthesia rotations in hospital)
### Summer—Semester IV Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<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>
</tr>
<tr>
<td>ANET 5903</td>
<td>Anesthesia Principle and Practices III</td>
<td>2</td>
</tr>
<tr>
<td>MHS 5109</td>
<td>Capstone I</td>
<td>5</td>
</tr>
<tr>
<td>ANET 5103</td>
<td>Student Lecture Series III</td>
<td>1</td>
</tr>
<tr>
<td>MHS 5530</td>
<td>Principles and Practice of Management in Health Care</td>
<td>3</td>
</tr>
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</table>

**Total Credit Hours**: 19

MHS 5109 will be completed over summer and fall semesters. Minimum clinical experience: 144 hours (anesthesia rotations in hospital)

### Clinical Year, Fall—Semester V Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANET 6001</td>
<td>Clinical Anesthesia III</td>
<td>13</td>
</tr>
<tr>
<td>ANET 6110</td>
<td>Anesthesia Review I</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Credit Hours**: 14

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>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANET 6002</td>
<td>Clinical Anesthesia IV</td>
<td>15</td>
</tr>
<tr>
<td>ANET 6120</td>
<td>Anesthesia Review II</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Credit Hours**: 16

Minimum clinical experience: 675 hours (anesthesia rotations in hospital)

### Clinical Year, Summer—Semester VII Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANET 6003</td>
<td>Clinical Anesthesia V</td>
<td>12</td>
</tr>
<tr>
<td>MHS 5207</td>
<td>Practicum—Senior Seminar in Anesthesia</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total Credit Hours**: 17

Minimum clinical experience: 356 hours (anesthesia rotations in hospital)

Curriculum is subject to change as directed by the department.
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. (1 credit)

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. (5 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. (3 credits)

ANET 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)

ANET 5102—Student Lecture Series II
This course is a continuation of ANET 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)

ANET 5103—Student Lecture Series III
This course is a continuation of ANET 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. (1 credit)

ANET 5621—Principle 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 5622—Principle of Airway Management II
This course is a continuation of ANET 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, lightwands, fiberoptic intubations, 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. (1 credit)

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. (2 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. (2 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. (1 credit)

ANET 5328—ECG for Anesthesiologist Assistants
Basic and advanced ECG interpretation using simulators to understand an overview of heart anatomy, function, and neurophysiology. (1 credit)

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 anticholinergics, neuromuscular blockers, adrenergic agonists and antagonists, nonsteroidal anti-inflammatory drugs, antidysrhythmics, 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 anticholinergics, neuromuscular blockers, adrenergic agonists and antagonists, nonsteroidal anti-inflammatory drugs, antidysrhythmics, calcium channel blockers, diuretics, anticoagulants, antihistamines, and antimicrobials. (2 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 that 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 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. (1 credit)

ANET 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)

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. (3 credits)

ANET 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)

ANET 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)

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. (11 credits)

ANET 6110—Anesthesia Review I
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)

ANET 6120—Anesthesia Review II
This course is a continuation of ANET 6110. 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)

ANET 6130—Anesthesia Review III
This course is a continuation of ANET 6120. 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)

ANET 6200—Clinical Practice in Anesthesia
This course is a continuation of ANET 6130. Developed
for the student who requires additional clinical training.
Developmental skills and foundations of the clinical
aspects 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. (12 credits)

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 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 5107—Internship
The student will complete 80 hours of internship in an area
of interest within a health care organization, outside of his
or her regular place 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 M.H.Sc. faculty approval. (5 credits)

MHS 5109—Capstone I
The course is composed of 36 weeks of journal club, in
which students are responsible for presenting, discussing,
and critiquing current medical articles from peer-reviewed
journals relevant to their profession. This course provides
the anesthesia assistant student with the opportunity
for in-depth study in the area of anesthesiaology. The
course was specifically designed to help anesthesiology
assistant students to enhance their education in the area
of anesthesiaology and to provide them with the opportunity
to use newly acquired concepts/knowledge in preparation
for clinical practice. (5 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)

MHS 5207—Practicum—Senior Seminar
in Anesthesia
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 promotion
and disease prevention interventions with underserved
and/or nontraditional populations. (5 credits)

MHS 5507—Ethical, Legal, and Cultural Trends in
Today's Health Care Environment
This course will examine ethical principles, cultural issues,
and legal trends in today's health care environment.
Discussion, analysis and application of cultural issues and
ethical principles that guide decision making as related
to current health care reform will be explored. (4 credits)
MHS 5511—Statistics and Research Methods in Health Care
Research is the foundation for making meaningful improvements in clinical and public health practice. Health care professionals need to use evidence-based research to direct their decisions in their clinical, administrative, or academic positions. An increasingly important component of a health care professional’s education involves conducting quantitative and qualitative research, which includes developing research questions that will answer the problem under study, reviewing the literature, selecting the appropriate methodology, obtaining reliable and valid data, organizing data into manageable datasets, conducting suitable statistical analysis, writing the results, and making informed conclusions. This course is designed to promote an understanding of the principles, uses, and applications of the basic research methods utilized in the clinical and public health arena. This is supported by the study of the statistical concepts used in the analysis and interpretation of data collected as part of the research process. These analytical tools will assist students in creating their own research proposals and critically evaluating research conducted by others. (4 credits)

MHS 5400—Directed Studies in Anesthesia I
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 5401—Directed Studies in Anesthesia II
This course is a continuation of MHS 5400. (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, and the allocation of scarce resources. (3 credits)

MHS 5530—Principles and Practice of Management in Health Care
The 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)

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, Florida 33328-2018

(954) 262-1101 or 800-356-0026, ext. 21101
www.nova.edu/mhs/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
2209 Dickens Road
Richmond, Virginia 23230-0090
email: aaaa@societyhq.com.
www.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, North Carolina 27607
www.aa-nccaa.org

For information about the anesthesia care team, contact:
American Society of Anesthesiologists
520 N. Northwest Highway
Park Ridge, Illinois 60068-2573
www.asahq.org
Department of Audiology

Audiology Program Overview

The Department of Audiology offers the Doctor of Audiology (Au.D.) degree program. The postbachelor's, 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.)

Six hours of coursework in speech and language disorders is required before graduation and three hours of coursework in Normal Language is required before taking Pediatric Audiology. If a student did not complete these courses as an undergraduate, he or she can take them during the Au.D. course of study. However, they require 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 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 www.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 form along with a $50, nonrefundable application fee
2. three letters of recommendation from professors and/or supervisors (must use the NSU Department of Audiology evaluation form)
3. official transcripts sent directly from all previously attended undergraduate, professional, and graduate institutions to the following address in its entirety:
   Nova Southeastern University
   Enrollment Processing Services
   Department of Audiology Admissions
   3301 College Avenue, P. O. Box 299000
   Fort Lauderdale, Florida 33329-9905.
4. Graduate Record Examination (GRE) scores (taken within five years of the date of application)

The audiology committee on admissions will not consider an application until all required fees, credentials, test scores, transcripts and recommendations have been received by 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, Florida 33328-2018
Phone: (954) 262-1101
877-640-0218
Fax: (954) 262-2282
www.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 2015–2016 postbachelor's on-campus Doctor of Audiology program is $21,725 (subject to change by the board of trustees without notice).

Tuition for the United Kingdom Au.D. program is $650 per credit hour (subject to change by the board of trustees without notice).

• A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 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

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 www.nova.edu/aud.

Curriculum Outline: Postbachelor's Program

Typical Plan of Study

<table>
<thead>
<tr>
<th>YEAR 1—Semester 1: Fall</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>AUD 5301 Diagnostics I: Audiologic Diagnostic Procedures Across the Life Span</td>
<td>3</td>
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<tr>
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<tr>
<td>AUD 5302 Acoustics and Instrumentation</td>
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<tr>
<td>AUD 5304 Anatomy and Physiology of the Auditory and Vestibular Mechanisms</td>
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<tr>
<th>YEAR 1—Semester 2: Winter</th>
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<tr>
<td>AUD 5405 Overview of Amplification I</td>
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<td>AUD 6404 Auditory and Vestibular Pathologies</td>
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<td>AUD 6408 Introduction to Auditory Processing Evaluation and Treatment</td>
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<tr>
<td>YEAR 1—Semester 3: Summer</td>
<td>Credit Hours</td>
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<tr>
<td>AUD 5070 Research Methods in Audiology I: Introduction</td>
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<tr>
<td>AUD 5303 Psychoacoustics and Speech Perception</td>
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<tr>
<td>AUD 5402 Introduction to Auditory Electrophysiology</td>
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<td>AUD 5403L Electrophysiology Lab</td>
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<td>AUD 5404 Introduction to Vestibular Evaluation</td>
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<td>AUD 6510 Clinic I</td>
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<thead>
<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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<td>AUD 6502 Hearing Conservation</td>
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<tr>
<td>AUD 7079 Coding and Reimbursement</td>
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<tr>
<td>AUD 7130 Pediatric Audiology</td>
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<td>AUD 6511 Clinic II</td>
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<tr>
<td>AUD 6503 Topics in Audiology</td>
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<td>AUD 6504 Implantable Hearing Technologies</td>
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<td>AUD 6508 Introduction to Tinnitus Evaluation and Management</td>
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<tr>
<td>AUD 7120 Electrophysiology: Auditory</td>
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<td>AUD 6512 Clinic III</td>
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<tr>
<th>YEAR 2—Semester 3: Spring</th>
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<tbody>
<tr>
<td>AUD 7075 Counseling in Audiology</td>
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<td>AUD 7135 Pediatric Audiologic Rehabilitation</td>
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<tr>
<td>AUD 7160 Advanced Vestibular Evaluation and Treatment</td>
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<td>AUD 7607 Internship I</td>
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<tbody>
<tr>
<td>AUD 6310 Adult Audiologic Rehabilitation</td>
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<tr>
<td>AUD 7100 Advanced Seminar in Amplification</td>
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<tr>
<td>AUD 7180 Diagnostics III: Integration of Audiologic Test Results</td>
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<tr>
<td>AUD 7190 Case Studies I</td>
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### YEAR 3—Semester 2: Winter

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<td>AUD 7050</td>
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<tr>
<td>AUD 7071</td>
<td>Biochemistry and Pharmacology for Audiologists</td>
<td>2</td>
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<tr>
<td>AUD 7080</td>
<td>Practice Management for Audiology</td>
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<tr>
<td>AUD 7201</td>
<td>Case Studies II</td>
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<td>AUD 7613</td>
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### YEAR 3—Semester 3: Spring

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<td>AUD 7610</td>
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### YEAR 4—Semester 1: Fall

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<tr>
<td>AUD 7611</td>
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### YEAR 4—Semester 2: Winter

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<tr>
<td>AUD 7612</td>
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</table>

**Postbachelor's Program Total Credit Hours: 119**

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**Curriculum Outline: UK Program**

Typical Plan of Study for UK Degree Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>AUD 7050</td>
<td>Research Methods II: Applications</td>
<td>3</td>
</tr>
<tr>
<td>AUD 7071</td>
<td>Pharmacology for Audiologists</td>
<td>2</td>
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<tr>
<td>AUD 7030</td>
<td>Aging and the Auditory/Vestibular System</td>
<td>3</td>
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<tr>
<td>AUD 7075</td>
<td>Counseling in Audiology</td>
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<tr>
<td>AUD 7161</td>
<td>Genetics of Hearing Impairment</td>
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<tr>
<td>AUD 7101</td>
<td>Advanced Seminar in Amplification</td>
<td>3</td>
</tr>
<tr>
<td>AUD 7130</td>
<td>Pediatric Audiology</td>
<td>3</td>
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<tr>
<td>AUD 7121</td>
<td>Advanced Auditory Electrophysiology</td>
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<tr>
<td>AUD 7160</td>
<td>Advanced Vestibular Evaluation and Treatment</td>
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<tr>
<td>AUD 7181</td>
<td>Diagnostics III: Integration of Audiologic Test Results</td>
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<tr>
<td>AUD 7081</td>
<td>Business Management and Leadership</td>
<td>3</td>
</tr>
<tr>
<td>AUD 6504</td>
<td>Implantable Hearing Technologies</td>
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</table>

**Total Credit Hours: 34**
Audiology Course Descriptions

AUD 5070 — Research Methods I: Introduction
This course will provide students the opportunity to learn about and discuss the importance of outcomes measurement and clinical research in audiology. Students locate information, evaluate the rigor of the source and document, and synthesize the professional literature on a topic of their choosing. (3 credits)

AUD 5301 — Diagnostics I: Audiologic Diagnosis Across the Life Span
This course covers the components of the basic audiologic examination, including, but not limited to, case history, otoscopy, pure tone threshold evaluation, speech threshold evaluation, speech recognition evaluation, classical site-of-lesion tests, basic immittance, test result interpretation, and test battery interpretation. Audiologic screening and procedural modifications for special populations including pediatrics will also be discussed. Hypothetical cases will be presented. (3 credits)

AUD 5301L — Diagnostics I Lab
This lab is designed to provide an opportunity for students to practice audiological evaluation methods. Students will conduct components of the basic audiological examination, including, but not limited to, case history, otoscopy, pure-tone air and bone threshold evaluation, speech audiometric testing, basic immittance, masking procedures, and test interpretation. (1 credit)

AUD 5302 — Acoustics and Instrumentation
Students will study properties of sound and conduct sound analyses. They will also learn about and conduct audiometric calibration procedures. (3 credits)

AUD 5303 — Psychoacoustics and Speech Perception
Students will study normal human auditory sensation and perception. Changes in auditory sensation and perception that occur as a function of sensorineural hearing loss, and their implications for hearing aid processing, audiologic evaluation, and treatment will be discussed. (3 credits)

AUD 5304 — Anatomy and Physiology of the Auditory and Vestibular Mechanisms
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. (3 credits)

AUD 5402 — Introduction to Auditory Electrophysiology
Basic procedures for acquiring and interpreting auditory electrophysiologic tests are discussed. This course describes the use of auditory brainstem-evoked response testing for threshold and neuro-otologic diagnosis. (2 credits)

AUD 5403L — Introduction to Electrophysiology Lab
This lab supplements AUD 5402 and AUD 5404, providing students with practical assignments. (1 credit)

AUD 5404 — Introduction to Vestibular Evaluation
Basic procedures and interpretation for vestibular assessment, including electro/videonystagmography and bedside evaluations, are discussed. (2 credits)

AUD 5405 — Overview of Amplification I
This course is designed to provide 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. The course also includes basic concepts in counseling. (3 credits)

AUD 5405L — Amplification Lab I
This lab supplements AUD 5405, providing students with practical assignments. (1 credit)

AUD 6310 — Adult Audiologic Rehabilitation
This course focuses on audiological intervention and remediation strategies for adults and elderly individuals with auditory communication handicaps. Emphasis will be placed on the importance of a multiprofessional approach. (3 credits)

AUD 6402 — Diagnostics II
Site-of-Lesion Assessment
This course is designed to review basic immittance testing and introduce advanced immittance testing, acoustic reflex and reflex decay testing procedures, formula masking, and otoacoustic emissions. Case studies will be utilized. (2 credits)

AUD 6402L — Diagnostics II Laboratory
This lab is designed to develop student competency with audiology test procedures, such as immittance, masking, and otoacoustic emissions. (1 credit)

AUD 6404 — Auditory and Vestibular Pathologies
Students will study pathologies affecting the conductive, sensory, neural, and balance mechanisms. Methods for their differential diagnosis will be discussed. Case studies will be reviewed. (4 credits)

AUD 6406 — Overview of Amplification II
In this course, the student begins to integrate theoretical and practical concepts of fitting and verification. Components and features available on contemporary hearing instruments are presented. (3 credits)
AUD 6406L—Amplification Lab II  
This lab supplements AUD 6406, providing students with practical assignments. (1 credit)

AUD 6408—Introduction to Auditory Processing Evaluation and Treatment  
This course is designed to introduce students to auditory processing evaluation and treatment. Anatomy and physiology of the central auditory nervous system will be discussed. Tests for the evaluation of auditory processing and patterns of delay will be presented. (2 credits)

AUD 6502—Hearing Conservation  
Students will study the impact of noise from a physiological perspective. Students will study, conduct, and interpret noise surveys. Various service delivery models from industry, schools, military, and other sites will be discussed. The basic elements of an effective hearing conservation program will be discussed. The relevant legislation mandating such programs will be presented. (3 credits)

AUD 6503—Topics in Audiology  
Current topics in assessment, management, and treatment of hearing and balance are examined. (2 credits)

AUD 6504—Implantable Hearing Technologies  
This course is designed to provide students with an understanding of different implantable auditory devices for adults and children. Information covered in class will include, but is not limited to, candidacy for implantation, basic understanding of the surgery and surgical risks of implants, pre- and post-audiometric test measures to determine benefit, programming, and troubleshooting. (2 credits)

AUD 6508—Introduction to Tinnitus Evaluation and Management  
This course is designed to introduce students to tinnitus evaluation and treatment. Anatomy and physiology of the central auditory nervous system and associated subcortical and cortical structures are presented. Past and emerging theories on tinnitus will be discussed. The evaluation and treatment of both subjective and objective tinnitus will be presented. (1 credit)

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 7050—Research Methods II: Applications  
Students will study research design, data collection, analysis, and evaluation. The ability to comprehend, analyze, and critically evaluate professional literature will be emphasized. Students will design clinically based research to test a clinical hypothesis or document treatment effectiveness. (3 credits)

AUD 7071—Biochemistry and Pharmacology for Audiology  
The biochemistry of the ear will be described, and with that as a foundation, the mechanisms, side effects, drug interactions, and toxicity of these drugs will be examined. (2 credits)

AUD 7075—Counseling in Audiology  
This course is designed to explore theories of counseling related to the management of individuals with auditory and vestibular disorders. Different approaches for interacting with patients and their families, individually and in groups, will be addressed. (3 credits)

AUD 7078—Ethics for Audiologists  
Theories of ethics and applications to audiology in the clinical, research, and academic arenas. Analysis of ethical scenarios and dilemmas. (1 credit)

AUD 7079—Coding and Reimbursement for Audiology  
Students will be introduced to evaluation, treatment, and diagnosis codes relative to audiology practice. Third party reimbursement policies, procedures, and guidelines will be discussed. (1 credit)

AUD 7080—Practice Management for Audiology  
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. (2 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 is designed to provide 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—Electrophysiology: Auditory
Students will study cochlear physiologic and 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. (4 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 is designed to provide a review of normal and abnormal auditory development in children. Audiologic assessment, management, and treatment of neonates, infants, and young children will be discussed. Evaluation procedures for the difficult-to-test patient will be explored. (3 credits)

AUD 7135—Pediatric Audiology Rehabilitation
This course details the aspects related to the provision of audiology rehabilitation services to children with hearing loss. It includes such topics as models of information processing during communication, development of auditory speech and language skills in children with hearing loss, provision of effective counseling and guidance to families, and provision of assessment and intervention services for the development of speech and language skills in the home and school environments. (3 credits)

AUD 7160—Advanced Vestibular Evaluation and Treatment
Students will study the anatomy and physiology of the peripheral and central vestibular mechanisms and the integration of the human equilibrium system. Disorders of vestibular function will be studied. Vestibular evaluation procedures will be presented. Vestibular rehabilitation and balance therapy programming and therapy techniques will be 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 7180—Diagnostics III: Integration of Audiologic Test Results
Students will study advanced auditory evaluation with an emphasis on integration of audiologic test results leading to management and treatment strategies. (3 credits)

AUD 7190—Case Studies I
Students critically analyze and present cases that require integration of information from throughout the curriculum. (1 credit)

AUD 7201—Case Studies II
Students critically analyze and present cases that require integration of information from throughout the curriculum. (1 credit)

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)
A respiratory therapist (RT), or respiratory care practitioner (RCP), is an allied health professional and life-support specialist concerned with the diagnostic evaluation, treatment, and management of patients with cardiopulmonary disorders. The RT is proficient in the therapeutic administration of medical gases and aerosols, intermittent and continuous mechanical ventilation, bronchopulmonary hygiene, basic and advanced cardiac life-support techniques, noninvasive and invasive patient monitoring, pulmonary function evaluation, arterial blood gas analysis, airway management procedures, and pulmonary rehabilitation techniques. An RT must also be knowledgeable regarding various assessment techniques and patient education models. These skills are used with neonatal, pediatric, and adult patients in acute, sub-acute, and home care settings.

To function effectively as a member of the multidisciplinary health care team, the respiratory therapist must have a sound understanding of the physiological and psychological needs of the patient, the role of the various therapeutic interventions in the patient care plan, and development of broad-based skills to more effectively contribute to the overall care of the patient.

**Accreditation**

Nova Southeastern University First-Professional Bachelor of Science in Respiratory Therapy Program is accredited by the Commission on Accreditation for Respiratory Care (CoARC). The program's reference number is 200615. The program is not accredited in polysomnography. Commission on Accreditation for Respiratory Care, 1248 Harwood Road, Bedford, TX 76021-4244, phone: 817-283-2835, fax: 817-354-8519, www.coarc.com

**Mission Statement**

The mission of NSU’s Department of Cardiopulmonary Sciences is to advance the respiratory care profession through leadership in teaching, research, and service. We will provide a premiere health care education experience in a learning environment that cultivates critical thinking, inspires professional leadership, encourages and promotes research, and imparts a strong awareness of ethical standards and social diversity. By engaging all faculty members and students in research and scholarly activity, we intend to cultivate the knowledge, attitudes, and skills necessary to not only support national leadership for the respiratory care profession, but also develop future educators and providers in professionally related health care arenas.

**Admissions Requirements**

Admission to the Bachelor of Science in Respiratory Therapy (B.S.R.T.) program has once-a-year enrollment and requires the following:

- successful completion of all prerequisite coursework with a grade of C or higher, from a regionally accredited college or university
- minimum cumulative GPA of 2.75 on a 4.0 scale from all undergraduate work
- minimum cumulative science GPA of 2.75

**Computer Requirements**

The B.S.R.T. program is primarily iPad based, therefore, each student is required to have an iPad.* In addition to the iPad, the following is the recommended minimum computer configuration for students.

- PC or Mac, 2 GHz minimum processor (If Mac, the computer must be able to run select Windows programs. This will require a program—such as Parallels, Boot Camp, or equivalent—and a Windows operating system.)
- 2 GB RAM or more, based on the computer and operating system
- video and monitor capable of 1024 X 8 resolution or better and streaming video capable
- CD-ROM
- full-duplex sound card and speakers
- microphone with headset or boom microphone
- cable, DSL, satellite, or cell modem
- Internet connection with Internet service provider
- the ability to run Windows XP or higher
- Microsoft Office 2007 or higher with PowerPoint and Word (or Office replacement, such as Open Office or iWork)
- Adobe Reader

*Apple iPad with camera, 32 GB memory or more, and Wi-Fi
Application Procedures
• submit application with $50, nonrefundable application fee
• submit writing sample that includes a clear statement of the goals set for entering the B.S.R.T. program
• submit two evaluations (reference) forms
• send official transcripts from each university or college attended

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
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 Health Care Sciences, Department of Health Science Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

Applicants meeting minimum admissions criteria will be scheduled for a required, on-campus interview with the program director.

Tuition and Fees
• $50, nonrefundable application fee
• $26,500 tuition per year (2015–2016 academic year)
• NSU student services fee of $1,050—required annually
• $145 annual HPD general access fee
• $200 acceptance fee—required to reserve the accepted applicant’s place in the entering first-year class, but nonrefundable in the event of a withdrawal—payable within two weeks of an applicant’s acceptance

Students are responsible for purchasing any required textbooks, uniforms, white coats, and/or classroom materials.

Academic Dismissal
See the section relating to suspension/dismissal in the NSU Student Handbook.

Readmission Policy
Each course in any given semester must be successfully completed with a passing grade in order to move to the next semester. If this requirement is not met, students can re-enter the program upon approval of the program’s administration, successful competency evaluations, and auditing of courses starting in the beginning of the academic year in which the failure took place. Students will be charged for the course(s) that resulted in a failing grade. Students will be allowed only one re-entry to the program.

Course of Study
The Bachelor of Science in Respiratory Therapy degree is awarded after successful completion of 24 months of coursework in hybrid format. Beginning in the second semester, students are given clinical assignments and experiences. There will be increased clinical involvement throughout the program as students have direct patient care at health care facilities throughout the state of Florida.

 Requirements for Graduation
In order to be eligible for a Bachelor of Science in Respiratory Therapy, students are required to do the following:

• satisfactorily complete the program of 75 semester hours (minimum) of study in the B.S.R.T. major required for the degree (not including CLEP, proficiency examination’s or prior experiential learning credits)
• complete general education, prerequisite, major, and elective requirements as specified by the program at time of admission resulting in a minimum total of 120 semester hours
• attain a 2.0 cumulative grade point average
• attain a 2.25 grade point average in the major area
• submit a degree application form before completing registration for the last semester
• fulfill all obligations to the library, the student’s program, and the bursar’s office
• attend the commencement ceremony
Bachelor of Science in Respiratory Therapy (First-Professional Program)
Curriculum Outline

<table>
<thead>
<tr>
<th>Prerequisites Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Chemistry with Lab*</td>
<td>4</td>
</tr>
<tr>
<td>Human Anatomy and Physiology I and II with Lab*</td>
<td>8</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Math (higher than level 1040, one of which must be College Algebra)</td>
<td>6</td>
</tr>
<tr>
<td>Medical Terminology</td>
<td>1</td>
</tr>
<tr>
<td>Microbiology with Lab*</td>
<td>4</td>
</tr>
<tr>
<td>Physics I with Lab*</td>
<td>4</td>
</tr>
<tr>
<td>Social/Behavioral Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Written Communications (above 1000 level)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>45</strong></td>
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*These courses will meet the Natural and Physical Science General Education requirements of 6 credits.

NSU Professional Curriculum

**Fall—Semester I Courses (16 Weeks)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>RCP 4040</td>
<td>Statistics and Principles of Scientific Literature Evaluation</td>
<td>3</td>
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<tr>
<td>RCP 3002</td>
<td>Cardiopulmonary Anatomy and Physiology with Lab</td>
<td>3</td>
</tr>
<tr>
<td>RCP 3003</td>
<td>Fundamentals of Respiratory Care with Lab</td>
<td>4</td>
</tr>
<tr>
<td>RCP 3004</td>
<td>Respiratory Basics and Patient Assessment with Lab</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
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**Winter—Semester II Courses (18 Weeks)**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>RCP 3007</td>
<td>Pulmonary Disease</td>
<td>3</td>
</tr>
<tr>
<td>RCP 3008</td>
<td>Pharmacology for Respiratory Therapy</td>
<td>3</td>
</tr>
<tr>
<td>RCP 3009</td>
<td>Patient Monitoring with Lab</td>
<td>4</td>
</tr>
<tr>
<td>RCP 3501</td>
<td>Clinical I (an 8-hour day, once a week for 10 weeks)</td>
<td>1</td>
</tr>
<tr>
<td>RRT 4009</td>
<td>Legal and Ethical Considerations in Respiratory Care</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
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<td></td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td>Credit Hours</td>
</tr>
<tr>
<td>--------</td>
<td>-------</td>
<td>--------------</td>
</tr>
<tr>
<td>RCP 3011</td>
<td>Mechanical Ventilation with Lab</td>
<td>4</td>
</tr>
<tr>
<td>RCP 3012</td>
<td>Cardiopulmonary Diagnostics and PFT with Lab</td>
<td>3</td>
</tr>
<tr>
<td>RCP 3013</td>
<td>Human and Infectious Disease (nonpulmonary)</td>
<td>3</td>
</tr>
<tr>
<td>RCP 3502</td>
<td>Clinical II (12-hour days, twice a week for 10 weeks)</td>
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**Total Credit Hours** 13

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>RCP 4001</td>
<td>Neonatal/Pediatric Respiratory Care with Lab</td>
<td>4</td>
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<tr>
<td>RCP 4002</td>
<td>Cardiopulmonary Technology/Specialties</td>
<td>3</td>
</tr>
<tr>
<td>RCP 4003</td>
<td>Alternate Respiratory Disciplines</td>
<td>3</td>
</tr>
<tr>
<td>RCP 4501</td>
<td>Clinical III (12-hour days, 3 times a week for 10 weeks)</td>
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**Total Credit Hours** 15

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>RCP 4005</td>
<td>Health Care Research and Evidence-Based Practice</td>
<td>3</td>
</tr>
<tr>
<td>RCP 4100</td>
<td>Clinical Seminar I</td>
<td>2</td>
</tr>
<tr>
<td>RCP 4502</td>
<td>Clinical IV (12-hour days, 3 times a week for 10 weeks)</td>
<td>5</td>
</tr>
<tr>
<td>RRT 4006</td>
<td>Leadership and Management in Respiratory Care</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 13

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCP 4101</td>
<td>Clinical Seminar II</td>
<td>1</td>
</tr>
<tr>
<td>RCP 4503</td>
<td>Specialization Clinical V (12-hour days, 3 times a week for 10 weeks)</td>
<td>5</td>
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</tbody>
</table>

**Total Credit Hours** 6

**Total Professional Program Credit Hours** 75

**Total Prerequisites and Professional Program Credit Hours** 120

Program requirements and curriculum are current as of March 2013. Requirements are subject to change without notice.
Bachelor of Science in Respiratory Therapy (First-Professional Program) 
Course Descriptions

BHS 4031—Statistics and Principles of Scientific Literature Evaluation
This course is designed to introduce the conceptual foundation of statistical analysis and statistical reasoning of health sciences data and prepare the student to calculate, interpret, and utilize appropriate software packages for basic statistical analysis. This course will also provide an introduction to critical analysis of research and medical literature, as well as basic research methods. Statistical and research concepts and procedures are combined with an emphasis on evidenced-based research in respiratory.

RCP 3002—Cardiopulmonary Anatomy and Physiology with Lab
Provides a comprehensive study of cardiopulmonary anatomy and physiology. Topics include normal ventilation, lung mechanics, pulmonary circulation, diffusion, and gas transport in the blood. The course will also include the natural and chemical regulation of breathing, blood flow and pressure, cardiac output with an emphasis on heart-lung relationship, clinical applications of respiratory care, and commonly associated disorders. The renal system will be included.

RCP 3003—Fundamentals of Respiratory Care with Lab
Provides students with an introduction to the field of respiratory care. Historical development of the profession, the principles of chemistry and physics as they apply to respiratory care, and cardiopulmonary anatomy and physiology, as well as respiratory care procedures, are covered. This course will include oxygen delivery devices, humidifiers, aerosol generators, gas delivery, metering and analyzing devices, precursurers, vibrators, environmental devices, manometers, gauges, and vacuum systems. Specific modes of respiratory care are examined to understand the indications, hazards, contraindications, and evaluation of therapy. Modes of care include medical gases, humidity/aerosol therapy, aerosol medications, positive pressure breathing, incentive spirometry, expiratory resistance, postural drainage, and percussion/vibration.

RCP 3004—Respiratory Basics and Patient Assessment with Lab
Essentials of respiratory assessment will be covered to include review of existing data in the patient record, patient history, physical examination, oximetry, blood gases, respiratory monitoring, laboratory studies, chest and upper airway radiographs, bedside EKG interpretation, cardiovascular monitoring, and nutritional assessment. Basic life support will be covered to include cardiopulmonary resuscitation, artificial ventilation and circulation, endotracheal intubation, airway care, tracheostomy care, and recognition and treatment of arrhythmias.

RCP 3007—Pulmonary Disease
The course provides a comprehensive approach to etiology, pathophysiology, clinical manifestations, diagnosis, treatment, and prognosis of common pulmonary diseases and syndromes. Main topics include obstructive and restrictive pulmonary and cardiovascular disorders, neoplastic disease of the lung, disordered breathing, cardiac and cardiovascular disorders, neuromuscular disorders, shock, near drowning, burns, smoke inhalation, and carbon monoxide poisoning.

RCP 3008—Pharmacology for Respiratory Therapy
The purpose of this course is to cover the physiologic and pharmacologic basis of pulmonary and cardiac medications. Preparation, calculation of dosages and mixtures, and general principles of pharmacology will be covered followed by an in-depth discussion of the most commonly used respiratory drugs. This will include bronchoactive drugs and drug groups related to the cardiopulmonary system, neuromuscular blocking agents, central nervous system depressants, cardiovascular agents, diuretics, and commonly used antibiotics and antifungals.

RCP 3009—Patient Monitoring with Lab
This course provides a study of invasive and noninvasive patient monitoring techniques and equipment. Invasive topics include hemodynamic monitoring, arterial pressure monitoring, central venous, and pulmonary artery catheters, as well as cardiac output measurement. Noninvasive monitoring topics include pulse oximetry, transcutaneous monitoring, inductance plethysmography, capnography, and electrocardiogram. This course will also include the recognition and treatment of arrhythmias and cardiovascular pharmacology. ACLS instruction will be provided.

RCP 3011—Mechanical Ventilation with Lab
This course provides instruction in the theory, setup, operation, and maintenance of mechanical ventilators and related equipment. Topics include mechanical ventilator theory, ventilator operation, ventilator maintenance, and troubleshooting. Lab hours will provide students with hands-on practice in these areas.

RCP 3012—Cardiopulmonary Diagnostics and PFT with Lab
Provides an overview of the various areas comprising cardiopulmonary diagnostics to include normal and abnormal pulmonary function and related technology. The student will learn to perform, interpret, and evaluate pulmonary function studies. In addition, the student will learn the operation and maintenance of pulmonary function and gas analysis equipment. Other topics include stress and exercise testing, metabolic testing, ventilation/
perfusion scanning, cardiac catheterization laboratory, nutrition, and noninvasive cardiology. Lab hours will provide students with hands-on practice.

**RCP 3013—Human and Infectious Disease**

This course will cover nonrespiratory disease managed in the critical care unit and will include neurologic disorders, shock, trauma, sepsis, drug overdose, renal failure, and acute gastrointestinal disturbances. Respiratory care of the postoperative patient will also be reviewed. Common infectious diseases, such as HIV/AIDS, hepatitis, SARS, and influenza, will be discussed.

**RCP 3501—Clinical I**

This course is an 8-hour day, once a week for 10 weeks. It introduces students to clinical practice in basic respiratory care procedures. Topics include introduction to the clinical affiliate, patient assessment, chart review, medical documentation, medical gas therapy, oxygen therapy, aerosol therapy, incentive spirometry, and patient assessment. In addition, intermittent positive pressure breathing and chest physiotherapy and airway care using nasal, endotracheal, and tracheal tubes is introduced in basic care situations. Critical respiratory care is introduced to include basic care as applied in the intensive care unit including arterial puncture and blood gas analysis, and EKG services (observation and analysis only).

**RCP 3502—Clinical II**

This course is a 12-hour day, twice a week for 10 weeks. Critical respiratory care is further introduced to include all tasks presented in Clinical Practice I as applied to the intensive care unit. In addition, tracheostomy care, ventilator monitoring, arterial puncture and blood gas analysis, endotracheal intubation, EKG services, and bronchoscopy observation are introduced. Case presentations are required to integrate clinical and classroom theory.

**RCP 4001—Neonatal/Pediatric Respiratory Care with Lab**

This course provides an overview of the most important concepts to understand the neonatal and pediatric patient. From fetal growth to infant development, students will learn how to assess, identify, and treat the most common respiratory diseases that affect the neonatal and pediatric patient. An overview of common congenital diseases of the respiratory, cardiac, gastrointestinal, and neurologic systems will be included. Also included are neonatal and pediatric critical care and mechanical ventilation. Laboratory time will allow students to work with respiratory care equipment used to care for neonates and pediatric patients to include isolettes, ventilators, specialty gases, intubation, manual resuscitators, airway clearance devices, and airway maintenance.

**RCP 4002—Cardiopulmonary Technology/ Specialties**

An overview of the various areas comprising cardiopulmonary diagnostics and related technology will be provided. Topics include sleep laboratory, disaster management, extracorporeal membrane oxygenation, mechanical circulatory assistance, hyperbaric medicine, bronchoscopy (laser, etc.), flight and ground transport, and perfusion technology. This course will also cover the genetics and development of humans, including application of genetic technology with regard to the pulmonary system.

**RCP 4003—Alternate Respiratory Disciplines**

This course provides an overview of the concepts, procedures, and equipment utilized in the delivery of long-term care to individuals with a chronic cardiopulmonary disorder. The development and implementation of disease management programs for the care of patients with asthma, COPD, and other chronic conditions is presented. Pulmonary rehabilitation, patient education, and smoking cessation programs are reviewed. Provision of health care services in the home and other nonacute settings is examined.

**RCP 4005—Health Research and Evidence-Based Practice**

This course is designed as an introduction to critical analysis of research and medical literature, as well as basic research methods. The course includes an introduction to descriptive and inferential statistics and research design. Statistical and research concepts and procedures are combined with an emphasis on evidenced-based research in respiratory care.

**RCP 4006—Leadership and Management in Respiratory Care**

This course will provide extensive examination of current practices and trends of techniques used in the leadership of the health care environment. Emphasis will be placed upon specific skill sets used by managers of today's cardiopulmonary and respiratory workforce. Topics such as reimbursement and understanding and communicating with diverse populations will be included.

**RRT 4009—Legal and Ethical Considerations in Respiratory Care**

This course will provide a forum for discussion of current ethical, legal, and professional issues. We will refer to historical and emerging controversies in health care and society that influence the patient-care giver relationship. The method of instruction will primarily be student presentation and classroom discussion of current issue. **Prerequisite:** statistics
RCP 4100—Clinical Seminar I
(RT Protocols, CRT Review)
This is a hybrid course. Legal and ethical considerations in respiratory care will be discussed in the online environment and will cover current ethical, legal, and professional issues faced by practitioners. It will include a review of respiratory care as it pertains to the credentialing examinations administered by the National Board for Respiratory Care. A series of written and simulation examinations will be used to prepare the students for these exams. Emphasis will be placed on decision making and problem solving as they relate to clinical respiratory care. In conjunction with the review, a final case study presentation will be required and presented to the program director, medical director, director of clinical education, and faculty members (at a minimum) to assess the understanding of being a respiratory therapy professional. Students will also obtain medical error certification necessary for licensure.

RCP 4101—Clinical Seminar II
This is a hybrid course. It will include continued review of respiratory care as it pertains to the registry (RRT) credentialing examinations administered by the National Board for Respiratory Care. A series of written and simulation examinations will be used to prepare the students for these exams. Emphasis will be placed on decision making and problem solving as they relate to clinical respiratory care. In conjunction with the review, a final case study presentation will be required and presented to the program director, medical director, director of clinical education, and faculty members (at a minimum) to assess the understanding of being a respiratory therapy professional.

RCP 4501—Clinical III
This course is 12 hours a day, twice a week for 12 weeks. Students will have an opportunity to further develop skills required in the intensive care of the respiratory patient. Topics include comprehensive ventilator management, measurement and evaluation of hemodynamic variables, noninvasive monitoring, and pulmonary function laboratory. Specialty rotations include intubation, hyperbaric oxygen therapy units, cardiac catheterization, echocardiography, pulmonary rehabilitation, and home care. Case presentations are required to integrate clinical and classroom theory. Bronchoscopy observation is introduced.

RCP 4502—Clinical IV
This course is 12 hours a day, three times a week for 12 weeks. The course focuses on perinatal, neonatal, and pediatric respiratory care. Topics include medical gas therapy, oxygen delivery devices, aerosol therapy, hyperinflation therapy, airway clearance devices, patient assessment, monitoring (invasive and noninvasive), airway care, vent management, and labor and delivery assistance. Specialty rotations include the burn unit. Case presentations are required to integrate clinical and classroom theory.

RCP 4503—Specialization Clinical V
This course is 12 hours a day, three times a week for 12 weeks. Students will pick their preferred areas and will have an opportunity for in-depth application and reinforcement of adult intensive care. In addition, students are provided with the opportunity to develop an area of specialization. Specialization areas may include neonatal/pediatrics, adult critical care, pulmonary function laboratory, advanced diagnostics, pulmonary rehabilitation, home care, management, research, or education.
This program is designed for the licensed registered respiratory therapist who has completed the prescribed general education courses listed. The postprofessional Bachelor of Science in Respiratory Therapy (B.S.R.T.) completion degree allows respiratory therapists to further expand their expertise with advanced knowledge in a variety of areas. Delivered entirely online through a combination of synchronous (real-time) and asynchronous instruction, the B.S.R.T. completion program is designed for students who are unable to be on campus or for those with schedule or family constraints that make traditional college class schedules difficult.

Admissions Requirements
Admission to the program will require the following:

- successful completion of the coursework listed below, taken at an accredited college or university, with a grade of C (2.0) or higher

Prerequisite Courses

- Written communication about 1500 level 6 semester hours
- Mathematics about 1040 level (one of which must be College Algebra) 6 semester hours
- Humanities 6 semester hours
- Social and behavioral sciences 6 semester hours
- Natural and physical sciences 6 semester hours

Credits from the applicant's respiratory therapy program will be evaluated for equivalency by the Office of Transfer Services, and a curriculum plan will be developed on an individual basis.

- an associate's degree in the field of respiratory therapy, unless registered respiratory therapist (RRT) was obtained prior to the associate's degree requirement

- current licensure as a registered respiratory therapist (Applicant must provide a copy of his or her RRT license in the state in which he or she is employed. For states that do not require licensure, a copy of the NBRC RRT is needed.)

All applicants must submit

- a completed, online application that includes a nonrefundable, $50 application fee
- official transcripts from each university/college attended
- current license to practice respiratory therapy (Applicant must provide a copy of his or her RRT license in the state in which he or she is employed. For states that do not require licensure, a copy of the NBRC RRT is needed.)

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, New York 10274-5087
  (212) 966-6311
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 NSU’s Enrollment Processing Services.

All admission materials should be sent to

Nova Southeastern University
Enrollment Processing Services
College of Health Care Sciences
Respiratory Therapy Program
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905
Computer Requirements
For minimum recommended university computer specifications, visit www.nova.edu/publications/it-standards/.

Tuition and Fees
Tuition for the 2015–2016 B.S.R.T. postprofessional completion program for the practicing registered respiratory therapist is $445 per credit. An NSU student services fee of $1,050 is also required annually. All tuition and fees are subject to change by the board of trustees without notice.

Course of Study
The Bachelor of Science in Respiratory Therapy degree for the practicing respiratory therapist is a fully online, continuous-enrollment program. The program is presented in a distance-learning format and requires no on-campus time. The coursework is professor-paced using web-based delivery. The curriculum and coursework follow a standard, 12-week semester calendar. The curriculum is designed to build upon the existing knowledge base of the registered respiratory therapist, while focusing on the overall health care picture. Leadership, evidence-based practice, and education are a few of the areas covered in the curriculum.

Graduation Requirements
In order to be eligible for a Bachelor of Science in Respiratory Therapy, students are required to

- be of good moral character
- satisfactorily complete 45 credits in the B.S.R.T. program
- attain a minimum 2.5 cumulative grade point average while in the program
- earn a minimum total of 120 credit hours, including 30 credit hours of general education requirements
- obtain a grade of C or better (greater than or equal to 73 percent)
- demonstrate professional behavior throughout the program
- comply with all university Health Professions Division, College of Health Care Sciences, Department of Cardiopulmonary Science, and NSU Student Handbook policies and procedures

Bachelor of Science in Respiratory Therapy (Postprofessional Program) Curriculum Outline

<table>
<thead>
<tr>
<th>Courses</th>
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<td>BHS 4031 Statistics for Health Sciences</td>
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<td>RRT 3014 Advanced Patient Monitoring and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>RRT 3015 Critical Care Pathophysiology in Respiratory Care</td>
<td>3</td>
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<tr>
<td>RRT 3016 Advanced Cardiopulmonary Physiology</td>
<td>3</td>
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<tr>
<td>RRT 3017 Outpatient Services in Respiratory Therapy</td>
<td>3</td>
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<tr>
<td>RRT 3018 Advanced Pharmacology in Respiratory Therapy</td>
<td>3</td>
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<tr>
<td>RRT 3020 Quality Improvement in Health Care</td>
<td>3</td>
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<tr>
<td>RRT 3021 Sleep Medicine</td>
<td>3</td>
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<tr>
<td>RRT 4005 Evidence-Based Practice</td>
<td>3</td>
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<tr>
<td>RRT 4006 Leadership and Management for Health Care Professionals</td>
<td>3</td>
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<tr>
<td>RRT 4007 Education Principles in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>RRT 4009 Legal and Ethical Considerations in Respiratory Care</td>
<td>3</td>
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<tr>
<td>RRT 4010 Case Management Theory and Process</td>
<td>3</td>
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Health Professions Division Practical Coursework and Experiences
(Select two courses from the following for 6 credits)

- RRT 4502 Practicum 3
- RRT 4505 Scientific Investigation 3
- RRT 4506 Internship 3
- RRT 4507 Scientific Investigation II 3

Total Credits 120 (minimum)

Generalist Track Major Requirements 45
Core Courses 39

Optional Specialization in Management
Successful completion of the following courses, in addition to the requirements for the Bachelor of Science in Respiratory Therapy postprofessional program's generalist track, will grant a B.S.R.T. degree with the added specialization in management.

Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHS 3155 Conflict Resolution in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>BHS 3161 Health Care Finance</td>
<td>3</td>
</tr>
<tr>
<td>BHS 3162 Economics of Health Services</td>
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</tr>
<tr>
<td>RRT 4014 Operational Analysis and Quality Improvement</td>
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<tr>
<td>RRT 4103 Strategic Planning and Organizational Development for Health Care</td>
<td>3</td>
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</tbody>
</table>

Bachelor of Science in Respiratory Therapy (Postprofessional Program)
Course Descriptions

BHS 3155—Conflict Resolution in Health Care
This course discusses the fundamentals of conflict resolution and how it is applicable within the health care setting. During this course you should develop an understanding of conflict and effective methods and strategies for reducing the incidence of workplace conflict. This includes employee-employee conflict, supervisor-subordinate conflict, patient-patient conflict, and patient-provider conflict. (3 credits)

BHS 3161—Health Care Finance
The course introduces the fundamental tools, concepts, and applications aimed at providing students with an understanding of numerous financial theories and techniques used in health care financial management. The course materials are structured around emerging health care policies and the role finance and economics play in establishing policy. Case studies are drawn from a variety of sources, such as health maintenance organizations, home health agencies, nursing units, hospitals, and integrated health care systems. Some topics of discussion also include concepts of capital financing for providers, budgeting, financial ethics, payment systems, provider costs, high cost of health care, and measuring costs. (3 credits)

BHS 3162—Economics of Health Services
This course will teach the student to use economic analysis to understand critical issues in health care and health policy. Issues to be studied include the demand for health care, health insurance markets, managed care, medical technology, government health care programs, national health reform, and the pharmaceutical industry. The course will focus on the U.S. health care sector, but will also examine health care systems of other countries. (3 credits)
BHS 4031—Statistics for Health Sciences
This course is designed to introduce the conceptual foundation of statistical analysis and statistical reasoning of health sciences data and prepares the student to calculate, interpret, and utilize appropriate software packages for basic statistical analysis. (3 credits)

RRT 3014—Advanced Patient Monitoring and Assessment
Techniques and methods used to analyze and evaluate the health status of critically ill adult patients with emphasis on the respiratory, cardiovascular, and renal systems. (3 credits)

RRT 3015—Critical Care Pathophysiology in Respiratory Care
A survey of the disease processes that affect the tissues, organs, or body as a whole. Special emphasis is placed on infectious cardiac and pulmonary diseases, their causes, prevention, and treatment in the critical care setting. This course includes a review of respiratory physiology, cardiac, and circulatory function. (3 credits)

RRT 3016—Advanced Cardiopulmonary Physiology
This course covers advanced physiology of the cardiovascular and pulmonary systems. It includes study of respiratory physiology, cardiac, and circulatory function with relevant clinical application of concepts in ECG interpretation, blood pressure regulation, gas exchange and transport, breathing regulation, respiratory insufficiency, and congenital abnormalities. (3 credits)

RRT 3017—Outpatient Services in Respiratory Therapy
This course encompasses an introduction to the history, trends, issues, and evolution of the outpatient services and reimbursement with the respiratory therapy profession. The course includes selected respiratory care theories and practices in alternate-care sites including pulmonary diagnostics, pulmonary rehabilitation, home care, and subacute care. Topics and emphasis may vary. (3 credits)

RRT 3018—Advanced Pharmacology in Respiratory Therapy
This course builds upon a basic understanding of the concepts and principles of pharmacology as applied in the respiratory therapy in the management of patients with cardiopulmonary disease and critical care. (3 credits)

RRT 3020—Quality Improvement in Health Care
This course provides an introduction and evaluation of current approaches to assessing risk and improving health care quality through the practice of continuous quality improvement. It focuses on conceptual understanding and experiential learning. Prerequisite: statistics (3 credits)

RRT 3021—Sleep Medicine
This course is an overview of sleep medicine and anatomy and physiology of sleep and breathing. It serves as an introduction to sleep disorders and polysomnography including monitoring techniques and instrumentation. (3 credits)

RRT 4005—Evidence-Based Practice
This course will provide the student with an introduction to the concept of evidence-based practice and an opportunity to acquire the skills necessary to be able to incorporate evidence and best practices into professional work. These include an understanding of research methods and the approach to critical appraisal of research literature. Prerequisite: statistics (3 credits)

RRT 4006—Leadership and Management for Health Care Professionals
This course is an extensive examination of current practices and trends of techniques used in the leadership of the health care environment. Emphasis will be placed upon specific skill sets used by the managers of today's workforce. (3 credits)

RRT 4007—Education Principles in Health Care
This course is an introduction to basic principles of education and their application to the current health care environment. Course content includes information on designing a lecture or course for the classroom as an in-service or in a continuing education program. It focuses on assessing educational needs, organizing instruction, instructional methods, and evaluation. (3 credits)

RRT 4009—Legal and Ethical Considerations in Respiratory Care
This course will provide a forum for discussion of current ethical, legal, and professional issues. The course will refer to historical and emerging controversies in health care and society that influence the patient-care giver relationship. The method of instruction will primarily be student presentation and classroom discussion of current issues. Prerequisite: statistics (3 credits)

RRT 4010—Case Management Theory and Process
This course uses the framework of the strengths-based model in working with different populations with a special focus on pulmonary patients. Through an integration of online activities and discussion, key issues will be explored and examined in depth. (3 credits)
RRT 4014—Operational Analysis and Quality Improvement
This course addresses health care strategies that affect operational decisions. Strategic and tactical planning issues, with particular attention to marketing and strategic planning, opportunity assessment, and external analysis, are covered. Students also analyze and evaluate total quality management principles and continuous quality improvement processes in organizations. Students compare total quality tools and performance measures and examine leadership and teamwork in the business environment. (3 credits)

RRT 4103—Strategic Planning and Organizational Development for Health Care
This course focuses on management of human resources. Topics include employment law; typical middle management functions of recruitment, supervision, and retention; disciplinary procedures; and performance standards. The student will gain knowledge of organizational behavior, entrepreneurialism, and change management. Assessment and benchmarking techniques are also explored. (3 credits)

RRT 4502—Practicum
This course includes experiences in a chosen focus area (clinical, administrative, or population based). This experience will culminate in a capstone project in the form of research or another scholarly activity that articulates the design, organization, statistics, and data analysis used and includes a written presentation of the project. Prerequisites: statistics and all core courses (3 credits)

RRT 4505—Scientific Investigation
This course provides the student with the opportunity to gain experience in application of the scientific method. Emphasis will be on literary inquiries, statistical analysis, research design, and the preparation of material for publication. The student will develop an independent project on thesis proposal with the aid of a faculty adviser and prepare and submit a final report prior to graduation. Prerequisites: statistics, instructor permission, and all core courses (3 credits)

RRT 4506—Internship
This course is designed to have the student demonstrate competency related to clinical processes in an advanced practice area, such as neonatal critical care, pediatric critical care, adult critical care, pulmonary rehabilitation, pulmonary function laboratory, polysomnography, hyperbaric therapy, respiratory care management, or respiratory care education. Students should select the specialty section that reflects their area of expertise. A written presentation will be required. Degree completion students must enroll in the specialty section in which they have the most clinical experience and expertise. Prerequisite: statistics, instructor permission, and all core courses. (3 credits)

RRT 4507—Scientific Investigation II
This course provides the student with the opportunity to perform a systematic review or meta-analysis. Emphasis will be on study protocol design, defining inclusion/exclusion criteria, literature search strategies, and statistical methods for analysis. The student will develop an independent, systematic review or meta-analysis with the aid of a faculty adviser and submit it as a final project prior to graduation. Prerequisite: A course in statistics, scientific investigation, permission of instructor, and all core courses (3 credits)
The athletic training major is designed to prepare students to become certified athletic trainers who specialize in injury and illness prevention, assessment, treatment, and rehabilitation for physically active people. The curriculum provides a balance between classroom instruction and clinical experience that prepares students to become competent allied health care professionals.

This is a professional program. Athletic training students will graduate with a Bachelor of Science degree in Athletic Training and will be eligible to sit for the Board of Certification (BOC) examination. The athletic training major is designed to ensure that students who graduate from the program meet all requirements necessary to pass the BOC examination.

Accreditation
NSU’s athletic training major, established in 2003, and the Bachelor of Science in Athletic Training are accredited by the Commission on Accreditation of Athletic Training Education (CAATE), effective March 2007. NSU’s athletic training major received continuing accreditation in 2011, effective for ten years.

Program Goals
The athletic training program will

- develop communication, critical thinking, and professional skills to prepare students for the allied health field of athletic training
- meet the standards, guidelines, and requirements for accreditation and from governing organizations such as the National Trainers’ Association (NATA), the Board of Certification (BOC), and the Commission on Accreditation of Athletic Training Education (CAATE)
- provide an effective and interactive learning environment, as well as a solid educational foundation, both in didactic and clinical experience settings. The program will utilize modern educational media and advanced technology regularly in the clinical and educational settings. It will expose students to hands-on experiences, clinical settings, and professionals representing a wide range of allied and medical health care professions. Students will receive clinical instruction by professionals representing other medical and allied health disciplines, such as medical doctors, physical therapists, physician assistants, occupational therapists, and osteopathic physicians.
- create an optimal learning community of faculty members, clinical athletic trainers, and students that will provide quality health care for intercollegiate athletic programs and varied affiliated sites at all levels of sport, from grade school to professional sports teams
- prepare program students to attain graduate or professional school placement or entry-level employment within six months of graduating from the program. (Additionally, program graduates will obtain state licensure and other necessary professional designations from the appropriate regulatory agencies in the states where they will be employed.)

Athletic Training Major Phases
The NSU Athletic Training Education Program (ATEP) consists of three phases divided into four levels. Level I of the ATEP is the pre-professional phase (or Pre-Athletic Training Program). Levels II and III comprise the professional phase (or the athletic training major). Level IV is the completion phase.

Students admitted into the athletic training major must first complete the Pre-Athletic Training Program. The Pre-Athletic Training Program includes successful completion (C or better) of six courses: ATTR 1100 Introduction to Athletic Training, ATTR 1200 Principles of Athletic Training, ATTR 1300 Emergency Care, ATTR 1400 Health and Fitness, BIOL 1400 Introduction to Cell Biology (or equivalent), and BIOL 3312 Human Anatomy and Physiology/Lab (or equivalent). In addition, each student must complete a minimum number of clinical experience hours, as part of the ATTR 1100 and ATTR 1200 courses, observing ATEP-preceptors (i.e., Certified Athletic Trainers) in a variety of settings.

Students in the Pre-Athletic Training Program are eligible to submit a professional portfolio as part of the ATTR 1200 course. Submission of the professional portfolio does not guarantee matriculation into the professional phase of the program (the athletic training major). Transfer students are eligible for this major, but must complete all program requirements (ATEP Levels I through III) at Nova Southeastern University for degree completion. There are additional opportunities for the Level IV student to complete an internship in the area of sports medicine.

The NSU Athletic Training Education Program is nationally accredited by the Commission on Accreditation of Athletic Training Education (CAATE). Upon the completion of this program, students will be eligible to
sit for the Board of Certification (BOC) examination to become Certified Athletic Trainers (AT). Additional student costs associated with the Athletic Training Education Program include, but are not limited to, transportation to the clinical sites off campus, professional rescuer (CPR) certifications, required background checks, etc.

Level I of ATEP: Pre-Professional Phase (Pre-Athletic Training Program) Requirements

- maintenance of a 2.5 cumulative GPA and successful completion (C or better) of ATTR 1100, ATTR 1200, ATTR 1300, ATTR 1400, BIOL 1400, and BIOL 3312 with lab
- completion of athletic training student portfolio, signed technical standards, and compliance with other accreditation documents as part of ATTR 1100 and ATTR 1200 course requirements
- completion of 100 clinical observation hours, supervised by an ATEP-preceptor, as required by ATTR 1100 and ATTR 1200

Level II of ATEP: Professional Phase (Athletic Training Major) Requirements

- successful completion (C or better) of ATTR 2100, ATTR 2200, ATTR 2300, ATTR 2400, ATTR 2610, ATTR 2620, and ATTR 3300 with lab
- maintenance of CPR for the professional rescuer (or equivalent) certifications, as required for clinical experience hours
- completion of minimum of 300 clinical experience hours, supervised by an ATEP-preceptor, as part of both ATTR 2610 and ATTR 2620 course requirements

Level III of ATEP: Professional Phase (Athletic Training Major) Requirements

- successful completion (C or better) of ATTR 3100, ATTR 3500 with lab, ATTR 3630, ATTR 3640, EXSC 3700, EXSC 3740, and ATTR 4100
- maintenance of CPR for the professional rescuer (or equivalent) certifications, as required for clinical experience hours
- completion of a minimum of 300 clinical experience hours, supervised by an ATEP-preceptor, as required by ATTR 3630 and ATTR 3640

Level IV of ATEP: Completion Phase (Athletic Training Major) Requirements

- maintenance of CPR for the professional rescuer (or equivalent) certifications
- completion of degree requirements as outlined in the Graduation Requirements section of the Nova Southeastern University Undergraduate Student Catalog
- completion of registration for the Board of Certification Examination (BOC)

At Level IV, students are eligible for athletic training electives and an optional internship (ATTR 4950) that will be supervised by an athletic training faculty member at an assigned clinical site off campus, to be determined by the student.

Regular communication between students and their academic advisers is strongly recommended to ensure that each student is successfully moving toward graduation. Progress toward graduation requirements (2.25 or higher GPA within the major and 2.0 or higher cumulative GPA) will be closely monitored at 30 earned credits, 60 earned credits, and 90 earned credits. Degree conferral will take place upon completion of 120 credits and all course and degree requirements.

Student progress reports will be assessed based on the following standards: “exceeds criteria” (≥ 3.0 major and ≥ 2.5 cumulative GPA), “meets criteria” (2.25–2.99 major GPA and 2.0–2.49 cumulative GPA), and “does not meet criteria” (<2.25 major GPA and <2.0 cumulative GPA).

Admissions Requirements

Undergraduate admissions requires graduation from a regionally accredited high school, or a GED or homeschool equivalent, with a cumulative grade point average (GPA) and standardized test scores at or above the minimum entrance requirements.

Minimum Entrance Requirements*

High School GPA: 3.0 (Overall)
SAT: 1000 (Combined Math and Critical Reading Only) or ACT: 22 (Overall)**

* Satisfying these minimum entrance requirements does not guarantee admission.

**NSU will combine the best individual math and critical reading SAT exam scores or best individual ACT exam scores from multiple test instances to measure against the minimum entrance requirements. Applicants are encouraged to test multiple times to ensure the best possible total score is received.
Application Procedures

1. Submit an Application
Complete the Nova Southeastern University undergraduate admissions application. All applications must include a $50, nonrefundable application fee. Access the undergraduate application online by logging in to your VIP account (www.nova.edu/viplogin). If you don’t have a VIP account, create one by going to the application website (www.nova.edu/info-apply/undergraduate.html)

2. Request Official Transcripts
Request that official transcripts from all current and previous schools and/or institutions be sent directly to the NSU Enrollment Processing Services at the address below. Utilize the transcript request form at www.nova.edu/undergraduate/admissions/forms/transcript-request.pdf. NSU does not process received transcript request forms for prospective students. Therefore, download and print one transcript request form for each of your previous schools and/or institutions and mail it directly to them.

Home School Education Students, send Verification of Compliance and Completion of Home Education Program, to include
• copy of teacher’s evaluation or district confirmation
OR
• verification of a passing score on the state student assessment test (FCAT—Florida), administered by a certified teacher

For more information on AP and IB courses, please visit Transfer Evaluation Services for Undergraduate Students (www.nova.edu/registrar/tes).

3. Submit SAT/ACT Scores
Request that official SAT and/or ACT score reports be sent directly to NSU’s Enrollment Processing Services. All first-year applicants (students who have never attended college or who have fewer than 24 credit hours of transfer credit), must provide official test scores. Students without the appropriate SAT/ACT scores or prerequisites for college-level math and/or English will be placed in foundation courses.

NSU’s SAT school code is 5514, and the ACT school code is 6706.

Tuition and Fees

Tuition for 2015–2016 (subject to change by the board of trustees without notice) is

• $26,910 for the full-time, day program
• $897 per credit hour for the part-time, day program
• $751 per credit hour for existing students in the evening program at the Fort Lauderdale/Davie Campus
• $897 per credit hour for new students in the evening program at the Fort Lauderdale/Davie Campus
• $604 per credit hour for existing students in the evening program at the regional campuses
• $897 per credit hour for new students in the evening program at the regional campuses

Tuition for 2016–2017 will subsequently be posted on our website (www.healthsciences.nova.edu/undergraduate/athletic-training).

Full-time, day students should anticipate the following additional approximate expenses:
• Room—$7,280, based on a double room for fall and winter semesters
• Meal Plan—$2,600, based on a declining balance per year
• Books (estimated)—$100–$250 per course

Additional Fees
• Application fee is $50.
• Registration fee is $25 per semester.
• An NSU student services fee is $350 per semester, not to exceed $1,050 annually.
• Laboratory fee varies by program.*

*Refer to the NSU Undergraduate Student Catalog for specific program fees.

Athletic Training Program Requirements for Graduation

All degree-seeking students must be matriculated and complete the minimum credits as designated by their chosen major. The following conditions are also required:
1. completion of at least 120 credits, including major, minor, general education, specialization, concentration, exams, and elective coursework, as specified by program requirements
2. attainment of a 2.0 cumulative grade point average
3. attainment of a 2.25 grade point average in the major area
4. completion, at NSU, of at least 30 credits (not including CLEP, proficiency examinations, or prior experiential learning credits)
5. completion of at least 50 percent of the credits in the major area at NSU (not including CLEP, proficiency examinations, or prior experiential learning credits)

6. submission of a degree application form and payment of the diploma fee, preferably no later than the last semester

**Academic Dismissal and Readmission in the Athletic Training Program**

Academic Progress is separate from the standards for Satisfactory Academic Progress (SAP) for financial aid purposes. For detailed information about maintaining SAP for financial aid eligibility, visit www.nova.edu/sap. For further information about academic dismissal or readmission, please refer to the NSU Undergraduate Student Catalog (www.nova.edu/undergraduatestudies/forms/2015-16_undergraduate_catalog.pdf).

**Course of Study**

**General Education Requirements (30 credits)**

Students are required to complete 30 credit hours as part of the general education program. For specific course requirements, refer to the General Education Program section in the Academic Resources and Procedures segment of the NSU Undergraduate Student Catalog at www.nova.edu/undergraduatestudies/forms/2015-16_undergraduate_catalog.pdf.

**Required General Education Coursework**

- written composition (6 credits at or above COMP 1500)
- mathematics (6 MATH credits at or above MATH 1040)
- humanities (6 credits in any course with a prefix of ARTS, FILM, HIST, HUMN, LITR, PHIL, SPAN, or WRIT, or any foreign language)
- social and behavioral sciences (6 credits in any course with a prefix of COMM, GEOG, GEST, GLBS, POLS, PSYC, ECN, INST, or SOCL)
- natural and physical sciences (6 credits in any courses with a prefix of BIOL, MBIO, CHEM, ENVS, or PHY)

Total: 30 semester hours

**Athletic Training Major Requirements (63 credits)**

During the athletic training major’s pre-professional phase (first two semesters), students must successfully complete (i.e., earn a C or better in) all introductory courses: ATTR 1100 Introduction to Athletic Training, ATTR 1200 Principles of Athletic Training, and ATTR 1300 Emergency Care and First Aid. During the pre-professional phase, students are also required to spend 100 hours observing certified athletic trainers in a variety of settings. Completion of the pre-professional phase (or the Pre-Athletic Training program) does not guarantee admission into the athletic training major (professional phase). It is a competitive matriculation process.

**Curriculum Outline for the Bachelor of Science in Athletic Training**

<table>
<thead>
<tr>
<th>Core Courses (63 credits)</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>ATTR 1100 Introduction to Athletic Training</td>
<td>1</td>
</tr>
<tr>
<td>ATTR 1200 Principles of Athletic Training</td>
<td>3</td>
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<tr>
<td>ATTR 1300 Emergency Care and First Aid</td>
<td>3</td>
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<tr>
<td>ATTR 1400 Health and Fitness</td>
<td>3</td>
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<tr>
<td>ATTR 2100 Injury Evaluation I</td>
<td>3</td>
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<tr>
<td>ATTR 2200 Injury Evaluation II</td>
<td>3</td>
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<tr>
<td>ATTR 2300 Sports Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>ATTR 2400 Strength and Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>ATTR 2610 Athletic Training Clinical I</td>
<td>3</td>
</tr>
</tbody>
</table>
ATTR 1100—Introduction to Athletic Training
This course is an introduction to the sports medicine team, legal considerations, environmental concerns, and the profession of athletic training. Students will be able to promote athletic training as a professional discipline in order to educate athletes, the general public, and the physically active. This course includes a minimum of 50 hours of scheduled clinical observations at an approved site, under the supervision of a Certified Athletic Trainer. **Prerequisites:** COMP 1000 or equivalent or SAT Verbal score of 520, ACT English score of 22, a TOEFL score of 650 (paper) or 280 (computer), a passing Writing Challenge Exam (1 credit)

ATTR 1200—Principles of Athletic Training
Emphasis will be on the basic concepts of preventing athletic injuries, injury recognition and assessment, and care and treatment procedures for proper management of athletic injuries. Additionally, students will be instructed in the arts and skills of taping and wrapping. This course includes a minimum of 50 hours of scheduled clinical observations at an approved clinical site under the supervision of a Certified Athletic Trainer. **Prerequisite:** ATTR 1100 (3 credits)

ATTR 1300—Emergency Care and First Aid
Students will learn to recognize, assess, and treat the acute injuries and illnesses of athletes and others involved in physical activities; prevent disease transmission; perform emergency care of injuries such as splinting; and provide proper medical referral. (3 credits)

ATTR 1400—Health and Fitness
This course will provide students with the basic concepts of health, such as nutritional issues, physiological concerns, and wellness screening. Students will also gain an appreciation for lifetime fitness activities and an understanding of how community programs provide necessary health services to the general public. (3 credits)

ATTR 2100—Injury Evaluation I
Emphasis in this course will be on recognition, assessment, treatment, and appropriate medical referral of athletic injuries and illnesses of the lower extremities including the foot, ankle, knee, and hip. Additional emphasis will be placed on clinical evaluation skills. This course is only for students matriculated in the Athletic Training Education program. **Prerequisite:** ATTR 1200 (3 credits)

ATTR 2200—Injury Evaluation II
Emphasis in this course will be on recognition, assessment, treatment, and appropriate medical referral of athletic injuries and illnesses of the upper extremities, including the head and cervical spine. Additional emphasis will be placed on clinical evaluation skills. This course is only for students matriculated in the Athletic Training Education program. **Prerequisite:** ATTR 2100 (3 credits)
ATTR 2300—Sports Nutrition
This course includes the study of nutrition, biochemical processes in energy metabolism, and nutrition-related health problems. Additional emphasis will be placed on nutrition as it relates to physical performance, sports, and fitness. **Prerequisite:** ATTR 1400 (3 credits)

ATTR 2400—Strength and Conditioning
This course includes the study of the varied aspects of strength and conditioning in a variety of sports. In addition to learning and practicing strength-training techniques, students will design a conditioning program and explain their program to their peers. **Prerequisite:** ATTR 1400 (3 credits)

ATTR 2610—Athletic Training Clinical I
This course focuses on field experiences and the application of learned principles from athletic training clinical skills. It includes 150 hours of observation in various settings and specific clinical skills from ATTR 1200 to facilitate comprehensive learning. Students will be supervised and given the opportunity to practice learned skills in the clinical setting. This course is only for students matriculated in the athletic training major. **Prerequisite:** ATTR 1200 (3 credits)

ATTR 2620—Athletic Training Clinical II
This course focuses on field experiences and the application of learned principles from athletic training clinical skills. It includes 150 hours of observation in various settings and specific clinical skills from ATTR 2610 to facilitate comprehensive learning. Students will be supervised and given the opportunity to practice learned skills in the clinical setting. This course is only for students matriculated in the athletic training major. **Prerequisite:** ATTR 2210 or ATTR 2610 (3 credits)

ATTR 3100—General Medicine in Sports
Students will acquire skills and knowledge on the recognition, treatment, and referral of general medical conditions related to each of the body systems, including, but not limited to, congenital and acquired abnormalities of athletes and other physically active individuals. Also included are physiological progression of injuries, illnesses, and diseases. An additional area of focus is related to pathology, medical diagnostics, medical interventions (pharmacological and procedural), and the implications of these for the athlete or others involved in physical activities. **Prerequisites:** ATTR 2220 or ATTR 2620 and BIOL 3312 or BIOL 3320 (3 credits)

ATTR 3300—Therapeutic Modalities/Lab
This course offers a study of sports therapy physical agents used to treat injuries of the musculoskeletal, neuromuscular, and integumentary systems including, but not limited to, cryotherapy, hydrotherapy, electrotherapy, biofeedback, and mechanical therapy. Students will apply the techniques and clinical skills related to the application of therapeutic modalities. Clinical hours in the athletic training room and other facilities (see Clinical Experience I through IV) will give the student the additional opportunity to use the knowledge, skills, and techniques learned in this course. This course is only for students matriculated in the Athletic Training Education program. **Prerequisite:** ATTR 2100 (4 credits)

ATTR 3500 Rehabilitation of Athletic Injuries/Lab
This course involves the study of the principles of a comprehensive rehabilitation program specifically related to design and implementation of a therapeutic program. Students will learn to incorporate exercises related to strength, proprioception, and neuromuscular control to achieve sport-specific goals and objectives. Students will assess rehabilitation progress and criteria for return to competition. **Prerequisite:** ATTR 3300 (4 credits)

ATTR 3630—Athletic Training Clinical III
This course focuses on field experiences and the applications of learned principles from athletic training clinical skills. It includes 150 hours of observation in various settings and specific clinical skills from the previous semester to facilitate comprehensive learning. Students will be supervised and given the opportunity to practice learned skills in the clinical setting. This course is only for students matriculated in the Athletic Training Education program. **Prerequisite:** ATTR 2220 or ATTR 2620 (3 credits)

ATTR 3640—Athletic Training Clinical IV
This course focuses on field experiences and the applications of learned principles from athletic training clinical skills. It includes 150 hours of observation in various settings and specific clinical skills from the previous semester to facilitate comprehensive learning. Students will be supervised and given the opportunity to practice learned skills in the clinical setting. This course is only for students matriculated in the Athletic Training Education program. **Prerequisite:** ATTR 3230 or ATTR 3630 (3 credits)
ATTR 3700—Advanced Emergency Procedures
The course's content and activities will prepare participants to make appropriate decisions about the care to provide in a medical emergency. The course teaches the skills an emergency medical responder (EMR) needs to act as a crucial link in the emergency medical services (EMS) system. This course is taught by a nationally certified instructor for EMR instruction. The course is designed to enhance students’ current level of knowledge of the material required to prepare for emergency trauma management, offering certification as an EMR. An emergency medical responder certification is a nationally recognized certification that requires instruction, assessment, and successful completion of both practical and written examinations, both of which are requirements for this course offering. Prerequisites: ATTR 1200 and ATTR 1300 (3 credits)

ATTR 3800—Evolution of Sports Medicine
This course will include both lecture material and a weeklong field experience dedicated to the study of the development of sports medicine. The course is designed to explore the clinical practices employed by medical professionals to treat and rehabilitate sports-related injuries. The timeline of the course will begin with ancient Greek times and continue through modern day. Students will be able to understand the significance of sports medicine development and growth from the beginning. Prerequisite: COMP 1500 or COMP 1500H (3 credits)

ATTR 3810—Roman Influence of Sports Medicine
This course will include both lecture material and a weeklong field experience dedicated to the study of the Roman influence of sports medicine. The course is designed to explore the clinical practices employed by medical professionals to treat and rehabilitate sports-related injuries. The course will begin with an in-depth study of Roman medicine. Students will be able to understand the significance of sports medicine development and growth from the beginning. Prerequisite: COMP 1500 or COMP 1500H (3 credits)

ATTR 4100—Athletic Training Administration
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 will be addressed. Additionally, the student will discuss 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. Prerequisite: ATTR 3230 or ATTR 3630 (3 credits)

ATTR 4300—Applied Research in Athletic Training
Research methodology, statistical analysis, data collection, and writing for publications related to athletic training are discussed. Students will gain a theoretical basis, develop, and write a research proposal that may be executed and completed during their senior clinical internship. This course is only for students matriculated in the Athletic Training Education program. (3 credits)

ATTR 4400—Sports Pharmacology
This course will focus on pharmacology for the health professional in a nonprescribing profession. Focus will be on pharmaceuticals that are prescribed and used over the counter by physically active people. Drug actions, indications, contraindications, and adverse reactions will be covered, along with herbal supplement drug interactions. Prerequisite: BIOL 3312 or equivalent (3 credits)

ATTR 4900—Special Topics in Athletic Training
Topics in sports medicine and athletic training that are not included in a regular course offering will be offered through this course. Prerequisites may be required. Specific content and prerequisites are announced in the course schedule for the given term. Students may reenroll for special topics covering different content. (1–3 credits)

ATTR 4900A—Special Topics in Athletic Training: Capstone in Athletic Training
This course prepares athletic training students to take the Board of Certification Inc. (BOC) Exam to earn the credential for an Athletic Trainer. Students will review didactic knowledge from previous courses in the Athletic Training Education program. In addition to didactic material, this course will provide athletic training students with online testing similar to the Board of Certification Computer-Based Examination consisting of multiple choice and hybrid questions. Prerequisite: ATTR 3630 (1 credit)

ATTR 4950—Internship in Athletic Training
This is a 16-week work experience for the student's major area of study or area of career interest. The student must consult the academic division for specific details and requirements. Prerequisites: cumulative GPA of 2.5 or higher, major GPA of 3.0 or higher, completion of 60 or more credits, supervision of instructor, and permission of academic director (1–12 credits)

ATTR 4950A—Internship in Athletic Training (A)
This is a 16-week work experience for the student's major area of study or area of career interest. The student must consult the academic division for specific details and requirements. Prerequisites: cumulative GPA of 2.5 or higher, major GPA of 3.0 or higher, completion of 60 or more credits, supervision of instructor, and permission of academic director (1–12 credits)
ATTR 4950B—Internship in Athletic Training (B)
This is a 16-week work experience for the student's major area of study or area of career interest. The student must consult the academic division for specific details and requirements. **Prerequisites:** cumulative GPA of 2.5 or higher, major GPA of 3.0 or higher, completion of 60 or more credits, supervision of instructor, and permission of academic director (1–12 credits)

ATTR 4950C—Internship in Athletic Training (C)
This is a 16-week work experience for the student's major area of study or area of career interest. The student must consult the academic division for specific details and requirements. **Prerequisites:** cumulative GPA of 2.5 or higher, major GPA of 3.0 or higher, completion of 60 or more credits, supervision of instructor, and permission of academic director (1–12 credits)

ATTR 4950D—Internship in Athletic Training (D)
This is a 16-week work experience for the student's major area of study or area of career interest. The student must consult the academic division for specific details and requirements. **Prerequisites:** cumulative GPA of 2.5 or higher, major GPA of 3.0 or higher, completion of 60 or more credits, supervision of instructor, and permission of academic director (1–12 credits)

ATTR 4990—Independent Study in Athletic Training
The student selects and independently carries out library and/or empirical research. Faculty member supervision is provided on an individual basis. **Prerequisite:** to be determined by the faculty member and the program director (1–3 credits)

ATTR 4990A—Independent Study in Athletic Training (A)
The student selects and independently carries out library and/or empirical research. Faculty member supervision is provided on an individual basis. **Prerequisite:** to be determined by the faculty member and the program director (1–3 credits)

ATTR 4990B—Independent Study in Athletic Training (B)
The student selects and independently carries out library and/or empirical research. Faculty member supervision is provided on an individual basis. **Prerequisite:** to be determined by the faculty member and the program director (1–3 credits)

ATTR 4990C—Independent Study in Athletic Training (C)
The student selects and independently carries out library and/or empirical research. Faculty member supervision is provided on an individual basis. **Prerequisite:** to be determined by the faculty member and the program director (1–3 credits)

**Exercise and Sport Science Program**

The Exercise and Sport Science program provides students with a foundation in the movement sciences, which promote improvements in health, fitness, and/or performance for the physically active. The primary goal of this program is to prepare students to be evidence-based practitioners of exercise and human movement disciplines who think critically about the science behind their practice.

Students graduating from the exercise and sport science major will be able to seek employment as an exercise specialist, fitness and wellness coordinator, sport performance researcher, or strength and conditioning specialist, as well as enter professional graduate programs in exercise sciences and other fields, such as biomechanics, exercise physiology, and motor behavior.

**Program Objectives**
The Exercise and Sport Science program will

- meet standards and guidelines from governing organizations such as the American College of Sports Medicine (ACSM) and the National Strength and Conditioning Association
- prepare graduates to sit for professional certification examinations in exercise and fitness from the National Strength and Conditioning Association, American College of Sports Medicine, National Academy of Sports Medicine, and/or the American Council on Exercise
• prepare graduates for postgraduation placement in graduate school, a professional school, or entry-level employment within six months of completing the degree program
• develop competent scholars, researchers, and physical activity and sport specialists to meet the workforce needs of a global society
• prepare graduates to enhance delivery of physical activity, sport, and rehabilitative services for all segments of society, including special populations such as children and the elderly; people with disabilities, injuries, or disease; and athletes

Admissions Requirements
Undergraduate admissions requires graduation from a regionally accredited high school, or a GED or homeschool equivalent, with a cumulative grade point average (GPA) and standardized test scores at or above the minimum entrance requirements.

Minimum Entrance Requirements*
SAT: 1000 (Combined Math and Critical Reading Only) or ACT: 22 (Overall)**

* Satisfying these minimum entrance requirements does not guarantee admission.

**NSU will combine the best individual math and critical reading SAT exam scores or best individual ACT exam scores from multiple test instances to measure against the minimum entrance requirements. Applicants are encouraged to test multiple times to ensure the best possible total score is received.

Application Procedures
1. Submit an Application
Complete the Nova Southeastern University undergraduate admissions application. All applications must include a $50, nonrefundable application fee. Access the undergraduate application online by logging in to your VIP account (www.nova.edu/viplogin). If you don’t have a VIP account, create one by going to the application website (www.nova.edu/info-apply/undergraduate.html)

2. Request Official Transcripts
Request that official transcripts from all current and previous schools and/or institutions be sent directly to the NSU Enrollment Processing Services at the address below. Utilize the transcript request form at www.nova.edu/undergraduate/admissions/forms/transcript-request.pdf. NSU does not process received transcript request forms for prospective students. Therefore, download and print one transcript request form for each of your previous schools and/or institutions and mail it directly to them.

Home School Education Students, send Verification of Compliance and Completion of Home Education Program, to include
• copy of teacher’s evaluation or district confirmation
OR
• verification of a passing score on the state student assessment test (FCAT—Florida), administered by a certified teacher

For more information on AP and IB courses, please visit Transfer Evaluation Services for Undergraduate Students (www.nova.edu/registrar/tes).

3. Submit SAT/ACT Scores
Request that official SAT and/or ACT score reports be sent directly to NSU’s Enrollment Processing Services. All first-year applicants (students who have never attended college or who have fewer than 24 credit hours of transfer credit), must provide official test scores. Students without the appropriate SAT/ACT scores or prerequisites for college-level math and/or English will be placed in foundation courses.

NSU’s SAT school code is 5514, and the ACT school code is 6706.
Nova Southeastern University
Enrollment Processing Services
College of Health Care Sciences
Exercise and Sport Science Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905
Phone: (954) 262-1101 or 877-640-0218
Fax: (954) 262-2282

Tuition and Fees
Tuition for 2015–2016 (subject to change by the board of trustees without notice) is
• $26,910 for the full-time, day program
• $897 per credit hour for the part-time, day program
• $751 per credit hour for existing students in the evening program at the Fort Lauderdale/Davie Campus
• $897 per credit hour for new students in the evening program at the Fort Lauderdale/Davie Campus
• $604 per credit hour for existing students in the evening program at the regional campuses
• $897 per credit hour for new students in the evening program at the regional campuses

Tuition for 2016–2017 will subsequently be posted on our website (www.healthsciences.nova.edu/undergraduate/exercise).
Full-time, day students should anticipate the following additional approximate expenses:

- **Room**—$7,280, based on a double room for fall and winter semesters
- **Meal Plan**—$2,600, based on a declining balance per year
- **Books (estimated)**—$100–$250 per course

**Additional Fees**

- Application fee is $50.
- Registration fee is $25 per semester.
- An NSU student services fee is $350 per semester, not to exceed $1,050 annually.
- Laboratory fee varies by program.*

*Refer to the NSU Undergraduate Student Catalog for specific program fees.

**Requirements for Graduation**

All degree-seeking students must be matriculated and complete the minimum credits as designated by their chosen major. The following conditions are also required:

1. completion of at least 120 credits, including major, minor, general education, specialization, concentration, exams, and elective coursework, as specified by program requirements
2. attainment of a 2.0 cumulative grade point average
3. attainment of a 2.25 grade point average in the major area
4. completion, at NSU, of at least 30 credits (not including CLEP, proficiency examinations, or prior experiential learning credits)
5. completion of at least 50 percent of the credits in the major area at NSU (not including CLEP, proficiency examinations, or prior experiential learning credits)
6. submission of a degree application form and payment of the diploma fee, preferably no later than the last semester

**Academic Dismissal and Readmission in the Exercise and Sport Science Program**

Academic Progress is separate from the standards for Satisfactory Academic Progress (SAP) for financial aid purposes. For detailed information about maintaining SAP for financial aid eligibility, visit www.nova.edu/sap. For further information about academic dismissal or readmission, please refer to the NSU Undergraduate Student Catalog (www.nova.edu/undergraduatestudies/forms/2015-16_undergraduate_catalog.pdf).

**Exercise and Sport Science Course of Study**

**General Education Requirements (30 credits)**

Students are required to complete 30 credit hours as part of the general education program. For specific course requirements, refer to the General Education Program section in the Academic Resources and Procedures segment of the NSU Undergraduate Student Catalog at www.nova.edu/undergraduatestudies/forms/2015-16_undergraduate_catalog.pdf.

**Required General Education Coursework**

- **written composition** (6 credits at or above COMP 1500)
- **mathematics** (6 MATH credits at or above MATH 1040)
- **humanities** (6 credits in any course with a prefix of ARTS, FILM, HIST, HUMN, LITR, PHIL, SPAN, or WRIT, or any foreign language)
- **social and behavioral sciences** (6 credits in any course with a prefix of COMM, GEOG, GEST, GLBS, POLS, PSYC, ECN, INST, or SOCL)
- **natural and physical sciences** (6 credits in any courses with a prefix of BIOL, M BIO, CHEM, ENV S, or PHY)

**Total: 30 semester hours**
Curriculum Outline for the Bachelor of Science in Exercise and Sport Science

Major Requirements (63 credits)

<table>
<thead>
<tr>
<th>Core Courses (60 credits)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATTR 1200 Principles of Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>OR EXSC 1200 Prevention and Care of Athletic Injuries</td>
<td>3</td>
</tr>
<tr>
<td>ATTR 1300 Emergency Care and First Aid</td>
<td>3</td>
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<tr>
<td>ATTR 1400 Health and Fitness</td>
<td>3</td>
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<tr>
<td>ATTR 2300 Sports Nutrition</td>
<td>3</td>
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<tr>
<td>ATTR 2400 Strength and Conditioning</td>
<td>3</td>
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<tr>
<td>BIOL 1400 Introductory Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 3312 Human Anatomy and Physiology with Lab</td>
<td>5</td>
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<tr>
<td>EXSC 3700 Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>EXSC 3740 Exercise Physiology with Lab</td>
<td>4</td>
</tr>
<tr>
<td>EXSC 3760 Biomechanics of Human Movement with Lab</td>
<td>4</td>
</tr>
<tr>
<td>EXSC 3820 Exercise Prescription with Lab</td>
<td>4</td>
</tr>
<tr>
<td>EXSC 4100 Adapted Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>EXSC 4220 Motor Learning with Lab</td>
<td>4</td>
</tr>
<tr>
<td>EXSC 4300 Research Methods in Sport and Physical Education</td>
<td>3</td>
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<tr>
<td>EXSC 4400 Exercise and Sport Administration</td>
<td>3</td>
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<tr>
<td>EXSC 4901 Practicum in Exercise Science</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2020 Applied Statistics</td>
<td>3</td>
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<tr>
<td>OR MATH 2020H Applied Statistics Honors</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 3400 Sports Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Major Electives (3 credits)

| EXSC 4900 Special Topics in Exercise and Sport Science | 3 |
| EXSC 4950 Internship in Exercise and Sport Science | 1–12 |
| EXSC 4990 Independent Study in Exercise and Sport Science | 1–3 |

Any 3000/4000-level EXSC course not counted as a core course for the major | 3 |
Exercise and Sport Science Course Descriptions

ATTR 1200—Principles of Athletic Training
Emphasis will be on the basic concepts of preventing athletic injuries, injury recognition and assessment, and care and treatment procedures for proper management of athletic injuries. Additionally, students will be instructed in the arts and skills of taping and wrapping. This course includes a minimum of 50 hours of scheduled clinical observations at an approved clinical site under the supervision of a Certified Athletic Trainer. Prerequisite: ATTR 1100 (3 credits)

ATTR 1300—Emergency Care and First Aid
Students will learn to recognize, assess, and treat the acute injuries and illnesses of athletes and others involved in physical activities; prevent disease transmission; perform emergency care of injuries such as splinting; and provide proper medical referral. (3 credits)

ATTR 1400—Health and Fitness
This course will provide students with the basic concepts of health, such as nutritional issues, physiological concerns, and wellness screening. Students will also gain an appreciation for lifetime fitness activities and an understanding of how community programs provide necessary health services to the general public. (3 credits)

ATTR 2300—Sports Nutrition
This course includes the study of nutrition, biochemical processes in energy metabolism, and nutrition-related health problems. Additional emphasis will be placed on nutrition as it relates to physical performance, sports, and fitness. Prerequisite: ATTR 1400 (3 credits)

ATTR 2400—Strength and Conditioning
This course includes the study of the varied aspects of strength and conditioning in a variety of sports. In addition to learning and practicing strength-training techniques, students will design a conditioning program and explain their program to their peers. Prerequisite: ATTR 1400 (3 credits)

BIOL 1400—Introductory Cell Biology
This course is an introduction to the basic principles of cell and molecular biology. It includes the study of atomic, molecular, and cellular structure and function; biochemical processes and pathways; and molecular and classical genetics. Prerequisite: MATH 1000 or higher. (3 credits)

BIOL 3312—Human Anatomy and Physiology with Lab
This course deals specifically with form and function of human systems. The lecture period stresses human physiology; the laboratory is devoted to anatomy, histology, and physiology. The lecture and laboratory are presented in a unified fashion with the aim that each reinforces the other in presenting a complete picture of functional morphology. Although lower vertebrates are used for comparative purposes, human systems receive major emphasis in both lecture and laboratory. Prerequisite: BIOL 1400 or BIOL 1500 (5 credits)

EXSC 3700—Kinesiology
This course provides a study of the anatomy, physiology, and biomechanics of the muscle system as it relates to the principles of movement. Students will learn the muscle groups involved with specific movements and the results of the action of particular muscle groups on overall movement. (3 credits)

EXSC 3740—Exercise Physiology with Lab
This course offers a study of the integration of cardiopulmonary, neuromuscular, and musculoskeletal systems as they apply to the movement of the body through space. The systems are studied at the chemical, cell, and organismal levels. It includes use of instrumentation and procedures commonly employed to measure and analyze cardiopulmonary, neuromuscular, and musculoskeletal systems. Prerequisite: BIOL 3312 or BIOL 3320 (4 credits)

EXSC 1200—Prevention and Care of Athletic Injuries
This course is designed to introduce the student to prevention, recognition, and acute care management techniques for athletic-related injuries. Time will be spent addressing the art and science of appropriate taping and wrapping techniques for athletic injuries. (3 credits)

EXSC 3760—Biomechanics of Human Movement with Lab
This course provides the application of mechanical concepts to movement problems in sport, rehabilitation, and fitness. The anatomical and mechanical principles that dictate the limits and potential of human movement will be addressed. There is an overlying theme of movement observation, interpretation, and remediation with regard to biomechanics. It includes a laboratory component. Prerequisite: EXSC 3700 (4 credits)
EXSC 3820—Exercise Prescription with Lab
This course is designed to assist the student with measurement and interpretation of health and fitness-related factors necessary for prescribing preventative and rehabilitative exercise programs. The focus areas include cardiorespiratory fitness, flexibility, body composition, muscular strength and endurance, and risk stratification. It includes a laboratory component. Prerequisite: ATTR 2400 (4 credits)

EXSC 4100—Adapted Physical Education
This course allows students to study medical characteristics of common disabilities and methods for designing appropriate sport and exercise programs. Clinical experiences with athletes/physically active individuals with disabilities will be available during the semester. Prerequisites: ATTR 1400 and BIOL 3312 or equivalent (3 credits)

EXSC 4220—Motor Learning/Development with Lab
This course provides students with the ability to analyze the emerging interrelationships among the motor, social, emotional, and cognitive forms of behavior and development. The course will discuss topics related, but not limited to, the developmental perspectives, physical growth, maturation and aging, perceptual motor development, physiological changes and exercises, sociocultural influences on motor development, theories, experimental studies, and current issues in the acquisition, performance, and retention of motor skills. It includes a laboratory component. Prerequisites: PSYC 3400 and EXSC 3700 (4 credits)

EXSC 4300—Research Methods in Sport and Physical Education
This course offers a foundation for conducting research in the areas of exercise/physical activity and sport. Specific attention will be on structure and interpretation of the research structure and data analysis (qualitative and quantitative) for publication and presentation. Prerequisite: MATH 3020 (3 credits)

EXSC 4400—Exercise and Sport Administration
This course offers an in-depth background of the standards, policies, and practices of organization, supervision, and administration for sport and exercise programs and facilities. Prerequisite: EXSC 3800 (3 credits)

EXSC 4901—Practicum in Exercise and Sport Science
This course offers the student an opportunity to earn course credit for a practicum/internship in a sport and exercise program and/or facility. Prerequisite: EXSC 4300 (3 credits)

EXSC 4990—Independent Study in Exercise and Sport Science
The student selects and independently carries out library and/or empirical research. Faculty member supervision is provided on an individual basis. Prerequisite: to be determined by the faculty member and the department chair (1–3 credits)

MATH 2020—Applied Statistics
This is an introductory course in the use of descriptive and inferential statistics. Topics include graphical and numerical descriptive measures, probability, common random variables and their distributions, sampling procedures, confidence intervals, and hypothesis testing (including tests for independence and goodness of fit). This course has been exempted from the requirements of the Writing Across the Curriculum policy. Prerequisite: MATH 1030 or higher (3 credits)

PSYC 3400—Sport Psychology
This course provides a study of the integration of cardiopulmonary, neuromuscular, and musculoskeletal systems as they apply to the movement of the body through space. The systems are studied at the chemical, cell, and organismal levels. Prerequisite: BIOL 3312 or BIOL 3320 (3 credits)
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, Florida, location. The Bachelor of Science in Medical Sonography is offered on our main 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
- 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
- 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:

- Windows (7 or 8) or Mac OS X version 10.7 or above
- Microsoft Office software to include Word, Powerpoint, and Excel
- headphones, microphone, camera, and video conferencing capabilities
- broadband access
- suggested options: surge protection and appropriate back-up options

Tablets and smartphones, while very useful, may not be sufficient for all program uses. Additional minimum computer requirements can be found at www.nova.edu/publications/it-standards.

Bachelor of Health Science Online Degree Completion Program

The Bachelor of Health Science (B.H.Sc.) program is designed to provide career and academic advancement for health care practitioners and deliver a well-rounded generalist curriculum. This program is designed to be completed entirely online, requiring no on-campus time, thus allowing the opportunity for members of numerous health care occupations to complete their undergraduate degree while continuing to work.

There have been dramatic changes in the health care market and delivery systems in the United States over the past decade. As health care becomes increasingly competitive, it becomes more important to distinguish oneself professionally and academically. The online Bachelor of Health Science Program is offered via the College of Health Care Sciences’ web-based distance learning technology that allows health care professionals to remain in their current location and employment.

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 online Master of Health Science (M.H.Sc.) and later the Doctor of Health Science (D.H.Sc.) program.

Department of Health Science
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.

**Description of Curriculum**

The program requires that a minimum of 30 semester hours of coursework (including 21 semester hours of required core coursework) be completed through the NSU B.H.Sc. program. A minimum total of 120 semester hours, of which 30 semester hours must fulfill general education requirements, are required to graduate with the B.H.Sc. degree.

The B.H.Sc. program is designed for completion in a distance-learning format and requires no on-campus time. The coursework is professor-paced using web-based delivery. The curriculum and coursework follow a 12-week semester calendar.

The curriculum is designed to build upon the existing knowledge base of the health care professional while focusing on the overall health care picture. Leadership, diversity, and conflict resolution are but a few of the areas covered in the curriculum.

**Required Core Courses**

- BHS 3110—Health Care Ethics (3 semester hours)
- BHS 3120—Introduction to Epidemiology (3 semester hours)
- BHS 3150—Principles of Leadership (3 semester hours)
- BHS 3155—Conflict Resolution in Health Care (3 semester hours)
- BHS 3160—Health Policy (3 semester hours)
- BHS 4000—Cultural Competency in Health Care (3 semester hours)
- BHS 4100—Academic and Professional Writing (3 semester hours—must be taken during the first semester of enrollment in the program)

**Total:** 21 semester hours

Effective for new matriculants on or after January 2006, students will be required to obtain a grade of C or better (greater than or equal to 73 percent) in every required core course. Students receiving a C-, D+, D, or D- in a required core course will be required to retake the course at its next scheduled offering.

**General Education**

**Mission**

The NSU undergraduate general education program prepares students to be responsible citizens in a dynamic global environment with a commitment to independent and continuous learning.

**Philosophy**

Chief among the values that govern Nova Southeastern University's undergraduate general education curriculum is flexibility, which entails, among other things, the student's own ability to adapt, to reform, and to begin anew. The NSU faculty values the mental suppleness necessary for its graduates to succeed in a complex, ever-changing environment. Thus, its curriculum inculcates the skills that are conducive to independent learning and a lifelong commitment to scholarship, growth, and change.

**Responsible Citizens**

As a result of their membership in a university community, students have both obligations and privileges that help prepare them for their role as citizens of the state and world. They are encouraged to become fully engaged members of this community on a variety of levels and in a plethora of ways, including membership in classes (participating in discussion and performing tasks to benefit group projects); participation in extracurricular, cocurricular, recreational, and value-added programs (convocation, guest speakers, health and wellness programs, honors program, etc.); and involvement in leadership programs and student organizations. To that end, the university sponsors an ever-growing body of cocurricular and extracurricular activities that challenge, support, and enhance student inquiry, social awareness, physical and mental well-being, and academic achievement.

**Dynamic Global Environment**

Through exposure to an array of issues in history, behavioral sciences, anthropology, literature, philosophy, film studies, language, and performance arts, our students become immersed in the traditions and forces that have shaped our contemporary multicultural society. Students also benefit by belonging to a diverse, multilingual student body. Members of the university at the main campus and at regional campuses value engagement with their respective communities. University clinics, facilities, and outreach programs are among the many ways students make a difference in a broader community. By fostering experience and engagement within and beyond the classroom, both at home and abroad, the general education program enables students to make a connection between the world of ideas and those practical matters that demand their application.

**Independent and Continuous Learning**

The inculcation of independent learning relies on a curriculum that educates students in mathematical and ethical reasoning, independent problem solving, and courageous exploration of issues and solutions. The general education curriculum brings students closer to a confident, lifelong commitment to the value of inquiry and the competencies necessary to conduct it, including the ability to identify and evaluate reliable sources. The annual undergraduate student symposium intends to recognize and support, as well as encourage, student research.
One's undergraduate major is the final and necessary component of the bachelor's degree, coming at a time in mental development (not necessarily in age) when one begins to draw the focus of one's mental energies onto an academic subject that becomes, in the process, carefully integrated and interwoven into one's personality. Late in life, many college graduates point to their choice of major as a formative experience for character, as well as a lens through which they have maintained and developed a certain perspective on their own experience and on the world in general.

Prior to this, however, careful groundwork—not only in a variety of courses so that an informed choice of major might be made, but also in terms of preparing one's mind for the particular intellectual demands and expectations of work in a major subject—must take place. As a medieval craftsman might have prepared a parchment before lettering, the array of courses in the general education curriculum clears away obstacles and prepares the mind for greater receptivity. This series of offerings is aimed not so much at content—a misunderstanding that all too often prompts false objections regarding the utility or practicality of a particular course—as much as it is aimed at those habits of inquiry, discipline, studiousness, and openness that make the subsequent major so worthwhile.

Mathematics, therefore, teaches precision, discipline, and elegance; the social sciences illuminate both outer and inner forces that limit personal freedom. Art, literature, and the humanities investigate the human experience, enabling us to experience directly the minds of others from past centuries and throughout the world, leaving us less attached to narrow frames of reference and, in the process, discovering what is universally human. Philosophy clarifies and sharpens our thinking, while history exposes us to the ideas.

In order to be eligible to graduate with the B.H.Sc. degree, a student must have completed 30 semester hours of general education coursework in addition to the B.H.Sc. curriculum with a resulting minimum total of 120 semester hours. If all general education requirements are not met at the time of admission, they can be obtained concurrently while enrolled in the B.H.Sc. program. A student can obtain and transfer these courses through NSU's Office of Undergraduate Admissions or another regionally accredited college or university. Official high school transcripts (showing courses, grades, and graduation date) or a GED equivalent are required for applicants with fewer than 24 college credits.

Effective January 1, 2006, prior to matriculation, all applicants must have completed a minimum of 3 semester hours (or the equivalent) of college-level written composition from a regionally accredited college or university, receiving a minimum grade of a C (GPA of 2.0 on a 4.0 scale).

**Required General Education Coursework**

**Arts and Humanities**

Learning Outcome 1: Students will learn to demonstrate a breadth of knowledge from a variety of arts and humanities disciplines and an understanding and appreciation for the various methods utilized in those fields to make sense of the world. Students will delineate the means by which different scholarly fields reflect, interact with, and influence human thought, culture, and values and apply various “ways of knowing” in the evaluation of contemporary issues or problems.

The student will

- understand basic critical terminology
- recognize different techniques, methods, or approaches to knowing the world employed by various arts and humanities disciplines
- 6 credits in any course with a prefix of ARTS, DANC, FILM, HIST, HUMN, LITR, MUSC, PHIL, SPAN, THEA, or WRIT, or any foreign language

**Mathematics**

Learning Outcome 2: Students will learn to demonstrate knowledge of fundamental mathematical principles and concepts. Students will achieve basic quantitative literacy, allowing them to interpret quantitative data into meaningful terms and understand relationships between sets of quantitative data.

The student will

- understand and apply fractions and percentages
- explain the use of basic statistical data
- effectively utilize integers, ratios, percentages, exponents, and logarithms
- use mathematical methods to solve applied and word problems
- interpret and evaluate quantitative or symbolic models such as graphs, tables, units of measurement, scales, equations, functions, and distributions
- 6 credits at or above MATH 1040

**Science**

Learning Outcome 3: Students will learn to apply methods of scientific inquiry. Students will achieve basic scientific literacy, allowing them to make informed decisions on contemporary consumer or social issues.

The student will

- differentiate among facts, laws, theories, and hypotheses
- employ the basic terminology of at least one area of science and define its major concepts, principles, and fundamental theories
• formulate a hypothesis that relates to a simple problem or question and design a valid experiment to test it
6 credits in any course with a prefix of BIOL, MBIO, CHEM, ENVS, SCIE, or PHYS

Social and Behavioral Sciences
Learning Outcome 4: Students will learn to understand and appreciate the role of the individual in a group. Students will understand the major concepts and methods used by social or behavioral scientists to investigate, analyze, or predict human or group behavior.

The student will
• understand and apply the major principles, models, and issues under investigation by the social and behavioral sciences
• recognize and be able to describe how individuals or groups of individuals are influenced by social, cultural, or political institutions, both in their own culture and in other cultures
• apply disciplinary knowledge from the social or behavioral sciences to contemporary social problems
6 credits in any course with a prefix of ANTH, COMM, GEOG, GEST, GLBS, POLS, PSYC, ECN, INST, or SOCL

Written Composition
Learning Outcome 5: Students will learn to express ideas clearly and coherently. Students will use the English language effectively, allowing them to construct logical and persuasive arguments.

The student will
• adapt expressions to specific purposes, contexts, and audiences
• develop a controlling idea or thesis
• arrange supporting details coherently
• use appropriate technology
6 credits at or above COMP 1500

Academic Requirements—Writing Across the Curriculum
Each undergraduate course includes written assignments, in the language of instruction, that make up at least 25 percent of the final course grade. Each course contains at least eight pages (approximately 2,000 words or their equivalent) of writing, with faculty members providing feedback on these assignments. Written assignments can include, but are not limited to, essays, summaries, memos, lesson plans, journal entries, lab reports, project proposals, progress reports, case studies, and project reviews.

B.H.Sc. Program Goals
The Bachelor of Health Science degree program will enable students to
1. pursue a well-rounded and diverse educational degree completion program for health professionals in an online environment that allows them to continue gainful employment in their chosen field while attending and completing coursework
2. enhance and develop leadership and health care knowledge through academic inquiry while using current, practical health care models
3. enhance their understanding of diverse populations in health care and prepare them to take leadership roles in the rapidly changing health care environment
4. enhance their understanding of the political, social, legal, and ethical issues that may be encountered, allowing them to have an impact on areas of health care practice
5. develop knowledge that helps bridge the gap between clinical care, health care diversity, and critical inquiry

Expected B.H.Sc. Program Learning Outcomes
Graduates of the Bachelor of Health Science degree completion program will demonstrate command of the following learning outcomes, as evidenced by their participation in class, completion of class assignments, presentations, and projects. They will be able to
1. communicate effectively in writing on a variety of topics related to health care
2. demonstrate an awareness and appreciation of the delivery of culturally competent health care
3. effectively communicate and acknowledge the impact of the legal, ethical, and political environment on health care policy and delivery
4. demonstrate the knowledge and ability to search and retrieve information and materials related to individual clinical practice issues or overall health policy concerns
5. describe and demonstrate management/leadership skills and theories that can be applied in preparation for effectively leading or managing in a health care environment
6. demonstrate knowledge of, and effectively apply, health care models, theories, and tools to issues impacting health care delivery

Admissions Requirements
Prospective B.H.Sc. students are selected by the Department of Health Science committee on admissions through consideration of the overall qualities of the applicant. The program will admit midlevel clinicians, and allied health professionals with diverse education,
work, and life experiences who have demonstrated capacity to pursue the course of study and increasingly responsible positions in health care. 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 may be required (phone interview may be substituted). All interview expenses are the responsibility of the applicant.

Admission to the B.H.Sc. program requires the following:

1. completion prior to matriculation of three semester hours (or equivalent) of college-level written composition from a regionally accredited college or university with a minimum grade of C (GPA of 2.0 on a 4.0 scale)

2. an associate’s degree in a field of health from a regionally accredited college or university with a minimum cumulative GPA of 2.7 on a 4.0 grading scale

or

a post-high school diploma or certificate of completion in a professional field of health care with a minimum cumulative GPA of 2.7 on a 4.0 grading scale

In order for this coursework and education to be considered for credit, an applicant must submit a student-prepared learning portfolio requesting assessment of prior experiences for academic credit. This will describe all traditional, online, military, and other health care education, as well as work-related experience and health care-related conferences attended. A resume or CV, transcripts and/or official documentation of attendance must accompany all prior learning portfolios. Learning portfolios will be reviewed to determine the amount of credit given, if any, for prior learning only after an applicant has been accepted into the program.

3. documented evidence demonstrating education or experience in the health care field within the past five years.

All applicants must show evidence of computer skills through course work 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.

It should be noted that many criteria, in addition to academic credentials, play a role in the admission process for the B.H.Sc. program. While the program allows the student to demonstrate academic capability, it does not assure admission to any professional school. Admission to the B.H.Sc. program will not guarantee admission to any other program of Nova Southeastern University.

Upon receipt of the completed application, fees, credentials and transcripts, the admissions officers and the College of Health Care Sciences will review all material for evidence of the proper education, training, and background to enter the B.H.Sc. program.

**Pre-Master of Occupational Therapy Concentration for Certified Occupational Therapy Assistants**

This educational opportunity is available to Certified Occupational Therapy Assistants (COTAs) to earn a Bachelor of Health Science (B.H.Sc.) degree and, upon completion of the Pre-Master of Occupational Therapy (Pre-M.O.T.) concentration, be guaranteed admission to the Master of Occupational Therapy program at NSU’s main campus in Fort Lauderdale, Florida.

**Pre-M.O.T. Curriculum Requirements**

**Required General Education Coursework**

- written composition (6 credits at or above COMP 1500)
- mathematics (6 MATH credits at or above MATH 1040)
- humanities (6 credits in any course with a prefix of ARTS, FILM, HIST, HUMN, LITR, PHIL, SPAN, or WRIT, or any foreign language)
- social and behavioral sciences (6 credits in any course with a prefix of COMM, GEOG, GEST, GLBS, POLS, PSYC, ECN, INST, or SOCL)
- natural and physical sciences (6 credits in any courses with a prefix of BIOL, MBIO, CHEM, ENVS, or PHY)

Total: 30 semester hours

**Required Pre-M.O.T. Courses**

- BIOL 1500—biology with lab (4 semester hours)
- BIOL 3312 OR BIOL 3320—anatomy and physiology (3 semester hours)
- PHYS 2350—physics with lab OR EXSC 3700—kinesiology (3 semester hours)

Total: 10 semester hours

**Required B.H.Sc. Courses**

- BHS 3110—Health Care Ethics (3 semester hours)
- BHS 3120—Introduction to Epidemiology (3 semester hours)
- BHS 3150—Principles of Leadership (3 semester hours)
- BHS 3155—Conflict Resolution in Health Care (3 semester hours)
- BHS 3160—Health Policy (3 semester hours)
• BHS 4000—Cultural Competency in Health Care (3 semester hours)
• BHS 4100—Academic and Professional Writing (3 semester hours—must be taken during the first semester of enrollment in the program)
• BHS 4031—Statistics for Health Sciences (3 semester hours)
• B.H.Sc. Electives (A minimum of 6 semester hours of courses with BHS prefixes—other than the courses listed above—are required.)

Total: 30 semester hours

Open/Transfer Electives
These can include any combination of additional BHS prefixed elective courses, and/or transfer courses of any prefix with a course level of 1000 or above, resulting in a total of 60 semester hours.

A minimum of 30 B.H.Sc. semester hours is required for the degree.

Minimum Total Degree Semester Hours Required: 120

*These courses can also be used to fulfill general education natural and physical sciences requirements.

Course requirements are subject to change.

Admissions Requirements

B.H.Sc. Requirements
Prior to matriculation, all applicants must have

• 3 semester hours (or the equivalent) of college-level written composition from a regionally accredited college or university with a minimum grade of C (GPA of 2.0 on a 4.0 grading scale)

• an associate's degree in occupational therapy from an Accreditation Council for Occupational Therapy Education (ACOTE®)-accredited program at a regionally accredited college or university with a minimum cumulative GPA of 2.7 on a 4.0 grading scale and initial certification by the National Board for Certification in Occupational Therapy, Inc. (NBCOT®) as a Certified OT Assistant (COTA)

• documented evidence demonstrating education or experience in the health care field within the past five years

M.O.T. Requirements for COTA Applicants
Prior to matriculation, all applicants must have

• received approval of associate's degree transcript
• completed a personal interview
• submitted Graduate Record Exam (GRE) scores that are less than five years old for all three areas of the general test (quantitative, verbal, and analytical writing)

Preference will be given to applicants with a minimum combined GRE general score of 800 on the verbal and quantitative tests and a 3.5 on the analytical test, or the equivalent scores on the new GRE.

Upon successful completion of the B.H.Sc. degree and the above requirements, students will be offered a seat in the NSU M.O.T. program.

For more information about admissions requirements for the M.O.T. program, visit www.nova.edu/ot, email hpdadmissionsinfo@nova.edu, or call 800-356-0026, ext. 21101.

Application Procedures
To apply online

• go to http://nova.askadmissions.net/embreinterestpage.aspx?ip=undergrad
• follow directions to complete interest page
• in Program of Study field, select Health Science (Completion Program)
• create username and password to access VIP/Application page
• submit information
• log into VIP page to continue application process
• complete and submit application by January 15

Pre-Doctor of Occupational Therapy (Pre-O.T.D.) Concentration for Certified Occupational Therapy Assistants
This educational opportunity is available to Certified Occupational Therapy Assistants (COTAs) to earn a Bachelor in Health Science (B.H.Sc.) degree and, upon completion of the Pre-Doctor of Occupational Therapy (Pre-O.T.D.) concentration, be guaranteed admission to the Doctor of Occupational Therapy (O.T.D.) entry-level program at NSU’s campus in Tampa, Florida.

Classes for NSU’s three-and-a-half-year, blended, distance/face-to-face O.T.D. program take place at the NSU Tampa campus and online. The program, designed to attract creative and compassionate individuals who like to help others achieve their potential, meets the need for occupational therapy education beyond a master's degree by students who want flexibility while performing their current occupations.
Pre-O.T.D. Curriculum Requirements

Required General Education Courses
• written composition (6 credits at or above COMP 1500)
• mathematics (6 MATH credits at or above MATH 1040)
• humanities (6 credits in any course with a prefix of ARTS, FILM, HIST, HUMN, LITR, PHIL, SPAN, WRIT or any foreign language)
• social and behavioral sciences (6 credits in psychology—must include Intro/General Psychology [PSYC 1020], and 3 credits of upper-division coursework in psychology)
• natural and physical sciences (6 credits consisting of BIOL, Mbio, CHEM, ENVS, PHY)

Subtotal Required General Education Courses: 30 credits

Required Pre-O.T.D. Courses*
• BIOL 1500—biology with lab (4 credits)
• BIOL 3312 OR BIOL 3320—anatomy and physiology (3 credits minimum)
• PHYS 2350—physics with lab OR EXSC 3700—kinesiology (3 credits minimum)

Subtotal Required Pre-O.T.D. Courses: 10 credits minimum

Additional Required Pre-O.T.D. Courses (can be used toward open elective requirements)
• BIOL 2600—Medical Terminology (1 credit)
• PSYC 2350—Human Growth and Development or Developmental Psychology (3 credits)

Subtotal Required Additional Pre-O.T.D. Courses: 4 credits

Required B.H.Sc. Courses
• BHS 3110—Health Care Ethics (3 credits)
• BHS 3120—Introduction to Epidemiology (3 credits)
• BHS 3150—Principles of Leadership (3 credits)
• BHS 3155—Conflict Resolution in Health Care (3 credits)
• BHS 3160—Health Policy (3 credits)
• BHS 4000—Cultural Competency in Health Care (3 credits)
• BHS 4100—Academic and Professional Writing (3 credits—must be taken during the first semester of enrollment in program)
• BHS Electives (A minimum of 6 credits of any course with BHS prefixes—other than the required courses listed above—are required.)

Subtotal Required B.H.Sc. Courses: 30 credits

Open/Transfer Electives
These can include any combination of coursework consisting of additional BHS prefixed elective courses, and/or transfer courses of any prefix with a course level of 1000 or above, resulting in a total of 60 credits.

Subtotal Open/Transfer Elective Courses: 60

Minimum Total Degree Credits Required: 134

*These courses can also be used to fulfill general education natural and physical science requirements.

Many of the general education, pre-O.T.D. concentration, and open elective requirements may be fulfilled through prior OTA coursework.

Admissions Requirements

B.H.Sc. Requirements
Prior to matriculation, all applicants must have
• 3 credits (or the equivalent) of college-level written composition from a regionally accredited college or university with a minimum grade of C (GPA of 2.0 on a 4.0 grading scale)
• an associate's degree in occupational therapy from an Accreditation Council for Occupational Therapy Education (ACOTE®)-accredited program at a regionally accredited college or university with a minimum cumulative GPA of 2.6 on a 4.0 grading scale and initial certification by the National Board for Certification in Occupational Therapy, Inc. (NBCOT®) as a Certified OT Assistant (COTA)
• documented evidence demonstrating education or experience in the health care field within the past five years

O.T.D. Requirements for B.H.Sc.-Occupational Therapy Assistant Applicants
The entry-level Doctor of Occupational Therapy (O.T.D.) program selects students based on grade point average (GPA), Graduate Record Examination (GRE) scores, a written essay, letters of recommendation, and an interview. All this information will be factored into the rubric that the department uses in evaluating applicant qualifications. Strong candidates will also demonstrate concern for people of diverse backgrounds, as well as the ability to use judgment, insight, and reasoning. Prior to matriculation, all applicants must have
• earned a cumulative average of 3.0 or better on a 4.0 scale in B.H.Sc. courses
Transfer Credit Policy

Students who have earned college credits at other regionally accredited colleges or universities can transfer these credits into the B.H.Sc. program. Students should contact a B.H.Sc. admissions counselor to discuss how prior college credits can be used to obtain the B.H.Sc. degree.

A final and official evaluation will not be initiated until NSU receives all of your official transcripts. You may want to speak to your academic adviser for more information or visit the Transfer Evaluation Services website at www.nova.edu/cwis/registrar/tes/.

The B.H.Sc. program will transfer a maximum of 90 eligible semester credits including credit for CLEP, proficiency exams, and prior experiential learning toward a degree. Official high school transcripts (showing courses, grades, and graduation date) or a GED equivalent are required for applicants with fewer than 24 college credits.

Students must complete a minimum of 25 percent (30 semester hours) of their coursework within the B.H.Sc. program major.

Students with credits, health care or academic experiences, certificates, diplomas or degrees from nationally accredited colleges, military training or other educational training/
technical support online access, online tools and methods, and library resources.

Online interactive learning methods involve web pages to access course materials, announcements, the electronic library, and other information, plus a range of online activities that facilitate frequent student-professor interaction. Faculty members and students interact via online forums using threaded bulletin boards, chat rooms, and email. Students are able to submit assignments as email attachments, through the use of online forms sent directly to program instructors, fax to fax, fax to email, and through WebCT. Some online courses may include electronic classroom sessions.

Online students have access to books, journal articles, microfiche, dissertations, index searches, catalog searches, and reference librarians. The online medical database collection at NSU is extensive and includes access to quality subscription services free of charge to the student.

Technical Help
The Online Computing Help Desk of NSU’s Office of Information Technology provides telephone and email support to NSU students and faculty and staff members. Support services include assistance with connecting to NSU’s online computing systems; navigating through the WebCT system; resolving Personal Identification Number (PIN) issues; supporting wireless computing on campus; and configuring various software programs such as Microsoft Outlook, Netscape Navigator, and Internet Explorer. Contact the Help Desk by calling (954) 262-4357 or 800-541-6682, ext. 24357, or by emailing help@nsu.nova.edu.

Testing Services
Testing Services administers placement challenge exams in writing, mathematics, and chemistry for all NSU undergraduate students, as well as offering faculty make-up exams. Testing Services also administers other course equivalent examinations, such as College-level Examination Program (CLEP) tests, DANTES subject standardized tests, New York University Proficiency Testing in Foreign Languages, and the TECH 1110 exam. Test takers must present photo identification (e.g., NSU official ID, driver’s license, or passport) prior to testing. All examinations are by appointment only. For more information about Testing Services or to schedule an appointment, call (954) 262-8374 or 800-338-4723, ext. 28374.

Application Procedures
Candidates for admission are responsible for the submission of

- a completed application form along with a $50, nonrefundable application fee
- two letters of evaluation from individuals other than relatives such as academic advisers, professors, clinical or non-clinical supervisors, or community associates
- official college-, certificate-, and/or diploma-based transcripts from all undergraduate and graduate institutions attended, sent directly from the institution (Official high school transcripts—showing courses, grades, and graduation date—or a GED equivalent are required for applicants with fewer than 24 college credits.)
- graduates from programs other than those from regionally accredited colleges or universities must submit a student prepared learning portfolio requesting Assessment of Prior Experiences for Academic Credit.
- copies of national and or state professional certification, licensure or registration, if applicable.

The B.H.Sc. program offers four start dates per year: January, April, July, and October. In order to be considered for January, applications must be received by December 1. In order to be considered for April, applications must be received by March 1. In order to be considered for July, applications must be received by June 1. In order to be considered for October, applications must be received by September 1. To ensure that your application receives prompt consideration, you should apply early. All admissions materials should be sent to

Nova Southeastern University
Enrollment Processing Services
Attn: College of Health Care Sciences
B.H.Sc. Program
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905

The Department of Health Science committee on admissions will not consider an application until all required fees, credentials, transcripts and test scores have been received by the Office of Admissions.

The university reserves the right to modify any requirements on an individual basis as deemed necessary by the dean of the 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, department chair, and B.H.Sc. program director reserve the right to require the student’s withdrawal at any time for the above-mentioned reasons.

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
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 (EPS), College of Health Care Sciences, Department of Health Science, Office of Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

Tuition and Fees

- $50, nonrefundable application fee
- Tuition is $330 per semester hour.
- An NSU student services fee of $1,050 is required annually.
- Students are responsible for purchasing any required textbooks and/or classroom materials.
- $75 diploma only fee
- A graduation and diploma fee of $225 will be incurred by those students who elect to participate in the formal, on-campus graduation ceremony (not required).

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 College of Health Care Sciences. Tuition, fees, and payment schedules are subject to change without notice.

Requirements for Graduation

To be eligible to receive the B.H.Sc. degree, students shall

- satisfactorily complete the program of 30 semester hours (minimum) of study in the B.H.Sc. major required for the degree (not including CLEP, proficiency examinations, or experiential learning credits)
- complete general education, major, and elective requirements as specified by the program at time of admission, resulting in a minimum total of 120 semester hours
- attain a 2.0 cumulative grade point average
- attain a 2.25 grade point average in the major area
- submit a degree application form before completing registration for the last semester and contact the B.H.Sc. program director to discuss graduation
- fulfill all obligations to the library, the student’s program, and the bursar's office
- receive recommendation by B.H.Sc. program director to the dean of the College of Health Care Sciences

Students who complete the pre-M.O.T. track should refer to the M.O.T. admissions requirements for COTAs previously outlined in this catalog.

Students who wish to continue their studies beyond minimum graduation requirements to complete additional coursework, major or minor, must submit their requests in writing to the B.H.Sc. program and have documented plans to complete the educational program. A form requesting a second major or minor can be requested from the program office. Information regarding the degree application process can be found on the B.H.Sc. Student Center on Blackboard. If you are receiving financial aid, you need to contact the financial aid office at (954) 262-3380 or toll free at 800-806-3680 to obtain their advice on how your decision to continue beyond your degree requirements may or may not affect your financial aid eligibility.

Graduation with Honors

A student eligible for graduation with a cumulative grade point average of 3.8 or higher who has completed more than 39 credits at NSU is eligible to receive the degree with distinction.

Application for graduation can be completed online by following the directions at www.nova.edu/cwis/registrar/instructions.html.

Request for Second Major

Pursuing a second major is a serious commitment and requires significant student responsibility. Students may graduate with a second subject or double major depending on the availability of courses and academic division schedules. Students who wish to declare a second major must inform their academic adviser.

A request for a second major may be made following completion of 30 credits toward a bachelor's degree and before 90 credits are earned toward a bachelor's degree. A student must have a cumulative grade point average of 2.5 or higher in order to declare a second major.
In order to declare a second major, students must complete a Request for Second Major Form, which requires signatures from department leadership in both areas of study. The Request for Second Major Form is a statement of student intent. The student is responsible for tracking requirements and prerequisites for both major programs, with guidance and assistance from departmental advisers. Both majors will be posted to the transcript at the time of conferral of the bachelor’s degree. A second major will not be added to a transcript following conferral of a degree.

Requirements for the second major, as for the first major, are based on the curriculum published in the NSU Undergraduate Student Catalog for the semester of the student’s entry into the university. For majors subsequently added to the college, curriculum requirements are based on the catalog in effect during the semester the second major is declared.

Commencement

Attendance of graduation ceremonies 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 May).

Information regarding undergraduate graduation ceremonies is posted at www.fcas.nova.edu/student/commencement/undergraduate/index.cfm. This page explains general information and contains online forms that must be filled out.

Nondegree-Seeking Students

A nondegree-seeking student is one who wishes to take one or more courses in the Bachelor of Health Science Program, but does not intend to pursue the B.H.Sc. degree at the time of application.

The nondegree-seeking student must meet the following admission requirements in order to take classes in the B.H.Sc. program:

• completion prior to matriculation of three semester hours (or equivalent) of college-level written composition from a regionally accredited college or university with a minimum grade of C (GPA of 2.0 on a 4.0 scale)

• an associate’s degree in a field of health from a regionally accredited college or university with a minimum cumulative GPA of 2.7 on a 4.0 grading scale

or

a post-high school diploma or certificate of completion in a professional field of health care with a minimum cumulative GPA of 2.7 on a 4.0 scale

Nondegree-Seeking Student Application Procedures

Nondegree-seeking students must submit

• a completed application form along with a $50, nonrefundable application fee.

• official college-, certificate-, and/or diploma-based transcripts from all undergraduate and graduate institutions attended, sent directly from the institution (Official high school transcripts—showing courses, grades, and graduation date—or a GED equivalent are required for applicants with fewer than 24 college credits.)

• one letter of evaluation from individuals other than relatives such as academic advisers, professors, clinical or non-clinical supervisors, or community associates

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 are limited to taking a maximum of nine semester hours of B.H.Sc. coursework. Enrollment in these courses does not guarantee acceptance into the B.H.Sc. degree program or any other Nova Southeastern University program.

If, after taking classes in the B.H.Sc. program, a nondegree-seeking student decides to pursue the B.H.Sc. degree, the student must resubmit an application to the program to be a degree-seeking student and must meet all the admission requirements for the B.H.Sc. degree program.

A nondegree-seeking student who, after taking classes in the B.H.Sc. program, decides to apply to be a degree-seeking student may request a transfer of credits taken as a nondegree-seeking student in accordance with the transfer policy of the B.H.Sc. program.

Computer Skills

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.

Address and Name Changes

NSU maintains student contact information through WebSTAR (www.webstar.nova.edu). This includes current mailing addresses and telephone numbers. Students should update their records in WebSTAR and notify their academic division if there is a change in their name and/or contact information.
Bachelor of Science (B.S.)—Cardiovascular Sonography (On-Campus, Entry-Level, Tampa)

Cardiac Sonography (Echocardiography)
Cardiac sonographers are also called echocardiographers. Echocardiography obtains images of the heart via ultrasound. It is one of the most widely used imaging examinations for assisting in the diagnosis of heart disease. Echocardiography is especially useful for assessing diseases that affect the heart valves and for detecting physiological abnormalities in the motion and appearance of the heart wall.

Vascular Sonography
Vascular sonographers use ultrasound imaging and other types of exams to detect anatomical and physiological changes caused by diseases of the arteries and veins and the resulting effects on organs and other tissues. Vascular disorders include carotid artery disease, which may lead to stroke; abdominal vascular diseases, such as aneurysms; peripheral arterial disease, which can result in chronic pain and may progress to loss of limbs; and venous conditions that can cause blood clots (thrombosis), which can travel to the lungs (pulmonary embolism).

The NSU Cardiovascular Sonography program at the Tampa campus offers didactic and clinical training in two of the four major medical ultrasound specialties (adult cardiac echocardiography and vascular sonography) as an integrated curriculum. The growing use of ultrasound and the need for sonographers with multiple credentials to accommodate the demands of recent workplace trends has resulted in this new, combined curriculum approach to medical ultrasound education programs. At the end of the program, the student will be able to perform both adult echocardiography and vascular ultrasound and physiological studies and will qualify to apply for national professional registry exams in both specialties.

Program Objectives
• to graduate competent, entry-level cardiovascular technologists who are qualified to perform a variety of standard and specialized diagnostic vascular and cardiac examinations
• to ensure that graduates are qualified to register for at least one sonographic specialty national credentialing exam in either adult cardiac echocardiography or vascular ultrasound, if not both, as offered by the American Registry for Diagnostic Medical Sonography (ARDMS) and/or the corresponding credentials offered by Cardiovascular Credentialing International (CCI)
• to prepare graduates for future leadership roles in cardiac, vascular, or combined cardiovascular laboratories and ultrasound departments
• to enhance students’ academic skills for pursuing research studies or education in cardiac and vascular sonography

Graduates of the NSU Tampa Cardiovascular Sonography program are eligible to apply for both the adult echocardiography and the noninvasive vascular technology professional registry exams offered by the American Registry for Diagnostic Medical Sonography (ARDMS) and/or the corresponding credentials offered by Cardiovascular Credentialing International (CCI).

Concurrent Master of Health Science Dual-Degree Option
Students who already hold a bachelor’s degree from an accredited institution with a minimum GPA of 3.0 are eligible to apply for the concurrent Master of Health Science (M.H.Sc.) option. Students who enroll in this concurrent M.H.Sc. program will graduate with a Bachelor of Science—Cardiovascular Sonography degree and a Master of Health Science degree. Both programs will be completed in 27 months. Students interested in the concurrent Master of Health Science option should contact an admissions counselor or the program office for further details.

Curriculum Overview
Admission to the program requires the completion of a minimum of 30 semester hours of general education coursework. The core of the cardiovascular sonography course of study includes 92 semester hours. The entire program requires a total of 122 semester hours for a student to graduate with a Bachelor of Science—Cardiovascular Sonography.

The cardiovascular sonography program includes on-campus lectures; extensive, hands-on training in our ultrasound laboratory; online courses; and a 12-month, focused or combined externship in a clinical laboratory setting. The graduating student will earn a bachelor’s degree in cardiovascular sonography. Students will take a combination of general courses in the health science field and focused core courses in the cardiovascular technology field. Examples of general courses include Writing for Medical Publication, Epidemiology, Biostatistics, and Principles and Practice of Management in Health Care. Examples of cardiovascular sonography courses include Ultrasound Physics, Cardiac Ultrasound, and Carotid Artery Duplex. While on campus, the student will spend more than 500 hours in the training laboratory learning imaging skills and techniques and physiologic testing methods prior to the clinical externship experience.
In the second year, the student will complete a clinical training program of more than 1,600 hours, while continuing to take online courses. The student may have the option to perform his or her clinical externship in a vascular, adult echo, or combined cardiovascular clinical experience, based upon his or her interests and demonstrated competencies.

Upon graduation, the student will be eligible to sit for professional registry exams based upon completion of the program and clinical requirements.

Prerequisites
In order to be eligible for admission to the Bachelor of Science—Cardiovascular Sonography (B.S.), a student must have completed 30 semester hours of prerequisite education coursework with a minimum cumulative GPA of 2.6 on a 4.0 grading scale. Certain standard grants, transfer credits, and corequisites may apply in specific individual circumstances. Please inquire of an admissions representative or contact the program office for applicability and details.

Required General Education Coursework
- written composition (6 semester hours—at or above COMP 1500)
- social and behavioral sciences (6 semester hours)
- arts and humanities (6 semester hours)
- science* (6 semester hours)
- mathematics (6 semester hours—at or above MATH 1040)

Total General Education Courses: 30 semester hours

*Program specific science requirements are 3 credits of Anatomy and Physiology I (with or without lab) and 3 credits of General Physics (with or without lab).

Note: Required general education courses cannot be survey courses. Anatomy and Physiology II is a preferred, but not required, course.

Admissions Requirements
Prospective cardiovascular sonography students are selected by the Committee on Admissions (COA), which considers the overall qualities of the candidate. Areas of consideration include interpersonal skills, personal motivation, understanding of the cardiovascular profession, academic performance and level of achievement, life experiences, and recommendations. Knowledge of the profession is essential. It is highly recommended that the B.S. applicant have or obtain meaningful and significant scientific, health care, or care of the elderly work or volunteer experience.

The applicant who has graduated from a college or university from a country for which English is not the primary language, regardless of United States residency status, must obtain a minimum score of 550 on the written or 213 on the computerized Test of English as a Foreign Language (TOEFL). An official set of scores must be sent directly from the Educational Testing Services in Princeton, New Jersey, to NSU’s EPS. Equivalent scores from the International English Language Testing System (IELTS) or the Pearson Test of English—Academic (PTE—A) are acceptable.

Upon receipt of the completed application; fees; credentials; TOEFL, IELTS, or PTE—A scores (if applicable); and transcripts, the admissions officers and the College of Health Care Sciences will review all material for evidence of the proper education, training, and background to enter the Bachelor of Science—Cardiovascular Sonography program.

Admission to the Cardiovascular Sonography program does not guarantee admission to any other program of Nova Southeastern University.

The university reserves the right to modify any admissions requirements on an individual basis as deemed necessary by the dean of the 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, department chair, and cardiovascular sonography director reserve the right to require the student's withdrawal at any time for the above-mentioned reasons.

Application Procedures
Candidates for admission are responsible for the submission of
- completed application forms with $50, nonrefundable application fees by April 1
- current curriculum vitae
- two letters of evaluation from individuals (other than relatives) such as academic advisers, professors, clinical or non-clinical supervisors, or community associates
- official college-, certificate-, and/or diploma-based transcripts from all undergraduate and graduate institutions attended, sent directly from the institution
- a student-prepared learning portfolio requesting assessment of prior experiences for academic credit, if applicable (applies only to graduates from programs other than those from regionally accredited colleges or universities)
- copies of national and or state professional certification, licensure, or registration, if applicable
- TOEFL, IELTS, or PTE—A scores (if applicable)
• evaluation of coursework taken at a foreign institution for U.S. institutional equivalence, if applicable

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
  www.wes.org

• Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

• Educational Credential Evaluators, Inc.
  P.O. Box 314070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 Health Care Sciences, Department of Health Science Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

Admissions for the B.S.—Cardiovascular Sonography program works on a rolling admissions basis. Applications are accepted year round. All admissions material should be sent to

Nova Southeastern University
Enrollment Processing Services
College of Health Care Sciences
Department of Health Science
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905

Personal Interviews

Personal interviews are offered to the most-qualified applicants to assess interpersonal and communication skills, altruistic attitude, maturity, and commitment to the cardiovascular profession. Phone interviews will not be provided. Interviews are conducted at NSU's Tampa Campus and are by invitation only. An invitation to interview is not a guarantee of admission to the program. Virtual interviews via online videoconferencing technology are available for out-of-state or foreign applicants. Please discuss this with an admissions representative or contact the program office.

Distance Education Support

All students are required to have access to a computer (PC or Apple equivalent) with the following minimum specifications:

• AMD or Intel dual-core processor
• Windows 7 or better
• 4 GB RAM
• 250 GB hard-drive
• CD-ROM drive (read-write)
• USB port
• high-speed Internet connection (cable, DSL, etc., 100 Mb/second or better)
• graphics printing capability
• video webcam with microphone capability

Students on clinical externships in cardiovascular sonography must maintain NSU computer accounts including email. Students on clinical externships are also required to actively utilize the online clinical reporting system and online learning management systems on a daily basis. This will include, but not be limited to, daily time keeping, daily exam logs, and submission of required case studies. New students receive an orientation and access to extensive online technical support for online access, online tools and methods, and library resources.

Online interactive learning methods involve web pages to access course materials, announcements, the electronic library, and other information, plus a range of online activities that facilitate frequent student-professor interaction. Faculty members and students interact via online forums using threaded bulletin boards, streaming video, and email. Students are able to submit assignments through online course tools, sent directly to program instructors. Some online courses may include electronic classroom sessions.

Online students have online access to books, journal articles, microfiche, dissertations, index searches, catalog searches, and reference librarians. The online medical database collection at NSU is extensive and includes access to high-quality subscription search services free of charge to the student.

Tuition and Fees

• $50, nonrefundable application fee
• Tuition for academic year 2015–2016 is $20,500.
• Tuition for the Master of Health Science dual-degree option for 2015–2016 is $23,375.
• $145 annual HPD general access fee
• $1,050 annual student fee
• $500 acceptance fee—This fee is required to reserve the accepted applicant’s place in the entering first-year class, but is nonrefundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance.
• $250 deposit—This fee is due May 1, under the same terms as the acceptance fee.
• $250 preregistration fee—This fee is due July 15, under the same terms as the acceptance fee.
• $200 Sonography Principles and Instrumentation (SPI) Examination fee
• Students are responsible for purchasing any required textbooks, uniforms, white coats, and/or classroom materials.
• A graduation and diploma fee of $275 will be incurred.
• A $125 cardiovascular access fee is required yearly. This fee is required to pay for background checks, drug testing (if required), affiliation agreements, and immunizations
• Applicants should have a specific plan for financing 27 months of professional education. This includes 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 hospital insurance plan through the university.

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 College of Health Care Sciences. Tuition, fees, and payment schedules are subject to change without notice.

Graduation with Honors
The Bachelor of Science in Cardiovascular Sonography follows the criteria and policies of the College of Health Care Sciences for recognizing outstanding student performance and academic excellence while enrolled in, and upon graduation from, the program. Please refer to the College of Health Care Sciences section of this catalog or the College of Health Care Sciences Student Handbook for details.

Computer Skills
All students 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.

Accreditation, National Examinations, and Registry
The Cardiovascular Sonography program at NSU Tampa is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT), in both Adult Echocardiography and noninvasive Vascular Sonography. Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, FL 33756, Phone: 727-210-2350 / Fax: 727-210-2354, www.caahep.org.

Graduates are eligible to apply for the national registry examinations in both adult echocardiography and vascular technology, as offered by the American Registry for Diagnostic Medical Sonography (ARDMS), and/or the corresponding credentials offered by Cardiovascular Credentialing International (CCI).
## Curriculum Outline Bachelor of Science—Cardiovascular Sonography

### Required General Education Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written composition (at or above COMP 1500)</td>
<td>6</td>
</tr>
<tr>
<td>Social and behavioral sciences</td>
<td>6</td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Science*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (at or above MATH 1040)</td>
<td>6</td>
</tr>
</tbody>
</table>

**General Education Subtotal:** 30

*Program specific science requirements are 3 credits of Anatomy and Physiology I (with or without lab) and 3 credits of General Physics (with or without lab).

### Required Core B.S.—Cardiovascular Sonography Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHS 3110</td>
<td>Health Care Ethics</td>
</tr>
<tr>
<td>BHS 3120</td>
<td>Introduction to Epidemiology</td>
</tr>
<tr>
<td>BHS 3130</td>
<td>Research and Design for Health Care</td>
</tr>
<tr>
<td>BHS 3150</td>
<td>Principles in Leadership</td>
</tr>
<tr>
<td>BHS 3155</td>
<td>Conflict Resolution in Health Care</td>
</tr>
<tr>
<td>BHS 3160</td>
<td>Health Policy</td>
</tr>
<tr>
<td>BHS 4000</td>
<td>Cultural Competency in Health Care</td>
</tr>
<tr>
<td>BHS 4100</td>
<td>Academic and Professional Writing</td>
</tr>
<tr>
<td>BHS 4110</td>
<td>Health Care and Aging</td>
</tr>
<tr>
<td>CVS 3000</td>
<td>Introduction to Cardiovascular Instruments</td>
</tr>
<tr>
<td>CVS 3001</td>
<td>Correlative Anatomy</td>
</tr>
<tr>
<td>CVS 3010</td>
<td>Echocardiography I/Lab</td>
</tr>
<tr>
<td>CVS 3020</td>
<td>Echocardiography II/Lab</td>
</tr>
<tr>
<td>CVS 3030</td>
<td>Echocardiography III/Lab</td>
</tr>
<tr>
<td>CVS 3040</td>
<td>Ultrasound Physics I</td>
</tr>
<tr>
<td>CVS 3050</td>
<td>Ultrasound Physics Review</td>
</tr>
<tr>
<td>CVS 3060</td>
<td>Cerebrovascular Testing/Lab</td>
</tr>
<tr>
<td>CVS 3070</td>
<td>Peripheral Arterial Testing/Lab</td>
</tr>
<tr>
<td>CVS 3080</td>
<td>Venous Testing/Lab</td>
</tr>
<tr>
<td>CVS 3090</td>
<td>Abdominal Vascular Testing/Lab</td>
</tr>
</tbody>
</table>
Diagnostic Medical Sonography
Diagnostic medical sonography includes four primary areas of specialization: general (RDMS), cardiac (RDACS), vascular (RVT), and musculoskeletal (MSK). General sonography includes subspecialties in obstetrics and gynecology, organs of the body, and small parts (soft tissues and superficial glands), as well as neurosonology. Cardiac sonography examines the anatomical structure and function of the heart and is subdivided into three different subspecialties: adult echocardiography, fetal echocardiography, and pediatric echocardiography. Vascular sonography studies the anatomical and physiological characteristics of blood vessels (veins and arteries) in the human body. The most recently created specialty in sonography is musculoskeletal sonography. This specialty studies the different joints and tendons in the body. Diagnostic medical sonography uses mechanical, nonionizing sound waves to obtain images and is considered a noninvasive modality.

General Sonography
Professionals in this field are called sonographers or medical sonographers. Sonographers use diagnostic medical ultrasound to obtain images of internal organs such as the liver, gallbladder, bile ducts, pancreas, spleen, appendix, kidneys, and adrenal glands. They also can obtain images from superficial glands and soft tissues. Sonographers specializing in obstetrics and gynecology obtain images of the female pelvic organs and the fetus, while those specializing in neurosonology obtain images of the brain and its blood vessels. Sonographers working in all these specialties determine normal from abnormal situations and contribute to the making of a diagnosis of pathologies affecting those organs.

Vascular Sonography
Professionals working in this specialty are called vascular sonographers. They use ultrasound and other specialized equipment to assess the anatomic, physiologic, and pathologic conditions of veins and arteries. Among the most common studies are those of the carotid arteries, arteries of the upper and lower extremities, abdominal blood vessels, and intracranial circulation. Exploration of these vessels helps to determine the presence of plaques and thrombus, the direction of blood flow, and the process of revascularization, as well as patency of grafts. Vascular sonographers play a very important role in assessing the blood vessels in special situations such as stroke, peripheral arterial disease, abdominal aortic aneurysm, portal hypertension, and deep vein thrombosis. They even can help to select native vessels for grafts to be used in cardiac surgeries.

Medical Sonography Program
The NSU Medical Sonography Program in Fort Lauderdale offers didactic and clinical training in the general and vascular sonography subspecialties as one integrated curriculum. At the end of the program, the student will be able to perform general (abdomen, small parts, and neurosonology), obstetrical and gynecological, and vascular studies. The growing use of ultrasound and the need for sonographers with multiple credentials to accommodate
new regulations in the health care field have set the ground for a comprehensive program that combines the two main specialties of RDMS (abdomen, ob-gyn, breast, and neuro) and RVT.

Bachelor of Science—Medical Sonography (B.S.)
The Bachelor of Science in Medical Sonography program was designed to prepare entry-level professionals in the fields of general and vascular sonography. During the first year, students take online courses at the undergraduate level, as well as on-campus classes that include many hours each week in the training ultrasound lab. This is followed by a 12-month externship in a clinical site and online courses. Graduates from this program will be able to apply for national examinations with the American Registry of Diagnostic Medical Sonography (ARDMS) and obtain RDMS and RVT credentials. Upon graduation from the B.S. program, students will be eligible to apply for admission to the online Master of Health Science (M.H.Sc.) program.

Program Objectives
• to prepare competent entry-level general sonographers and vascular technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains
• to ensure that graduates are qualified to take and successfully pass a national credentialing exam from either the American Registry of Diagnostic Medical Sonography (ARDMS) or Cardiovascular Credentialing International (CCI)
• to prepare graduates for future leadership roles in general, vascular, or combined general and vascular laboratories and ultrasound departments
• to enhance the student’s academic skills for pursuing research studies or education in diagnostic medical sonography

Upon successful completion of the Bachelor of Science in Medical Sonography, students are eligible to apply for admission to the Master of Health Science (M.H.Sc.), and later the Doctor of Health Science (D.H.Sc.) programs. 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.

Curriculum Overview
Length of the Program: 27 months
The medical sonography program, both at the bachelor's and master's degree levels, includes on-campus lectures; extensive, hands-on training in the ultrasound laboratory; online courses; and a 12-month externship in an accredited clinical facility. The curriculum for this program follows the standards recommended by the American Registry of Diagnostic Sonography (ARDMS) and the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Graduating students will earn a Bachelor of Science in Medical Sonography degree. Upon graduation, students will be able to sit for the professional registry exam with the ARDMS and earn RDMS and RVT credentials.

The curriculum follows a lock-step model, and the courses must be taken and passed in a predetermined sequence. Examples of the degree courses include Health Care Ethics, Academic and Professional Writing, Research Methods, and Principles of Management. Some of the core courses for the medical sonography include Ultrasound Physics, Abdominal Sonography, Obstetrics and Gynecology, Cerebrovascular Testing, and Peripheral Arterial Testing. In the second year, students have a 12-month externship, allowing them to gain experience through observation and hands-on practice, while being supervised by clinical mentors.

Prerequisites
In order to apply to the Bachelor of Science in Medical Sonography program, a student must have completed 30 semester hours of general education coursework as prerequisites. Only courses with a minimum GPA of 2.0 on a 4.0 grading scale will be accepted.

Required General Education Coursework
• composition (3 semester hours—above COMP 1000)
• mathematics (3 semester hours—above MATH 1000, college algebra strongly recommended)
• humanities (6 semester hours—3 semester hours in foreign language recommended)
• social and behavioral sciences (9 semester hours)
• human, biological, and physical sciences (6 semester hours—Anatomy and Physiology I required, Anatomy and Physiology II recommended)
• physics (3 semester hours)

Total: 30 semester hours
Note: Required general education courses cannot be survey courses.
Admissions Requirements

All applicants to the program must have a minimum of 30 semester credits from a regionally accredited college or university (as outlined previously) with a minimum cumulative GPA of 2.75 on a 4.0 grading scale. Only courses with a minimum GPA of 2.75 on a 4.0 grading scale may be considered for transfer. Upon receipt of the completed application, fees, credentials, and transcripts, the admissions officers and the College of Health Care Sciences will review all material for evidence of the proper education, training, and background to enter the Bachelor of Science in Medical Sonography program.

Prospective medical sonography students are selected by the Department of Health Science Committee on Admissions through consideration of the overall qualities of the applicant. The program will admit individuals with diverse education, work, and life experiences who have demonstrated capacity to pursue the course of study in general and vascular sonography. Areas of consideration include application content, academic record, letters of evaluation, and personal motivation. Admission to the medical sonography course of study will not guarantee admission to any other program of Nova Southeastern University.

The Department of Health Science Committee on Admissions will not consider an application until all required fees, credentials, transcripts, and test scores have been received by the Office of Admissions. The university reserves the right to modify any requirements on an individual basis as deemed necessary by the dean of the 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, department chair, and medical sonography director reserve the right to require the student's withdrawal at any time for the above-mentioned reasons.

Application Procedures

Candidates for admission are responsible for the submission of the following:

- completed application forms with $50, nonrefundable application fees
- two letters of evaluation from individuals (other than relatives) such as academic advisers, professors, clinical or non-clinical supervisors, or community associates
- official college-, certificate-, and/or diploma-based transcripts from all undergraduate and graduate institutions attended, sent directly from the institution
- a student-prepared learning portfolio requesting Assessment of Prior Experiences for Academic Credit, if applicable (graduates from programs other than those from regionally accredited colleges or universities only)
- copies of national and or state professional certification, licensure or registration, if applicable
- evaluation of coursework taken at a foreign institution for U.S. institutional equivalence, if applicable

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
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 NSU’s Enrollment Processing Services.

- resume or curricula vitae

The Office of Admissions for the Bachelor of Science in Medical Sonography works on a rolling admissions basis. Applications are accepted year-round. To ensure that your application receives prompt consideration, you should apply early. All admissions material should be sent to

Nova Southeastern University
Enrollment Processing Services
College of Health Care Sciences
Department of Health Science
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905
Personal Interviews
Once the application is completed, the Committee on Admissions will decide whether or not the application is strong enough to warrant an invitation for a personal interview. Interviews are conducted on the Nova Southeastern University main campus and are by invitation only. An invitation to interview is not a guarantee of admission.

Distance Education Support
Students on clinical externships in medical sonography must maintain NSU computer accounts including email. New students receive an orientation and extensive online technical support online access, online tools and methods, and library resources. Online interactive learning methods involve web pages to access course materials, announcements, the electronic library, and other information, plus a range of online activities that facilitate frequent student-professor interaction. Faculty members and students interact via online forums using threaded bulletin boards, chatrooms, and email. Students are able to submit assignments as email attachments, through the use of online forms sent directly to program instructors, fax to fax, fax to email, and through Blackboard. Some online courses may include electronic classroom sessions.

Online students have online access to books, journal articles, microfiche, dissertations, index searches, catalog searches, and reference librarians. The online medical database collection at NSU is extensive and includes access to quality subscription services free of charge to the student.

Tuition and Fees
• $50, nonrefundable application fee
• $20,500 per academic year
• $500 acceptance fee—This fee is required to reserve the accepted applicant's place in the entering first-year class, but is nonrefundable in the event of a withdrawal. It is payable within two weeks of an applicant's acceptance.
• $250 deposit—This fee is due February 15, under the same terms as the acceptance fee.
• $250 preregistration fee—This fee is due April 15, under the same terms as the acceptance fee.
• $200 Sonography Principles and Instrumentation (SPI) Examination fee
• Students are responsible for purchasing any required textbooks, uniforms, white coats, and/or classroom materials.
• A graduation and diploma fee of $275 will be incurred.
• An NSU student services fee of $1,050 is required annually.
• A $145 health professions general access fee is required yearly. This fee is required to pay for background checks, drug testing (if required), affiliation agreements, and immunizations.
• Applicants should have a specific plan for financing 27 months of professional education. This includes 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 hospital insurance plan through the university.

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 College of Health Care Sciences. Tuition, fees, and payment schedules are subject to change without notice.

Requirements for Graduation
To be eligible to receive the Bachelor of Science in Medical Sonography degree, students are required to
• complete general education, major, and elective requirements as specified by the program at time of admission, resulting in a minimum total of 125 semester hours
• attain a 2.0 cumulative grade point average
• submit a degree application form before completing registration for the last semester
• fulfill all obligations to the library, the student’s program, and the bursar’s office
• attend graduation ceremonies
• take the ARDMS Sonography Principles and Instrumentation (SPI) Examination by the end of their first year

Graduation with Honors
A student eligible for graduation with a cumulative grade point average of 3.8 or higher who has completed at least 90 credits at NSU is eligible to receive the degree with distinction.

Computer Skills
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.
Accreditation, National Examinations, and Registry

The Vascular Sonography course of study is accredited through the Commission on Accreditation of Allied Health Education Programs (CAAHEP) Joint Review Commission on Education in Diagnostic Medical Sonography (JRC-DMS).

JRC-DMS, Address: 2025 Woodlane Drive, St. Paul, MN 55125-2998, Telephone: 651-731-1582, website: www.jrcdms.org. Amanda Glassing, Accreditation Manager, Email: aglassing@jcahpo.org, Telephone: 651-731-1582.

Graduates will be eligible to take the national registry examination administered by the American Registry of Diagnostic Medical Sonographers (ARDMS)

American Registry of Diagnostic Medical Sonographers (ARDMS)
51 Monroe Street, Plaza East One
Rockville, Maryland 20850-2400
Tel: (301) 738-8401 or 800-541-9754
Fax: (301) 738-0312

Curriculum Outline Bachelor of Science—Medical Sonography

<table>
<thead>
<tr>
<th>Required General Education Courses</th>
<th>Semester Hours</th>
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<tbody>
<tr>
<td>Composition*</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral sciences</td>
<td>9</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Natural and physical sciences**</td>
<td>9</td>
</tr>
<tr>
<td>Mathematics***</td>
<td>3</td>
</tr>
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</table>

General Education Subtotal: 30

* 3 COMP credits above COMP 1000
** physics—required, anatomy and physiology—recommended
*** 3 MATH credits above MATH 1000 (college algebra recommended)

<table>
<thead>
<tr>
<th>Required B.H.Sc. Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHS 3110 Health Care Ethics</td>
<td>3</td>
</tr>
<tr>
<td>BHS 3120 Introduction to Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>BHS 3130 Research and Design for Health Care</td>
<td>3</td>
</tr>
<tr>
<td>BHS 3150 Principles in Leadership</td>
<td>3</td>
</tr>
<tr>
<td>BHS 3155 Conflict Resolution in Health Care</td>
<td>3</td>
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<tr>
<td>BHS 3160 Health Care Policy</td>
<td>3</td>
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<tr>
<td>BHS 4000 Cultural Competency in Health Care</td>
<td>3</td>
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<tr>
<td>BHS 4100 Academic and Professional Writing</td>
<td>3</td>
</tr>
<tr>
<td>BHS 4110 Health Care and Aging</td>
<td>3</td>
</tr>
</tbody>
</table>
In order to be eligible to graduate with the Bachelor of Science in Medical Sonography degree, a student must have completed 30 semester hours of general education coursework, in addition to the B.H.Sc. curriculum, with a resulting minimum total of 125 credit hours. Only courses with a minimum GPA of 2.0 on a 4.0 grading scale will be accepted.

**Cardiac Sonography Hybrid Certificate Program**

**Diagnostic Medical Sonography**

Diagnostic medical sonography includes four primary areas of specialization: general (RDMS), cardiac (RDCS), vascular (RVT), and musculoskeletal. General sonography includes subspecialties in obstetrics and gynecology, organs of the body, and small parts (soft tissues and superficial glands), as well as neurosonology. Cardiac sonography examines the anatomical structure and function of the heart and is subdivided into three different subspecialties: adult echocardiography, fetal echocardiography, and pediatric echocardiography. Vascular sonography studies the anatomical and physiological characteristics of blood vessels (veins and arteries) in the human body. The most recently created specialty in sonography is musculoskeletal sonography. This specialty studies the different joints and tendons in the body. Diagnostic medical sonography uses mechanical, nonionizing sound waves to obtain images and is considered a noninvasive modality.

**Cardiac Sonography Certificate**

In May 2016, NSU will offer a certificate in cardiac sonography for practicing sonographers. This 12-month program is designed to prepare practicing sonographers for
the cardiac registry exam. The courses will be delivered in a hybrid format, with online courses and on-campus lab sessions in the evenings or on weekends at our main campus. A clinical externship is offered during the last two terms of the program. Graduates will be eligible to take the national examinations for the cardiac registry as administered by the American Registry of Diagnostic Medical Sonographers (ARDMS) and/or Cardiovascular Credentialing International (CCI).

Objectives
This certificate program will

- provide working sonographers with the knowledge, skills, and critical thinking leading to cardiac sonography credentials
- provide working sonographers with the opportunity to sit for the examination to obtain the Registered Diagnostic Cardiac Sonographer (RDCS) credential from the American Registry of Diagnostic Medical Sonography and/or the Registered Cardiac Sonographer (RCS) credential from Cardiovascular Credentialing International.

Admissions Requirements
In order to be considered for admission, applicants must be one of the following:

- currently working, registered ultrasound professionals who wish to acquire the knowledge and training skills in the adult echocardiography specialty leading to the RDCS (ARDMS) and RCS (CCI) credentials
- health professionals, who have passed the Sonography Principles and Instrumentation (SPI) examination (ARDMS ultrasound physics portion of the exam)
- NSU College of Health Care Sciences alumni who have a bachelor’s or master’s degree in the vascular sonography course of study and who currently have RVT or ROMS credentials (or at least have passed the SPI exam and are willing to obtain the education and training leading to RDCS or RCS credentials)

Application Procedures
Applicants for admissions must submit, or be responsible for the submission of, a completed application form with a $50, nonrefundable application fee by the deadline of April 1. Applicants can complete the application online at http://nova.askadmissions.net/emtinterestpage.aspx?ip=undergrad. Applicants must also submit

1. official transcripts from the registrars of all colleges and universities attended, sent directly from the institution
2. official Sonography Principles and Instrumentation (SPI) scores (taken within three years of matriculation into the program) or an official copy of national and/or state professional certification, licensure, or registration
3. two letters of recommendation from individuals (other than relatives) such as professors, clinical or nonclinical supervisors, or community associates
4. a curriculum vitae or resume
5. TOEFL scores, or equivalent IELTS or PTE—A scores (if applicable)
6. evaluation of coursework taken at a foreign institution for U.S. institutional equivalence (if applicable)

Coursework taken at a foreign institution must be evaluated for U.S. 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
  www.wes.org
- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com
- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 must be sent to

Nova Southeastern University
Enrollment Processing Services
College of Health Care Sciences
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905

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.
Requirements for Graduation
To be eligible to receive the Certificate in Cardiac Sonography students are required to
• complete course requirements as specified by the program at time of admission, resulting in a minimum total of 42 credits
• attain a 2.0 cumulative grade point average
• fulfill all obligations to the library, the student’s program, and the bursar’s office
• attend the one-week assessment period on-campus
• attend graduation ceremony

Computer Skills
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.

Curriculum

<table>
<thead>
<tr>
<th>Term I</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CSC 3920 Cardiovascular Anatomy and Physiology—Hemodynamics</td>
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<tr>
<td>CSC 3930 Ultrasound Physics in Echocardiography</td>
<td>2</td>
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<tr>
<td>CSC 3940 Introduction to Adult Echocardiography I/Lab</td>
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<tr>
<td>CSC 3943 Pharmacology and ECG</td>
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<td>CSC 3944 Clinical Applications I</td>
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<tr>
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<td>CSC 3945 Clinical Applications II</td>
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<td>Total Credits: 42</td>
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BHS 3102—Ultrasound Physics I/Lab
This course is designed to help the student acquire knowledge of all the fundamental principles and concepts necessary to understand the properties of sound and ultrasound as used in diagnostic imaging. These principles and concepts will span from basic properties of sound in soft tissue to advanced techniques such as Doppler, spectral analysis, M-mode, etc. as they pertain to evaluation for vascular and cardiac ultrasound imaging. The students will also learn about artifacts, safety, and the concepts of bioeffects. Some of the principles will be illustrated. (3 semester hours)

BHS 3101—History of the U.S. Health System
This course will examine the origins and ongoing development of the U.S. health system. Students will gain historical understanding of the origins and forces that have influenced change within the US health care system. (3 semester hours)

BHS 3110—Health Care Ethics
This course is designed to introduce ethical thinking and concepts regarding health care to prepare the student with the essential vocabulary and thought processes to understand, evaluate, and participate in ethical decision making. (3 semester hours)

BHS 3111—Ultrasound Cross-Sectional Anatomy
This course is designed to expand upon student's present knowledge and understanding of normal anatomy through developing spatial relationships of organs, vessels, bones, muscles and connective tissues. (4 semester hours)

BHS 3120—Introduction to Epidemiology
The purpose of this course is to introduce students to the history and development of epidemiology in relation to public health and disease. Communicable, epidemic, endemic, and social diseases will also be discussed. (3 semester hours)

BHS 3130—Research and Design for Health Care
This course is designed as an introduction to critical analysis of research and medical literature as well as basic research methods. The course includes an introduction to descriptive and inferential analysis and research design. Statistical and research concepts and procedures are combined with an emphasis on practical health care applications. (3 semester hours)

BHS 3140—Health Care Practice
The purpose of this course is to study the legal implications of licensing, practice, and contractual employment. The importance of understanding rules of practice and standards of care are discussed. (3 semester hours)

BHS 3145—Principles of Environmental Health
This course will introduce students to the principles of environmental health and their importance to human populations. Some of the topics covered include environmental quality, occupational health, vector-borne and pandemic diseases, and hazardous materials management, as well as the regulations promulgated to manage each. (3 semester hours)

BHS 3150—Principles of Leadership
This course will provide an overview of numerous leadership theories to prepare the student for a leadership role in health care. The course will critically analyze the differences between leadership and management. (3 semester hours)

BHS 3151—Health Services Management
This course will provide an overview of health care and general management to prepare the student for a managerial role in health care administration. Course topics include human resource issues and policy, personnel planning, staffing, development, coaching, and training of employees. (3 semester hours)

BHS 3155—Conflict Resolution in Health Care
The purpose of this course is to develop an understanding of, and effective methods and strategies for reducing the incidence of, workplace conflict including employee-employee, supervisor-subordinate, patient-patient, and patient/client-provider conflict. (3 semester hours)

BHS 3160—Health Care Policy
This course provides the student with a broad understanding of policy, how health care is organized and dispensed, and how the practitioner can better work in the system. Topics of discussion include cost control, long-term care, quality control, ethical issues, and insurance. (3 semester hours)

BHS 3161—Concepts of Health Care Finance
This course introduces the fundamental tools, concepts, and applications aimed at giving students an understanding of numerous financial theories and techniques used in health care financial management. The course materials are structured around emerging health care policies and the role economics and finance play in establishing policy. Case studies are drawn from a variety of sources including health maintenance organizations, home health agencies, nursing units, hospitals, and integrated health care systems.
Some topics of discussion will include concepts of capital financing for providers, budgeting, financial ethics, payment systems, provider costs, the high cost of health care, and measuring costs. (3 semester hours)

BHS 3162—Economics of Health Care Services
This course will teach the student to use economic analysis to understand critical issues in health care and health policy. Issues to be studied include the demand for health care, health insurance markets, managed care, medical technology, government health care programs, national health reform, and the pharmaceutical industry. The course will focus on the U.S. health care sector, but will also examine the health care systems of other countries. (3 semester hours)

BHS 3170—Health Care Delivery Systems
This course is designed as an introduction to health care plans that are underwritten by the federal government as well as selected private HMOs. Topics will include Medicare, Medicaid, public health, Indian Health Service, Veterans Administration, military health systems, and managed care. An understanding of the social, political and professional forces that shape the health care delivery system will be discussed. (3 semester hours)

BHS 3190—Patient Education in Health Care
Patient education is an integral part of health care in every setting, from patient treatment to health and wellness promotion to injury and illness prevention. The focus of this course is to explore the many issues that impact patient education, from both a health care professional and a management perspective. Adult education theory, patient/practitioner 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. (3 semester hours)

BHS 3195—Therapeutic Communications for Health Care Professionals
This course covers a variety of general concepts and contemporary discussions in the area of therapeutic communications. Attention is paid to self-awareness, basic communication skills, and therapeutic responses from all health care professionals. (3 semester hours)

BHS 3200—Ultrasound Physics II/SPI Exam
This course is designed to review the principles and concepts learned in BHS 3111 through quizzes and exams and to prepare students for the Sonography Principles and Instrumentation (SPI) exam administered by the ARDMS. The students will take the exam after completion of the course in late April/early May. (1 semester hour)

BHS 3220—Introduction to Diagnostic Medical Sonography
This course is designed to introduce students to the equipment used in vascular ultrasound. The course will, therefore, be primarily taught in the ultrasound training laboratory in small groups. The focus of the course will be to lead students toward proficiency and competency in using all the tools available on the ultrasound equipment for the production of quality images, as well as proper ergonomics. This course is the foundation for all the following core courses. (2 semester hours)

BHS 3300—Cerebrovascular Testing/Lab
This course will focus on the use of ultrasound for the evaluation of the extracranial and intracranial cerebrovascular circulation. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound, as well as some other imaging techniques. (4 semester hours)

BHS 3400—Venous Testing/Lab
This course will focus on the use of ultrasound for the evaluation of the venous circulation of the upper and lower extremities. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound, as well as some other imaging techniques. (4 semester hours)

BHS 3500—Peripheral Arterial Testing/Lab
This course will focus on the use of ultrasound for the evaluation of the arterial circulation of the upper and lower extremities. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound and other technologies specific to vascular laboratories, as well as some other imaging techniques. (4 semester hours)

BHS 3700—Clinical Preparation and Review
This course will provide and reinforce the nontechnical aspects of the profession of diagnostic medical sonography. These include, but are not limited to, professionalism, patient care, and clinical rationale. This course will also prepare the students for the clinical experience that follows in the second year. (4 semester hours)

BHS 3800—Abdominal Sonography I
This course will review normal abdominal anatomy and physiology with a focus on cross sectional anatomy. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory learning to recognize normal sonographic
anatomy. Lectures will focus on the previously mentioned aspects, as well as on how to collect patient information relevant to the different ultrasound studies and other imaging techniques. This course provides a foundation that will help students understand the clinical exam and the elements contributing to their role and the scope of practice as general sonographers. (4 semester hours)

BHS 3810—Abdominal Sonography II
This course will review abnormal abdominal anatomy and physiology with a focus on clinical correlations. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory strengthening the skills learned from Abdominal Sonography I. Lab assignments will incorporate case studies, clinical correlations, and other imaging modalities (e.g., MRIs, nuclear medicine, CTs, etc.). Lectures will focus on the above-mentioned aspects, as well as on how to collect patient information relevant to the different ultrasound studies and pathologies. This course provides a foundation that will help students understand the clinical exam and the elements contributing to their role and the scope of practice as general sonographers. (4 semester hours)

BHS 3830—Small Parts Sonography
This course will focus on the use of ultrasound for the evaluation of superficial structures such as the thyroid and parathyroid glands, breasts, male reproductive system, superficial soft tissue structures, shoulders, hands, and wrists, as well as the neonatal brain, pediatric spine, pediatric hip/pelvis, and pediatric abdomen. It will have a strong hands-on component with students spending several hours in the laboratory. Lectures will focus on relevant normal and abnormal anatomical and physiological aspects as well as on clinical findings, signs, and symptoms of diseases related to these areas. (4 semester hours)

BHS 3900—Obstetrics and Gynecology Ultrasound I
This course will focus on the use of ultrasound for the evaluation of the organs in the human female pelvic cavity in both normal and abnormal, gravid and non-gravid anatomy and physiology. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. The lectures will focus on the aspects previously mentioned, as well as on fetal abnormalities and abnormal conditions of the fetus. The course will explore infertility and assisted reproductive technologies. (4 semester hours)

BHS 3910—Obstetrics and Gynecology Ultrasound II
This course is a continuation of Obstetrics and Gynecology Ultrasound I. It is a further comprehensive approach to in-depth studies of the organs contained within the human female pelvic cavity in both normal and abnormal, gravid and non-gravid anatomy and physiology. The course will focus on fetal abnormalities and abnormal conditions of the fetus. (4 semester hours)

BHS 3920—Special Needs
This course will review abnormal abdominal anatomy and physiology with a focus on clinical correlations. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory strengthening the skills learned from Abdominal Sonography I. Lab assignments will incorporate case studies, clinical correlations, and other imaging modalities (e.g., MRIs, nuclear medicine, CTs, etc.). Lectures will focus on the above-mentioned aspects, as well as on how to collect patient information relevant to the different ultrasound studies and pathologies. This course provides a foundation that will help students understand the clinical exam and the elements contributing to their role and the scope of practice as general sonographers. (4 semester hours)

BHS 3900—Cultural Competency in Health Care
The purpose of this course is to develop competency and better understanding when confronted with the practitioner's delivery of health care and issues related to diversity; ethnically based customs, rituals, and alternative health care choices; folk medicine; and cultural structure and viewpoints. (3 semester hours)

BHS 4001—Individuals with Disabilities and Special Needs
With the continued graying of the American population and the extending life expectancy of individuals with disabilities, there are a growing number of individuals facing chronic life challenges. These individuals are consumers of health care. It is incumbent on health care providers to understand how different challenges affect a person's abilities. Topics of discussion include laws that impact services, the history of disability care, and specific disabilities and their impact on functioning. (3 semester hours)

BHS 4005—Alternative Medicine in Health Care
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. Example topics include acupuncture, chiropractic, herbal medicine, homeopathy, massage, and naturopathic medicine. (3 semester hours)

BHS 4006—Fundamentals of Chinese Medicine
This course will discuss and analyze the impact, origins, and background of Chinese medicine. It is important to enter this class with an open mind, understanding that there are other forms of treatment for disease different from those taught in westernized medicine programs. Critical analysis of the meridians and pathways and various signs and symptoms associated with disease will be covered. (3 semester hours)

BHS 4009—Sports Medicine: Principles and Practice
This course will present a study of athletic injuries and the principle concepts and practices of sports medicine—including discussion of prevention, diagnosis, treatment, and recovery. The major musculoskeletal portions of the body will be covered, major preventive measures will be studied, and the major sports injuries will be addressed. The course will identify the medical treatments associated with the major sports injuries. (3 semester hours)
BHS 4010—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. (3 semester hours)

BHS 4011—Bioterrorism: Health Care Readiness and Response
This course uses a systems perspective to provide health professionals with an understanding of the prevention and response to the intentional release of harmful biologic agents. Category A diseases will be reviewed including anthrax and smallpox. Risk assessment and reduction for health care facilities will be discussed. The structure of public disaster response agencies and the potential difficulties integrating with privately held critical infrastructure will be evaluated. Tactics and structural components from the class can also be used during unintentional outbreaks to reduce their impact. (3 semester hours)

BHS 4012—Torture, Violence, and Trauma: Health Care’s Healing Role
This course provides an overview of the physical and psychological effects of torture, violence, and trauma. It focuses on the relationship between health care professionals and victims of human rights violations. Discussion topics include the detection, treatment, and documentation of victims of these events. The course examines the role of health care as it relates to incidents of torture, violence, and trauma. (3 semester hours)

BHS 4020—Topics in Maternal-Child Health
The purpose of this course is to provide an overview of maternal and child health (MCH) issues and topic areas. One to two MCH topics will be discussed weekly. To adequately prepare for class discussion questions and course assignments, students are expected to complete the required readings for each session. This course is designated for individuals who have an interest in working in the area of maternal and child health program development and intervention. (3 semester hours)

BHS 4031—Statistics for Health Sciences
This course is designed to introduce the conceptual foundation of statistical analysis and statistical reasoning of health sciences data and prepare the student to calculate, interpret, and utilize appropriate software packages for basic statistical analysis. (3 semester hours)

BHS 4100—Academic and Professional Writing
The purpose of this course is to introduce students to the format, content, and thought processes for successful academic and professional writing through the use of the NSU B.H.Sc. Form and Style Manual, as well as introduction to APA and AMA manuals. An overview of proper sentence and paragraph structure, grammar, punctuation usage, formatting, and bibliographic referencing will be discussed. (3 semester hours)

BHS 4110—Health Care and Aging
This course examines the psychosocial and cultural variations associated with maturing and aging. Topics covered will be an overview of life choices, living wills, and treatment, as well as cultural implications of senior care. (3 semester hours)

BHS 4130—Internship
The student will complete 40 hours of internship in an area of interest within a health care organization. The final project of this internship will be to produce a SWOT analysis of the unit or health care organization. Note: Student must receive departmental and adviser approval in order to be allowed to register for this course. (3 semester hours)

BHS 4140—Independent Study
Students select an area of study in cooperation with the course adviser and/or program director. The project may include such items as work-related studies, conference attendance, grant proposals and/or planning documents. A comprehensive paper will be developed and delivered according to the NSU B.H.Sc form and style manual. Note: Student must receive departmental and adviser approval in order to be allowed to register for this course. (3 semester hours)

BHS 4150—The Science of Sound
This course is designed to introduce students to acoustics. Students will study production of sound waves in general, and more specifically, the production of sound waves during speech. Students will also study the characteristics of sound waves, how sound waves are propagated through a medium, and the perception of sound. (3 semester hours)

BHS 4151—Linguistics and Psycholinguistic Variables of Normal Language Development
This course will provide an overview of speech and language development as it relates to the typically developing child from birth through adolescence. This course will include topic areas related to the dimensions of communication, neurological and anatomical bases of communication, models of speech and language development, and speech-language differences and diversity. (3 semester hours)

BHS 4152—Neuroanatomy and Neurophysiology of Audition
This course will provide an introduction to the gross structure of the brain and spinal cord. Functional relationship of their parts, with emphasis on the auditory and vestibular peripheral and central nervous systems, will be discussed. (3 semester hours)
BHS 4153—Speech and Language Disorders for Health Care Practitioners
Overview of speech and language delays and disorders, their etiology, and their treatment. How health care practitioners can identify people with possible disorders and make appropriate referrals. Consideration of the communication needs within the health care system of people with speech-language disorders. (3 semester hours)

BHS 4154—Effect of Hearing Impairment on Speech and Language
Phonologic, morphologic, syntactic, and pragmatic aspects of human communication associated with hearing impairment. Study of methods of screening hearing-impaired patients for concomitant speech and language disorders. Prerequisite: a course in normal language development (3 semester hours)

BHS 4160—Education for the Health Professions
This course will provide an opportunity to explore learning theories, learning styles, testing and assessment, education trends, and the use of technology in instruction as it relates to the health professional and professions. (3 semester hours)

BHS 4500—Clinical Externship I
This course will be mainly provided through immersion in a clinical setting assigned by the end of the first year. Students will be a daily integral part of the operations of the diagnostic ultrasound department they have been assigned to for the length of the term. Students will report to the clinical coordinator or an assigned professor of the program at NSU. (6 semester hours)

BHS 4600—Clinical Externship II
This course is a continuation of Clinical Externship I. (7 semester hours)

BHS 4700—Clinical Externship III
This course is a continuation of Clinical Externship II. (8 semester hours)

BHS 5001—APA Writing Seminar
This course is designed to introduce students to the APA writing form and style. Students will be guided by an instructor in the use of the APA Publication Manual and the components of an APA-style academic paper and practicum and internship reports. All courses within the Department of Health Science require that all written assignments be submitted in APA form and style. (3 semester hours)

CVS 3000—Introduction to Cardiovascular Sonography Instruments
This course is designed to introduce the students to the equipment used in cardiovascular ultrasound. The course will, therefore, be primarily taught in the ultrasound training laboratory in small groups, with supplemental online content and challenge-based learning assignments. The focus of the course will be to lead the students toward proficiency and competency in using all the tools available on the ultrasound equipment for the production of quality images, as well as proper ergonomics, patient handling, and care of the equipment. This course is the foundation for all the following core courses. (3 semester hours)

CVS 3010—Echocardiography I
This course will provide an introduction to techniques, measurements, and normal function of the adult heart as evaluated with ultrasound. It will have a strong hands-on component and students will spend several hours per week in the ultrasound training laboratory acquiring skills in basic imaging, patient positioning, and ergonomics to form a solid foundation for later, more-advanced courses. Lectures will include, but will not be limited to, a review of the normal anatomy and physiological function of the heart, commonly encountered pathologies, pathophysiology, basic treatment options, and beginning analysis of data obtained by ultrasound, as well as introduction to other cardio-focused techniques. (3 semester hours)

CVS 3020—Echocardiography II
This is an intermediate course on the use of ultrasound for the evaluation of the adult heart and heart function. It will have a strong hands-on component and students will spend several hours per week in the ultrasound training laboratory acquiring advanced imaging skills to begin mastery of the adult echocardiography examination. Lectures will continue with advanced subjects including, but not limited to, acquired and congenital pathologies, pathophysiology, and treatment options. In-depth analysis of echocardiographic findings and presentation of same in preliminary reporting will also be covered in detail. (3 semester hours)

CVS 3030—Echocardiography III
This is an advanced course on the use of specialized ultrasound techniques for the evaluation of the adult heart, with additional content for pediatric echocardiography and other advanced imaging techniques and considerations. It will have a strong hands-on component and students will spend several hours per week in the ultrasound training laboratory acquiring advanced imaging skills. Lectures will cover special considerations for advanced imaging, specific pathologies and anatomical considerations for pediatric imaging, pediatric congenital pathologies, pathophysiology, treatment options, and analysis of data obtained by ultrasound, as well as other cardio-focused techniques. Additional topics will cover procedures and other considerations surrounding the performance of the echocardiography exam that will be encountered in a clinical setting, preparing the student for clinical externships in year two of the program. (4 semester hours)
CVS 3040—Ultrasound Physics
This course is designed to help students acquire knowledge of all the fundamental principles and concepts necessary to understand the properties of sound and ultrasound as used in diagnostic imaging. These principles and concepts will span from basic properties of sound in soft tissue to advanced techniques such as Doppler, spectral analysis, and M-mode as they pertain to evaluation for vascular and cardiac ultrasound imaging. Students will also learn about artifacts, safety, and the concepts of bio-effects. Key physics principles will be illustrated with hands-on exercises and activities in the classroom and lab, utilizing both the imaging equipment and more everyday materials to facilitate understanding. Challenge-based learning physics assignments will also be given to further the learning process. (4 semester hours)

CVS 3050—Ultrasound Physics Review
This course is designed to review the principles and concepts learned in CVS 3040 through quizzes and exams to help the student prepare for the Sonography Principles and Instrumentation (SPI) exam administered by the ARDMS. The students will take the exam after completion of the course in late April/early May. (2 semester hours)

CVS 3060—Cerebrovascular Testing
This course will focus on the use of ultrasound for the evaluation of the extracranial and intracranial cerebrovascular circulation. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound and other diagnostic techniques. (3 semester hours)

CVS 3070—Peripheral Arterial Testing
This course will focus on the use of ultrasound for the evaluation of the arterial circulation of the upper and lower extremities. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound and other technologies specific to vascular laboratories. (3 semester hours)

CVS 3080—Venous Testing
This course will focus on the use of ultrasound for the evaluation of the venous circulation of the upper and lower extremities. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound and other techniques. (3 semester hours)

CVS 3090—Abdominal Vascular Testing
This course will focus on the use of ultrasound for the evaluation of the arterial and venous circulation of organs of the abdomen. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound and other diagnostic imaging techniques. (3 semester hours)

CVS 4000—Clinical Preparation
This course will provide for and reinforce the nontechnical aspects of the profession of diagnostic medical sonographers. This will include, but is not limited to, professionalism, billing, quality assurance, image storage, and reporting. The course will prepare students for the clinical experience that follows in the second year. Embedded in this course will also be a certification training seminar for Basic Life Saving (BLS) for Health Care Providers. (3 semester hours)

CVS 4500—Clinical Externship I
In the second year of the program, students may have the option of performing their clinical externships in a vascular, adult echo, or combined vascular/echo clinical experience, depending on their interests and demonstrated competencies. This course will be mainly provided through immersion in a clinical setting assigned at the culmination of the first year. Students will be a daily integral part of the operations of the vascular laboratory and/or echocardiography imaging department they have been assigned to for the length of the term. They will report to the clinical coordinator or an assigned professor of the program at NSU. (9 semester hours)

CVS 4600—Clinical Externship II
This course is a continuation of CVS 4500. (9 semester hours)

CVS 4700—Clinical Externship III
This course is a continuation of CVS 4500 and CVS 4600. (9 semester hours)
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 one to three years 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 one–three years 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.

All applicants must show evidence of computer skills through coursework or self-study skills prior to the end of the first term. 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 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

Nova Southeastern University
Enrollment Processing Services
College of Health Care Sciences
M.H.Sc. Program
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 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 three years of verifiable managerial experience in health care administration. This experience should be readily identifiable on the applicant’s resume. 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 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 2015–2016 is $400 per credit hour. An NSU student services fee of $1,050 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 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 $545 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 resume

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
College of Health Care Sciences, M.H.Sc. Program
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 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, New York 10274-5087
  (212) 966-6311
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 Health Care Sciences, Department of Health Science Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

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 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 37 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 College of Health Care Sciences. The dean reserves the right to require, in special cases, more than the minimum of 37 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 37 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>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003 Current Trends and Cultural Issues in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5205 Writing for Medical Publication</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5501 Epidemiology and Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5510 Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5521 Ethical Issues in Health Care</td>
<td>3</td>
</tr>
<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>Credit Hours</th>
</tr>
</thead>
<tbody>
<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>MHS 5400 Directed Studies</td>
<td>1–9</td>
</tr>
<tr>
<td>MHS 5541 Health Care Systems and Conflict</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5542 Health Care Education</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5543 Educational Theories and Psychology</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5544 Curriculum and Instruction in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5545 Assessment and Evaluation in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5546 Health Care Finance</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5535 Issues in Health Care Leadership</td>
<td>3</td>
</tr>
</tbody>
</table>
The M.H.Sc program offers five concentrations: sports medicine, higher education, health law, forensic investigative technology, and leadership in health care. 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>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003</td>
<td>Current Trends and Cultural Issues in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5205</td>
<td>Writing for Medical Publication</td>
<td>3</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 five concentrations: sports medicine, higher education, health law, forensic investigative technology, and leadership in health care. The internship and practicum must be completed in the area of concentration. There are no electives in the concentrations.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5501</td>
<td>Epidemiology and Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5510</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5521</td>
<td>Ethical Issues in Health Care</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration Courses (12 credits)</th>
<th>Credit Hours</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>
<td>Sports Injury Rehabilitation Principles</td>
</tr>
<tr>
<td>MHS 5810</td>
<td>Certified Strength and Conditioning Specialist Preparation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Practical Courses (10 credits)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5309</td>
<td>U.S. Health Policy</td>
</tr>
<tr>
<td>MHS 5207</td>
<td>Practicum</td>
</tr>
</tbody>
</table>

**Higher Education Concentration Curriculum**

<table>
<thead>
<tr>
<th>Core Courses (15 credits)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003</td>
<td>Current Trends and Cultural Issues in Health Care</td>
</tr>
<tr>
<td>MHS 5205</td>
<td>Writing for Medical Publication</td>
</tr>
<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>Credit Hours</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Practical Courses (10 credits)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5309</td>
<td>U.S. Health Policy</td>
</tr>
<tr>
<td>MHS 5207</td>
<td>Practicum</td>
</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.** For the health law concentration, two residential institutes are required on the main campus. These summer institutes are one–two days long.

<table>
<thead>
<tr>
<th>Core Courses (15 credits)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003</td>
<td>Current Trends and Cultural Issues in Health Care</td>
</tr>
<tr>
<td>MHS 5205</td>
<td>Writing for Medical Publication</td>
</tr>
<tr>
<td>MHS 5501</td>
<td>Epidemiology and Biostatistics</td>
</tr>
<tr>
<td>MHS 5510</td>
<td>Research Methods</td>
</tr>
<tr>
<td>MHS 5530</td>
<td>Principles and Practice of Management in Health Care</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration Courses (18 credits offered through the Shepard Broad College of Law)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHL 1020 Legal Research Methods and Reasoning*</td>
<td>4</td>
</tr>
<tr>
<td>MHL 1060 Tort and Contract Law</td>
<td>2</td>
</tr>
<tr>
<td>MHL 2020 Risk Management</td>
<td>2</td>
</tr>
<tr>
<td>MHL 1030 Administrative Law</td>
<td>3</td>
</tr>
<tr>
<td>MHL 1040 Legal and Ethical Issues in Health Care</td>
<td>2</td>
</tr>
<tr>
<td>MHL 1090 Law Accreditation/Licensing</td>
<td>2</td>
</tr>
<tr>
<td>MHL 1080 Law of Patients Rights and Advocacy</td>
<td>2</td>
</tr>
<tr>
<td>MHL 2021 Pharmaceutical Law*</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Practical Courses (10 credits)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5309 U.S. Health Policy</td>
<td>5</td>
</tr>
<tr>
<td>MHS 5207 Practicum</td>
<td>5</td>
</tr>
</tbody>
</table>

*includes a 1-credit, on-campus institute

### Forensic Investigative Technology Concentration Curriculum

This concentration will provide specialization training in the burgeoning field of forensic investigation. Students will be exposed to investigative and analysis techniques used during criminal investigations. Completing this concentration requires 40 credits, as detailed below. **All courses are delivered and organized as distance learning.**

<table>
<thead>
<tr>
<th>Core Courses (15 credits)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003</td>
<td>Current Trends and Cultural Issues in Health Care</td>
</tr>
<tr>
<td>MHS 5205</td>
<td>Writing for Medical Publication</td>
</tr>
<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>
Concentration Courses (15 credits)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5611</td>
<td>Firearms, Fingerprint, and Other Impression Evidence</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5612</td>
<td>Forensic Analysis of Trace and Drug Evidence</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5613</td>
<td>Crime Scene</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5614</td>
<td>Technology That Revolutionized Criminal Investigations</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5615</td>
<td>Overview of Crime Laboratory Management</td>
<td>3</td>
</tr>
</tbody>
</table>

*Courses are cross-listed with Criminal Justice Institute courses CJI 6111, CJI 6112, CJI 6113, CJI 6114, and CJI 6115.

Practical Courses (10 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</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>

Concentration for Recognition

In order to gain recognition in the Forensic Investigative Technology concentration of the M.H.Sc. program, the student must complete all five concentration courses for 15 total hours. Those completing the concentration will be recognized 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.

Leadership in Health Care Concentration Curriculum

This concentration will provide specialization training to meet the increasing demand for qualified leaders in the health care industry’s growing field of leadership in health care. Beginning in the winter of 2010, M.H.Sc. distance students will have the option of completing electives or a concentration in Leadership in Health Care. Completing this concentration requires 37 credits, as detailed below.

Core Courses (12 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003</td>
<td>Current Trends and Cultural Issues in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5205</td>
<td>Medical Writing for Publication</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5510</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5521</td>
<td>Ethical Issues in Health Care</td>
<td>3</td>
</tr>
</tbody>
</table>

Concentration Courses (15 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5530</td>
<td>Principles of Management in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5541</td>
<td>Health Care Systems and Conflict</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5546</td>
<td>Health Care Finance</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5535</td>
<td>Issues in Health Care Leadership</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5537</td>
<td>Health Care Leadership QA/RM</td>
<td>3</td>
</tr>
</tbody>
</table>
Practical Courses (10 credits)  Credit Hours
MHS 5309  U.S. Health Policy  5
MHS 5207  Practicum  5

Concentration for Recognition
In order to gain recognition in the Leadership in Health Care concentration of the M.H.Sc. program, the student must complete all five 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 Risk Management, Patient Safety, and Compliance Concentration
This concentration is designed for health care professionals seeking to enter, or be promoted in, the rapidly expanding field of health care risk management, compliance, and patient safety. 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.

Core Courses (12 credits)  Credit Hours
MHS 5003  Current Trends and Cultural Issues in Health Care  3
MHS 5205  Medical Writing for Publication  3
MHS 5521  Ethical Issues in Health Care  3
MHS 5501  Epidemiology and Biostatistics  3

Concentration Courses (15 credits)  Credit Hours
MHS 5530  Principles of Management in Health Care  3
MHS 5537  Health Care Leadership Quality Assurance/Risk Management  3
MHS 5538  Patient Safety Compliance in Health Care  3
MHS 5539  Health Care and Regulatory Compliance  3
MHS 5540  Enterprise Risk Management  3

Practical Courses (10 credits)  Credit Hours
MHS 5309  U.S. Health Policy  5
MHS 5207  Practicum  5

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.
**Clinical Research Concentration**

This concentration is designed for health care professionals who are involved with clinical research or who desire to enter the field of clinical research. This concentration will also be of benefit to those graduate students who desire to go on to a Ph.D. program. The courses in this concentration will prepare graduates with the skills and background necessary to apply statistical data, apply the principles of qualitative or quantitative research, and present research findings through the thesis process. Students must complete all 39 credits, as detailed below.

<table>
<thead>
<tr>
<th>Core Courses (12 credits)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003 Current Trends and Cultural Issues in Health Care</td>
<td>3</td>
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<td>MHS 5205 Medical Writing for Publication</td>
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<td>MHS 5501 Epidemiology and Biostatistics</td>
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<td>MHS 5510 Research Methods</td>
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<tr>
<th>Concentration Courses (15 credits)</th>
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<td>MHS 5904 Research Ethics</td>
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<td>MHS 5906 Communication Skills for Academics</td>
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<tr>
<td>MHS 5908 Applied Statistics</td>
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<td>MHS 5991 Quantitative Research Methods</td>
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<td>MHS 5992 Qualitative Research Methods</td>
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<td>MHS 5996 Thesis II</td>
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<td>MHS 5997 Thesis III</td>
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<tr>
<td>MHS 5998 Thesis IV</td>
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**Concentration for Recognition**

In order to gain recognition in the Clinical Research concentration of the M.H.Sc. program, the student must complete all five concentration courses for 15 total hours, as well as 12 hours of practical coursework. 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 5205—Writing for Medical Publication
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)

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)

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...
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 1010—Institute on Campus I (1 credit)
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 1060—Tort and Contract Law
This course provides a detailed introduction to the legal principles and major concepts of tort law and contract law, focusing on legal claims and disputes in the health care context. **Prerequisite:** MHL 1020 (2 credits)

MHL 2000—Institute on Campus II (1 credit)

MHL 2030—Risk Management
This course focuses on the legal importance of risk management programs for health care institutions. In doing so, it examines the keys to organizing and implementing successful risk management programs. It also focuses on considerations for developing effective risk management programs, evaluating them, and addressing specific risk areas, including those arising in managed care and integrated health care delivery systems. **Prerequisite:** MHL 1020 (2 credits)

MHL 1030—Administrative Law
This course explores the role of administrative law in health care and the effects of federalism and constitutional issues in that context. Students will review the sources of law for health care providers (institutions, organizations, and individuals). In doing so, they will chart the overlapping, and sometimes conflicting, roles of federal and state legal regulation and study the implications and effects of the various types of laws that govern the provision of health care—administrative agency regulations, constitutional provisions, statutes, and court decisions. (3 credits)

MHL 1040—Legal and Ethical Issues in Health Care
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)

MHL 1080—Law of Patients Rights and Advocacy
Over the last century, the law governing medicine has seen a shift from paternalism to respect for patients as the decision makers. Beginning with the development of the bedrock legal principles of informed consent, this course will examine the legal aspects of the 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. **Prerequisite:** MHL 1020 (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 AMFPLP 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 discovery 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—Communication Skills for Academics
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)

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)

Practical Components—Clinical Research Concentration Only

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 proposal. 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. Prerequisite: MHS 5995 (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. Once the thesis has been reviewed and accepted, the student may register for MHS 5998. Prerequisites: MHS 5996 and MHS 5995 (3 credits)

MHS 5998—Thesis IV
In this course, the student prepares for oral defense of the thesis and revision of the thesis manuscript. Prerequisites: MHS 5995, MHS 5996, and MHS 5997 (3 credits)
Master of Health Science Option

Students applying to the Bachelor of Science—Medical Sonography (B.S.) who already hold a bachelor's degree from an accredited institution with a minimum GPA of 3.0 are eligible to apply for the concurrent Master of Health Science (M.H.Sc.) option. Students who enroll in this concurrent M.H.Sc. will graduate with a Bachelor of Science in Medical Sonography and a Master of Health Science. Both programs will be completed in 27 months. Upon application, a review of the bachelor's transcript will be conducted and all general education requirements will need to be satisfied. In addition, up to 27 credits of open electives will be transferred. Upon transfer credit evaluation, completion of any additional credit to meet or fulfill the 57 credits for general education and open elective requirements will be required.

Curriculum for the M.H.Sc.

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<td>Current Trends and Cultural Issues in Health Care</td>
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<td>MHS 5521</td>
<td>Ethical Issues in Health Care</td>
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<td>MHS 5205</td>
<td>Writing for Medical Publication</td>
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<td>MHS 5510</td>
<td>Research Methods</td>
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<td>MHS 5403</td>
<td>Directed Studies in Medical Sonography</td>
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<td>MHS 5501</td>
<td>Epidemiology and Biostatistics</td>
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<td>MHS 5530</td>
<td>Principles of Management in Health Care</td>
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<td>MHS 5107</td>
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<td>MHS 5207</td>
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Total M.H.Sc. Degree Semester Hours Required 37

Degree Map

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<th>Requirement</th>
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<td>General education requirements</td>
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<td>Open electives</td>
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<td>Medical sonography</td>
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<td>Total for B.S. in Medical Sonography</td>
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<td>M.H.Sc. credits (required)</td>
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Total Credit Hours Required to Complete the B.S. and the M.H.Sc. 162
Bachelor of Science in Medical Sonography with Concurrent Master of Health Science Option Course Descriptions

BHS 3100—Ultrasound Physics I/Lab
This course is designed to help the student acquire knowledge of all the fundamental principles and concepts necessary to understand the properties of sound and ultrasound as used in diagnostic imaging. These principles and concepts will span from basic properties of sound in soft tissue to advanced techniques such as Doppler, spectral analysis, and M-mode, as they pertain to evaluation for vascular and cardiac ultrasound imaging. The students will also learn about artifacts, safety, and the concepts of bioeffects. Some of the principles will be illustrated. (3 credit hours)

BHS 3111—Ultrasound Cross-Sectional Anatomy
This course is designed to expand upon student's present knowledge and understanding of normal anatomy through developing spatial relationships of organs, vessels, bones, muscles, and connective tissues. (4 credit hours)

BHS 3200—Ultrasound Physics Review
This course is designed to review the principles and concepts learned in BHS 3111 through quizzes and exams and to prepare students for the Sonography Principles and Instrumentation (SPI) exam administered by the ARDMS. The students will take the exam after completion of the course in late April/early May. (1 credit hour)

BHS 3220—Introduction to Diagnostic Medical Sonography
This course is designed to introduce students to the equipment used in vascular ultrasound. The course will, therefore, be primarily taught in the ultrasound training laboratory in small groups. The focus of the course will be to lead students toward proficiency and competency in using all the tools available on the ultrasound equipment for the production of quality images, as well as proper ergonomics. This course is the foundation for all the following core courses. (2 credit hours)

BHS 3300—Cerebrovascular Testing/Lab
This course will focus on the use of ultrasound for the evaluation of the extracranial and intracranial cerebrovascular circulation. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound, as well as some other imaging techniques. (4 credit hours)

BHS 3400—Venous Testing/Lab
This course will focus on the use of ultrasound for the evaluation of the venous circulation of the upper and lower extremities. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound, as well as some other imaging techniques. (4 credit hours)

BHS 3500—Peripheral Arterial Testing/Lab
This course will focus on the use of ultrasound for the evaluation of the arterial circulation of the upper and lower extremities. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. Lectures will focus on anatomy, pathologies, treatment options, and analysis of data obtained by ultrasound and other technologies specific to vascular laboratories, as well as some other imaging techniques. (4 credit hours)

BHS 3700—Clinical Preparation and Review
This course will provide and reinforce the non-technical aspects of the profession of diagnostic medical sonography. These include, but are not limited to, professionalism, patient care, and clinical rationale. This course will also prepare the students for the clinical experience that follows in the second year. (4 credit hours)

BHS 3800—Abdominal Sonography I
This course will review normal abdominal anatomy and physiology with a focus on cross-sectional anatomy. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory learning to recognize normal sonographic anatomy. Lectures will focus on the above mentioned aspects, as well as on how to collect patient information relevant to the different ultrasound studies and other imaging techniques. This course provides a foundation that will help students understand the clinical exam and the elements contributing to their role and the scope of practice as general sonographers. (4 credit hours)
BHS 3810—Abdominal Sonography II
This course will review abnormal abdominal anatomy and physiology with a focus on clinical correlations. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory strengthening the skills learned from Abdominal Sonography I. Lab assignments will incorporate case studies, clinical correlations, and other imaging modalities (e.g., MRIs, nuclear medicine, CTs, etc.). Lectures will focus on the above mentioned aspects, as well as on how to collect patient information relevant to the different ultrasound studies and pathologies. This course provides a foundation that will help students understand the clinical exam and the elements contributing to their role and the scope of practice as general sonographers. (4 credit hours)

BHS 3830—Small Parts Sonography
This course will focus on the use of ultrasound for the evaluation of superficial structures such as the thyroid and parathyroid glands, breasts, male reproductive system, superficial soft tissue structures, shoulders, hands, and wrists, as well as the neonatal brain, pediatric spine, pediatric hip/pelvis, and pediatric abdomen. It will have a strong hands-on component with students spending several hours in the laboratory. Lectures will focus on relevant normal and abnormal anatomical and physiological aspects, as well as on clinical findings, signs, and symptoms of diseases related to these areas. (4 credit hours)

BHS 3900—Obstetrics and Gynecology Ultrasound I
This course will focus on the use of ultrasound for the evaluation of the organs in the human female pelvic cavity in both normal and abnormal, gravid and non-gravid anatomy and physiology. It will have a strong hands-on component with students spending several hours per week in the ultrasound training laboratory. The lectures will focus on the aspects previously mentioned, as well as on fetal abnormalities and abnormal conditions of the fettus. The course will explore infertility and assisted reproductive technologies. (4 credit hours)

BHS 3910—Obstetrics and Gynecology Ultrasound II
This course is a continuation of Obstetrics and Gynecology Ultrasound I. It is a further comprehensive approach to in-depth studies of the organs contained within the human female pelvic cavity in both normal and abnormal, gravid and non-gravid anatomy and physiology. The course will focus on fetal abnormalities and abnormal conditions of the fetus. (4 credit hours)

BHS 4500—Clinical Externship I
This course will be mainly provided through immersion in a clinical setting assigned by the end of the first year. Students will be a daily integral part of the operations of the diagnostic ultrasound department they have been assigned to for the length of the term. Students will report to the clinical coordinator or an assigned professor of the program at NSU. (6 credit hours)

BHS 4600—Clinical Externship II
This course is a continuation of Clinical Externship I. (7 credit hours)

BHS 4700—Clinical Externship III
This course is a continuation of Clinical Externship II. (8 credit hours)

MHS 5003—Current Trends and Cultural Issues in Health Care
This course serves to familiarize the student with current 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 credit hours)

MHS 5205—Writing for Medical Publication
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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 process that providers and patients engage in are analyzed. Topics will include informed consent and the allocation of scarce resources. (3 credit hours)

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. It will explore topics such as concepts of organizational management decision making, strategic planning, resource management and allocation, conflict, and the concept of power. (3 credit hours)

MHS 5107—Internship
The student will complete 80 hours of internship in an area of interest within a health care organization, outside of his or her regular place 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 M.H.Sc. faculty member approval. (5 credit hours)

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 promotion, and disease prevention interventions with underserved and/or nontraditional populations. (5 credit hours)

MHS 5403—Directed Studies in Medical Sonography
This course is the foundation of a three-tiered series that will culminate in a paper or poster presentation based on extensive research on a particular topic in diagnostic medical ultrasound/technology. In this first part of the course, the student will select a topic related to the field of diagnostic medical sonography/technology, obtain approval from the program director, and explore the foundation of that topic, including issues and questions. (9 credit hours)

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: 82
• 21 hours completed in the M.H.Sc. program
• 61 hours completed in the D.H.Sc. program
• M.H.Sc. degree awarded after completion of 44 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 College of Health Care Sciences.

**Tuition and Fees**

Tuition for M.H.Sc. courses are $400 per semester hour for courses offered during the summer II and fall 2015 terms. Tuition for winter, spring, summer II, and fall 2016 terms will subsequently be posted on our website (www.nova.edu/cah/healthsciences/mhs).

Tuition for D.H.Sc. courses are $628 per semester hour for courses offered during the summer II and fall 2015 terms. Tuition for winter, spring, summer II, and fall 2016 terms subsequently will be posted on our website (www.nova.edu/cah/healthsciences/dhs).

An NSU student services fee of $1,050 is also 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 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 below.

- World Education Services, Inc.
  Bowling Green Station
  P.O. Box 5087
  New York, New York 10274-5087
  (212) 966-6311
  www.wes.org
- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com
- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 Health Care Sciences, Department of Health Science Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

5. complete resume or curriculum vitae
6. copies of national and professional certifications or licenses by a recognized certifying body (if applicable)
Complete applications and all admission documentation must be sent to
Nova Southeastern University
Enrollment Processing Services
College of Health Care Sciences
M.H.Sc./D.H.Sc. Accelerated Track
3301 College Avenue, PO Box 299000
Fort Lauderdale, Florida 33329-9905
Phone: (954) 262-1101
877-640-0218
Fax: (954) 262-2282

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.

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 61 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 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 2009

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</td>
<td>Current Trends and Cultural Issues in Health Care</td>
</tr>
<tr>
<td>MHS 5205</td>
<td>Writing for Medical Publication</td>
</tr>
<tr>
<td>MHS 5501</td>
<td>Epidemiology and Biostatistics</td>
</tr>
<tr>
<td>MHS 5530</td>
<td>Principles of Management in Health Care</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 23 credits in the DHS courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8040</td>
<td>Professionalism and Health Care Ethics</td>
</tr>
<tr>
<td>DHS 8010</td>
<td>Statistics and Research Methods</td>
</tr>
<tr>
<td>Student’s choice of a DHS course</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8125</td>
<td>Preparation for the Internship/Practicum</td>
</tr>
</tbody>
</table>
### M.H.Sc. Degree Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5003</td>
<td>Current Trends and Cultural Issues in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5205</td>
<td>Writing for Medical Publication</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5501</td>
<td>Epidemiology and Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5530</td>
<td>Principles and Practice of Management in Health Care</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total:</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

#### MHS Elective Courses (choose three)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS 5211</td>
<td>Contemporary Issues in Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5541</td>
<td>Health Care Systems and Conflict</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5543</td>
<td>Educational Theories and Psychology</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5544</td>
<td>Curriculum and Instruction in Health Care Education</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5545</td>
<td>Assessment and Evaluation in Health Care Education</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5400</td>
<td>Directed Studies in Medical Science</td>
<td>3</td>
</tr>
<tr>
<td>MHS 5546</td>
<td>Health Care Finance</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total credits completed in the M.H.Sc. program:</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

### D.H.Sc. Degree Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8040</td>
<td>Professionalism and Health Care Ethics</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8190</td>
<td>Health Care Education</td>
<td>4</td>
</tr>
<tr>
<td>DHS course for internship/practicum preparation</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total:</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

#### 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 Code</th>
<th>Course Title</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>
<td>4</td>
</tr>
<tr>
<td>DHS 8030</td>
<td>Community Health Promotion and Disease Prevention</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8090</td>
<td>Health Policy</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8110</td>
<td>Community/Environmental Health</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Total:</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>
### Required Summer Residential Institutes

<table>
<thead>
<tr>
<th>Course</th>
<th>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 8080</td>
<td>Conflict Resolution</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8170</td>
<td>Leadership in Health Care</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total:** 12

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 both the generalist concentration and the conflict resolution concentration.

### Block 2

<table>
<thead>
<tr>
<th>Course</th>
<th>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>
<td>4</td>
</tr>
</tbody>
</table>

**Total:** 4

### Experiential

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8125</td>
<td>Preparation Forum</td>
<td>1</td>
</tr>
<tr>
<td>DHS 8130</td>
<td>Internship</td>
<td>5</td>
</tr>
<tr>
<td>DHS 8140</td>
<td>Practicum</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total:** 11

### Required Capstone

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8120</td>
<td>Doctoral Analysis</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total:** 2

### 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</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8100</td>
<td>Alternative and Complementary Medicine</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8180</td>
<td>Medical Writing</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
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 credit hours)

MHS 5205—Writing for Medical Publication
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 credit hours)

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 credit hours)

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 credit hours)

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 credit hours)

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 credit hours)

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 credit hours)

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 credit hours)

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 credit hours)

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 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 credit hours)
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 credit hours)

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 credit hours)

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 credit hours)

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 credit hours)

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 credit hours)

DHS 8080—Conflict Resolution in Health Care
This course examines and analyzes the nature and dynamics of human conflict within civil societies. Emphasis is placed upon conflicts within and among governments and public sector agencies and between the health provider, patients, and medical institutions. Students will be expected to take an active role in the course and develop their own strategies for dealing with conflict. A paper will be required that details and analyzes a conflict situation in the student’s work or other environment and how the conflict was resolved. (4 credit hours)

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 credit hours)

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 credit hours)

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 credit hours)

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 credit hours)

DHS 8120—Doctoral Analysis
In this faculty-supervised project, the capstone of the program, the student will develop a paper using the objectives from the core courses and one elective as guidelines and references to form the basis of the paper. This will require research into teaching and learning methods as well as online and in-class comparisons. The outcome or final product will be an in-depth analysis of the information presented and the knowledge gained during the doctoral program. This paper will also include methods for improving the program of study in the D.H.Sc. department and detailed methods to be used to deliver the proposed changes. (2 credit hours)

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 hour)

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 (5 credit hours)

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 (5 credit hours)

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 hours)

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 credit hours)
DHS 8170—Leadership in Health Care
This course explores the various methods of leadership and management, both in and out of health care, and their impact on productivity, profitability, and employee satisfaction. Critical analysis of the different types of leadership and management theories is given and the need for developing a leadership plan is explored. The student is expected to gain knowledge of the various types of leaders and systems and will be required to research and develop a paper on a specific leadership topic. (4 credit hours)

DHS 8180—Medical Writing
This course examines in practical terms the elements required for the successful publication of a 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. (4 credit hours)

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 credit hours)

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 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 credit hours)

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 credit hours)

DHS 8300—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. 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 credit hours)

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 credit hours)

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. 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 credit hours)
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 credit hours)

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 access to health care, the cost of health care, the quality of health care, and protection of the person of the patient. (4 credit hours)

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 credit hours)

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 controls are discussed. (4 credit hours)

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 credit hours)

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 credit hours)

Doctor of Health Science (D.H.Sc.) Program
The D.H.Sc. has a two-concentration curriculum. One is the generalist concentration. The second is the generalist course of study with a concentration in global health studies. The generalist D.H.Sc. program requires completion of a minimum of 61 semester hours of coursework. This includes 48 semester hours didactic coursework, 11 semester hours practical coursework, and 2 semester hours for the Doctoral Objective Analysis. The generalist D.H.Sc. program with a concentration in global health studies also consists of 61 semester hours, with the majority of electives and the internship and practicum dedicated to global health topics.

The D.H.Sc. program is designed for completion in a distance learning format and requires only minimal on-campus time during two intensive, one-week, summer institute seminar sessions. The residential summer sessions are available at the NSU campuses or student educational centers, with the location varying from year to year.

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 generalist course of study, the student must complete a practicum and internship approved by the D.H.Sc. program director in an area of health care such as leadership, education, policy, or delivery. Students selecting the global health concentration will focus their internship and practicum work in the global health arena. The internship is used to expose the student to an area of health care 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 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 the 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 non-clinical (An administrative/non-clinical 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
College of Health Care Sciences Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 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, New York 10274-5087
  (212) 966-6311
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 Health Care Sciences, Department of Health Science Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

5. a complete resume or CV
6. copies of national and professional certifications or licenses by recognized certifying bodies

A writing sample may be required beginning in winter 2013.

Administrative/non-clinical 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
College of Health Care Sciences Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 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 are $628 per semester hour for courses offered during the summer II and fall 2015 terms. Tuition for winter, spring, summer II, and fall 2016 terms subsequently will be posted on our website (www.nova.edu/caf/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 $1,050 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 61 semester hours (minimum) of study required for the degree.
- successfully complete the D.H.Sc. internship and practicum, and doctoral analysis
- receive a recommendation by the D.H.Sc. program director to the dean of the College of Health Care Sciences
## Curriculum Outline

### Core Courses

#### Core Block One—16 credits

Four of the following courses are required. Either DHS 8090 or DHS 8095 may be used to fulfill the health policy requirement. Either 8040 or 8045 will fulfill the ethics requirement. Courses not taken as requirements may be used as electives.

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>DHS 8000 Clinical Competencies in the Delivery of Health Care to Diverse and Special Populations 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours</td>
<td>DHS 8030 Community Health Promotion and Disease Prevention 4</td>
</tr>
<tr>
<td>OR</td>
<td>DHS 8040 Professionalism and Health Care Ethics 4</td>
</tr>
<tr>
<td>OR</td>
<td>DHS 8045 The Influence of Ethics and Culture on Global Health 4</td>
</tr>
<tr>
<td>OR</td>
<td>DHS 8090 Health Policy, Planning, and Management 4</td>
</tr>
<tr>
<td>OR</td>
<td>DHS 8095 Global Health Policy 4</td>
</tr>
<tr>
<td>Credit Hours</td>
<td>DHS 8110 Community Environmental and Occupational Health 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 matriculating after July 2007 should take at least one ethics course (either 8040 or 8045) and one health policy course (either 8090 or 8095), unless they obtain program director approval.

#### Core Block Two—8 credits

Two of the following courses are required. The other courses may be omitted or used as electives.

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>DHS 8400 Global Health Issues 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours</td>
<td>DHS 8750 Patient Safety Medical Error 4</td>
</tr>
<tr>
<td>Credit Hours</td>
<td>DHS 8190 Health Care Education 4</td>
</tr>
<tr>
<td>DHS 8800 Health Care Informatics 4</td>
<td></td>
</tr>
<tr>
<td>DHS 8810 Epidemiology and Global Health 4</td>
<td></td>
</tr>
<tr>
<td>HSP 9006 Evidence-Based Medical Practice 4</td>
<td></td>
</tr>
</tbody>
</table>

Students interested in the global health concentration should take DHS 8400 and DHS 8810, either as core courses or electives.
### Experiential (required)—11 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8125</td>
<td>Preparation Forum</td>
<td>1</td>
</tr>
<tr>
<td>DHS 8130</td>
<td>Internship</td>
<td>5</td>
</tr>
<tr>
<td>DHS 8140</td>
<td>Practicum</td>
<td>5</td>
</tr>
</tbody>
</table>

### Summer Residential Institutes (required)—12 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8010</td>
<td>Statistics and Research Methods</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8080</td>
<td>Conflict Resolution in Health Care</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8170</td>
<td>Leadership in Health Care</td>
<td>4</td>
</tr>
</tbody>
</table>

### Electives (two or three courses must be completed)—8–12 Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8100</td>
<td>Alternative and Complementary Medicine</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8180</td>
<td>Medical Writing</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8200</td>
<td>Independent Study A</td>
<td>4</td>
</tr>
<tr>
<td>DHS 8250</td>
<td>Independent Study B</td>
<td>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 8900</td>
<td>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.

### Capstone (required)—2 Credits

This course must be completed in the last semester of coursework.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHS 8120</td>
<td>Doctoral Analysis</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 both the generalist concentration and the conflict resolution concentration.
Doctor of Health Science Course Descriptions

DHS 8000—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 credit hours)

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 credit hours)

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 credit hours)

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 credit hours)

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 ethical 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 explore 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 credit hours)

DHS 8080—Conflict Resolution in Health Care
This course critically examines the dynamics of human conflict within civil societies. Emphasis is placed on conflicts within and among governments and public sector agencies and between the health provider, patients, and medical institutions. Students will be expected to take an active role in the course and develop their own strategies for dealing with conflict. A paper will be required that details and analyzes a conflict situation in the student’s work or other environment and how the conflict was resolved. (4 credit hours)

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 credit hours)
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 credit hours)

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 credit hours)

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 credit hours)

DHS 8120—Doctoral Analysis
In this faculty member-supervised project, and the capstone of the program, the student will develop a paper using the objectives from the core courses and one elective as guidelines and references to form the basis of the paper. This will require research into teaching and learning methods, as well as online and in-class comparisons. The outcome or final product will be an in-depth analysis of the information presented and the knowledge gained during the doctoral program. This paper will also include methods for improving the program of study in the D.H.Sc. program and detailed methods to be used to deliver the proposed changes. (2 credit hours)

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 hour)

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 (5 credit hours)

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 (5 credit hours)

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 hours)
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 credit hours)

DHS 8170—Leadership in Health Care
This course explores the various methods of leadership and management, both in and out of health care, and their impact on productivity, profitability, and employee satisfaction. Critical analysis of the different types of leadership and management theories is given and the need for developing a leadership plan is explored. The student is expected to gain knowledge of the various types of leaders and systems and will be required to research and develop a paper on a specific leadership topic. (4 credit hours)

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This course examines in practical terms the elements required for the successful publication of a 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. (4 credit hours)

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 credit hours)

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 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. (1–4 credit hours)

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. (1–4 credit hours)

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 credit hours)

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 credit hours)
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 credit hours)*

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 credit hours)*

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 credit hours)*

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 credit hours)*

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 credit hours)*

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 credit hours)*

Capstone Course (all)

DHS 8120—Doctoral Analysis
In this faculty-supervised project, the capstone of the program, the student will develop a paper using the objectives from the core courses and one elective as guidelines and references to form the basis of the paper. This will require research into teaching and learning methods as well as online and in-class comparisons. The outcome or final product will be an in-depth analysis of the information presented and the knowledge gained during the doctoral program. This paper will also include methods for improving the program of study in the D.H.Sc. department and detailed methods to be used to deliver the proposed changes. *(2 credit hours)*
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. program is 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. 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 (e.g., Au.D., D.P.T., O.T.D.) 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. Applicants must 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 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., M.A. or M.S. in Audiology, D.P.T., O.T.D.), or a combination of the above. 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.

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 College of Health Care Sciences, who makes the final determination.
5. Applicant must have a personal interview with the Ph.D. Committee on Admissions (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 resume 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 works on a rolling basis. 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
College of Health Care Sciences Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 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, New York 10274-5087
  (212) 966-6311
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 (fax)
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 resume 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

Applicant must also have a personal interview with the Ph.D. Committee on Admissions. (A telephonic or Skype interview is accepted, based on the applicant’s needs.)

Nonclinical applicants (health administrators) 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 transfer of credits to the program. A maximum of 8 credit hours may be considered for transfer from a regionally accredited doctoral program of study, but only if the transferred courses meet the goals and objectives of the course in question.

**Tuition and Fees**
Tuition for Ph.D. courses is $628 per semester hour for courses offered during the summer II and fall 2015 terms. Tuition for winter, spring, summer II, and fall 2016 terms subsequently will be posted on our website (www.nova.edu/chcs/healthsciences/phd/index.html). 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 $1,050 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 Ph.D. in Health Science degree, students must

- be of good moral character
- complete the minimum required coursework of 67 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**

<table>
<thead>
<tr>
<th>DHS Core Courses—24 Credits</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>DHS 8030 Community Health Promotion and Disease Prevention</td>
<td>4</td>
</tr>
<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>
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</table>
DHS 8080 Conflict Resolution in Health Care* 4
DHS 8170 Leadership in Health Care* 4
HSP 9006 Evidence-Based Medical Practice 4

* DHS 8080 and DHS 8170 are required summer institute courses.

<table>
<thead>
<tr>
<th>HPD Research Core Courses—18 Credits</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>HPH 7300 Biostatistics I</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7310 Biostatistics II</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7400 Research Design</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7410 Qualitative Research Design</td>
<td>3</td>
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<tr>
<td>HPH 7500 Philosophy of Science</td>
<td>3</td>
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<tr>
<td>OR HPH 7600 Grant Writing and Publication</td>
<td>3</td>
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<tr>
<td>HPH 7700 Test and Measurements</td>
<td>3</td>
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</tbody>
</table>

<table>
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<tr>
<th>Health Science Research Courses—25 Credits</th>
<th>Credit Hours</th>
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<tr>
<td>HSP 9001 Behavior Theories in Health Science</td>
<td>3</td>
</tr>
<tr>
<td>HSP 9002 Survey Methodology</td>
<td>3</td>
</tr>
<tr>
<td>HSP 9003 Research Ethics</td>
<td>3</td>
</tr>
<tr>
<td>HSP 9007 Research Practicum*</td>
<td>4</td>
</tr>
<tr>
<td>HSP 9010 Research Practicum Continued</td>
<td>2**</td>
</tr>
</tbody>
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*HSP 9007 is a required winter institute course.

<table>
<thead>
<tr>
<th>Comprehensive Exam—0 Credits</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>HSP 9008 Comprehensive Exam</td>
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</table>

<table>
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<tr>
<th>Dissertation—12 Credits</th>
<th>Credit Hours</th>
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<tr>
<td>HSP 9011 Dissertation</td>
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<tr>
<td>HSP 9012 Dissertation</td>
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<tr>
<td>HSP 9013 Dissertation</td>
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<tr>
<td>HSP 9014 Dissertation</td>
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<tr>
<td>HSP 9015 Dissertation</td>
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<tr>
<td>HSP 9016 Dissertation</td>
<td></td>
</tr>
<tr>
<td>HSP 9017 Dissertation Continuation</td>
<td>2**</td>
</tr>
</tbody>
</table>

**There is a continuing service charge for this course.
Doctor of Philosophy in Health Science Course Descriptions

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 8080—Conflict Resolution in Health Care
This course examines and analyzes the nature and dynamics of human conflict within civil societies. Emphasis is placed on conflicts within and among governments and public sector agencies and between the health provider, patients, and medical institutions. Students will be expected to take an active role in the course and develop their own strategies for dealing with conflict. A paper will be required that details and analyzes a conflict situation in the student's work or other environment and how the conflict was resolved. (3 credits, on-campus institute)

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 8170—Leadership in Health Care
This course explores the various methods of leadership and management, both in and out of health care, and their impact on productivity, profitability, and employee satisfaction. Critical analysis of the different types of leadership and management theories is given and the need for developing a leadership plan is explored. The student is expected to gain knowledge of the various types of leaders and systems and will be required to research and develop a paper on a specific leadership theory. (3 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—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—Grant Writing
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 9003—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 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 67. (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 Nova Southeastern University main campus in the greater Fort Lauderdale, Florida, area. Students register with the Department of Health Science prior to attending one of the institutes to take the comprehensive exam and receive an examination number. 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 do not show, or students who do not contact the program director requesting to be excused from the examination, will automatically fail the comprehensive examination. Students must take the comprehensive examination within one year of completion of all academic coursework. Students who fail to complete the requirements within the time frame will automatically fail the comprehensive examination. Students who have failed the comprehensive exam are referred to the Department of Health Science Committee for Student Progress (CSP) for possible dismissal from the Ph.D. program. The CSP then makes recommendations to the department chair. The department chair notifies the student of the decision by certified mail (return receipt requested) and by email with response requested. Students have the right to appeal the decision of dismissal from the Ph.D. program to the College of Health Care Sciences Appeals Committee within five business days of notification from the chair of their department.

The grading of the comprehensive examination is on a Pass/Fail basis. 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 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 who pass two of the three categories may retake the one failed category at the next scheduled examination date. Students have one opportunity to pass the failed category. Students who wish to dispute their grades must contact the Ph.D. program director, as there is no direct communication between graders and students. 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 level. Failure to pass the comprehensive examination may result in dismissal from the program, irrespective of students’ performance in other aspects of doctoral study. Students who do not pass two, or all three, categories have failed the comprehensive exam and are referred to the Department of Health Science Committee for Student Progress.

Students are strongly encouraged to familiarize themselves with the academic standards and the academic honesty policy and procedure as described in the College of Health Care Sciences Student Handbook. (0 credits)
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 main campus. The oral defense must be arranged at least 45 days in advance. Process and requirements are detailed in the Health Professions Division 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 on NSU’s main campus in Fort Lauderdale, Florida, or the NSU campus in Tampa, Florida. Three institute courses, taken in a minimum of two 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 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.), 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 M.O.T. is 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 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 4720 Montgomery Lane, Suite 200, Bethesda, Maryland 20814-3449. 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 in at least two different OT environments
- 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 350 and a quantitative score of 450 (tests taken prior to August 1, 2011) or a GRE verbal score of 143 and a quantitative score of 141 (tests taken after August 1, 2011) and an analytical writing score of at least 3.5.
### Prerequisite Courses

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<th>Semester Hours</th>
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<td>Biology with lab (introduction, general, or principles of)</td>
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<tr>
<td>Anatomy (human) and physiology (including lab)</td>
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<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></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>
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</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>
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<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>
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<th>Course Title</th>
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<tbody>
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<td>Theories of personality</td>
<td>3</td>
</tr>
<tr>
<td>Logic/philosophy</td>
<td>3</td>
</tr>
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</table>

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### 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 February 2. 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 [www.otcas.org](http://www.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 M.O.T. application form by the deadline of March 2 for further consideration, along with a $50, nonrefundable application fee.

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 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 in at least two different OT practice settings. Some of these environments include hospitals, clinics, and private practices with a variety of populations. Documentation of volunteer hours must be submitted within the OTCAS system.

Upon receipt of all materials from OTCAS, the supplemental 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
College of Health Care Sciences
Occupational Therapy Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 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 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 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, Florida 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 www.nsu.edu/bhs or email bhsinfo@nsu.nova.edu.

Tuition and Fees

Tuition for 2015–2016 (subject to change by the board of trustees without notice) is $29,000.

A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 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.

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 (101 credits) with a minimum grade of 78 percent in each OCT course and 70 percent in anatomy, physiology, and neuroanatomy
• have satisfactorily met all financial and library obligations
• successfully complete Level II fieldwork within 24 months of completion of didactic courses
• attend in person the commencement program in the year that the diploma will be conferred
## Master of Occupational Therapy Program Curriculum Outline

### First Year—Summer Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCT 5014</td>
<td>Introduction to Occupational Therapy</td>
<td>2</td>
</tr>
<tr>
<td>OCT 5963</td>
<td>Fieldwork Issues I</td>
<td>1</td>
</tr>
<tr>
<td>ANA 5420</td>
<td>Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>OCT 5400</td>
<td>Physiology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits 11**

### First Year—Fall Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCT 5800</td>
<td>Applied Kinesiology for Occupational Therapy</td>
<td>3</td>
</tr>
<tr>
<td>OCT 5101</td>
<td>Theoretical Foundations of Occupational Therapy Practice</td>
<td>2</td>
</tr>
<tr>
<td>OCT 5013</td>
<td>Occupational Analysis</td>
<td>2</td>
</tr>
<tr>
<td>OCT 5121</td>
<td>Impact of Human Conditions on Occupational Performance I</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credits 11**

### First Year—Winter Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANA 5533</td>
<td>Neuroanatomy</td>
<td>3</td>
</tr>
<tr>
<td>OCT 5011</td>
<td>Occupational Performance and Participation Throughout the Life Span</td>
<td>3</td>
</tr>
<tr>
<td>OCT 5123</td>
<td>Impact of Human Conditions on Occupational Performance II</td>
<td>4</td>
</tr>
<tr>
<td>OCT 5130</td>
<td>Human Interactions</td>
<td>2</td>
</tr>
<tr>
<td>OCT 5174</td>
<td>Research Methods</td>
<td>4</td>
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</tbody>
</table>

**Total Credits 16**

### Second Year—Summer Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCT 5015</td>
<td>Impact of Environment on Occupational Performance</td>
<td>3</td>
</tr>
<tr>
<td>OCT 6106</td>
<td>OT Practice for Mental Health and Wellness</td>
<td>5</td>
</tr>
<tr>
<td>OCT 6101</td>
<td>OT Practice for Mental Health and Wellness Practicum</td>
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</table>

**Total Credits 9**
### Second Year—Fall Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCT 6107</td>
<td>OT Practice with Children and Adolescents or Adults and Older Adults</td>
<td>8</td>
</tr>
<tr>
<td>OCT 6102</td>
<td>OT Practice Practicum</td>
<td>1</td>
</tr>
<tr>
<td>OCT 6175</td>
<td>Research Development Seminar</td>
<td>2</td>
</tr>
<tr>
<td>OCT 6150</td>
<td>Professionalism and Management</td>
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</table>

**Total Credits** 14

### Second Year—Winter Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCT 6108</td>
<td>OT Practice with Children and Adolescents or Adults and Older Adults</td>
<td>8</td>
</tr>
<tr>
<td>OCT 6103</td>
<td>OT Practice Practicum</td>
<td>1</td>
</tr>
<tr>
<td>OCT 6176</td>
<td>Research Practicum</td>
<td>2</td>
</tr>
<tr>
<td>OCT 6980</td>
<td>Fieldwork Issues II</td>
<td>1</td>
</tr>
<tr>
<td>OCT 6350</td>
<td>Professionalism and Leadership</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Credits** 14

### Third Year—Summer/Fall Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCT 6981</td>
<td>Fieldwork Experience II (40 hours/week for 12 weeks)</td>
<td>12</td>
</tr>
<tr>
<td>OCT 6982</td>
<td>Fieldwork Experience II (40 hours/week for 12 weeks)</td>
<td>12</td>
</tr>
</tbody>
</table>

**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 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449. 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 http://nova.edu/chcs/ot/index.html.

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)
- submit entry-level Graduate Record Examination (GRE) scores, a written essay, and letters of recommendation
- 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 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—A) score of 54, if applicable
Prerequisite Courses

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Recommended Courses

The following additional courses will also help in the occupational therapy curriculum.

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<tr>
<td>Logic/philosophy</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 February 2016. 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 www.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 settings. 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 select those applicants for interview. Those selected will be notified in writing of the time and place of the interview. An invitation to
appear for an interview 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
College of Health Care Sciences
Occupational Therapy Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 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 College of Health Care Sciences, Occupational Therapy Department—Tampa. 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, Florida 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 www.nsu.edu/bhs or email bhsinfo@nsu.nova.edu.

Tuition and Fees

Tuition for 2015–2016 (subject to change by the board of trustees without notice) for Florida residents and out-of-state students is $30,750.

A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 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

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**Entry-Level Doctor of Occupational Therapy Program Curriculum Outline**

<table>
<thead>
<tr>
<th>First Year—Summer Semester (12 weeks)</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ANAT 5420 Anatomy</td>
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</tr>
<tr>
<td>OTD 8101 Introduction to Didactic, Clinical, and Capstone Experiences</td>
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</tr>
<tr>
<td>OTD 8102 Foundations of Occupational Therapy</td>
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<tr>
<th>First Year—Fall Semester (16 weeks)</th>
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<tbody>
<tr>
<td>OTD 8103 Kinesiology in Occupations</td>
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</tr>
<tr>
<td>OTD 8141 Development of Occupation Across the Life Span</td>
<td>3</td>
</tr>
<tr>
<td>OTD 8142 Occupational and Contextual Analysis</td>
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</tr>
<tr>
<td>OTD 8151 Human Conditions and Occupations I</td>
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<thead>
<tr>
<th>First Year—Winter Semester (16 weeks)</th>
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<tr>
<td>ANAT 5423 Neuroanatomy</td>
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<tr>
<td>OTD 8152 Human Conditions and Occupations II</td>
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<tr>
<td>OTD 8143 Therapeutic Use of Self</td>
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<td>OTD 8161 Evidence in Occupational Therapy Practice</td>
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<tr>
<td>Course Code</td>
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<tr>
<td>OTD 8271</td>
<td>Occupational Therapy Interventions I—Psychosocial and Community</td>
</tr>
<tr>
<td>OTD 8281</td>
<td>Business of Practice and Management</td>
</tr>
<tr>
<td>OTD 8244</td>
<td>Innovations and Technology in Occupational Therapy</td>
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<tr>
<td>OTD 8272</td>
<td>Occupational Therapy Interventions II—Children and Youth</td>
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<tr>
<td>OTD 8262</td>
<td>Research Design</td>
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<td>Occupational Therapy Interventions III—Physical Disabilities</td>
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<td>OTD 8262L</td>
<td>Research Design Lab</td>
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<td>OCT 8282</td>
<td>Professional Leadership</td>
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<td>OTD 8391</td>
<td>Fieldwork Experience II</td>
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<td>Doctoral Certification and Introduction to Residency Program</td>
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<td>OR</td>
<td>OTD 8300 Specialized Course—Occupational Science</td>
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<td>OR</td>
<td>OTD 8340 Specialized Course—Wellness in Occupational Therapy</td>
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<tr>
<td>OTD 8363</td>
<td>Capstone Project I</td>
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<td>OTD 8363L</td>
<td>Capstone Project I Lab</td>
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<tr>
<td>OR</td>
<td>OTD 8360 Specialized Course—Applying Measurement Theory to Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td>OTD 8370 Specialized Course—Sensory Processing Basis of Occupational Performance</td>
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### Fourth Year—Summer Semester (12 weeks)

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<td>OTD 8493</td>
<td>Fieldwork Experience II</td>
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**Total Credits 12**

### Fourth Year—Fall Semester (16 weeks)

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<td>OTD 8494</td>
<td>Doctoral Residency</td>
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<tr>
<td>OTD 8464</td>
<td>Capstone Project II—Reflections and Exit Colloquium</td>
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**Total Credits 18**

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 clinical 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 90 percent are assured consideration for admission to the Dr.O.T. program.

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. (www.wes.org), Josef Silny & Associates, Inc. (www.jsilny.com), or Educational Credential Evaluators, Inc. (www.ece.org).

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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
- former NSU M.O.T. students who graduated after November 2009 and began the Dr.O.T. program within two years of graduation are required to complete 36 credits
- 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 Summer Research Institutes and four-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:

- HPH 7300—Fundamentals of Biostatistics (3 credits)
- HPH 7310—Principles of Statistical Inference (3 credits)
- HPH 7400—Research Design (3 credits)
- HPH 7410—Qualitative Research (3 credits)
- HPH 7500—Philosophy of Science (3 credits)
- HPH 7600—Grant Writing and Publication (3 credits)
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. Minimum Requirements
   - GPA of 3.5 on a 4.0 scale
   - graduate-level research methods course
   - introductory statistics course
   - master’s degree

3. 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—A) score of 54.

4. 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.

Application Procedures

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. TOEFL, IELTS, or PTE—A scores (international students, if appropriate)
5. official college transcripts from all undergraduate and graduate institutions attended, sent directly to

   Nova Southeastern University
   Enrollment Processing Services
   College of Health Care Sciences
   Occupational Therapy Admissions
   3301 College Avenue, P.O. Box 299000
   Fort Lauderdale, Florida 33329-9905

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
- successfully defend the dissertation, in person, within four years of passing the qualifying examination
- 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
- present dissertation research and findings at pregraduation symposium or professional conference or meeting
- provide four copies of dissertation, bound in accordance with program requirements
- submit dissertation to the University of Michigan’s Dissertation Abstracts International (ProQuest/UMI)
- satisfactorily meet all financial and library obligations
All foreign coursework must be evaluated by World Education Services, Inc. (www.wes.org), Josef Silny & Associates, Inc. (www.jsilny.com), or Educational Credential Evaluators, Inc. (www.ece.org).

6. 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.

Doctoral Tuition and Fees (Ph.D.)
1. Tuition for academic year 2015–2016 (subject to change by the board of trustees without notice) is $650 per credit hour.

2. A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 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.

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 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 and one other Ph.D. committee member 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 Ph.D. program director.
Occupational Therapy Course Descriptions

ANA 5420—Anatomy
Details human anatomy. Laboratory activities consist of student teams studying prosected cadavers, sections, bone sets, videotapes, radiographs, and models. (5 credits)

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 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. (2 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 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 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—Impact of Human Conditions 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—Impact of Human Conditions 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 therapeutic 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. (4 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 5963—Fieldwork Issues I
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 6101—OT Practice for Mental Health and Wellness Practicum
This course consists of Level I fieldwork related to occupational therapy practice in settings focused on mental health and mental illness for populations across the life span. It provides students with opportunities to apply knowledge and skills from the classroom to contemporary settings. (1 credit)

OCT 6102—OT Practice 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. (1 credit)

OCT 6103—OT Practice Practicum
This course consists of Level I fieldwork related to occupational therapy 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. (1 credit)

OCT 6106—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 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. (8 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. health care 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. health care 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 MOT 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 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 1 fieldwork with opportunity for exposure to varied professional leadership roles. (2 credits)

OCT 6980—Fieldwork Issues II
This second course in the Fieldwork Issues sequence builds on Fieldwork Issues I by continuing 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 become an evidence-based practitioner. 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, implement the findings into practice, and disseminate the findings. 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 7104—Occupational Science
The 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. (3 credits) Elective

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 professional 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
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. Advanced-level course: It is anticipated that students will have some prior knowledge and experience in this area of practice. (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. Prerequisite: OCT 7010 (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) Elective

OCT 7791—Grant Practicum
In this course, students develop 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 a hands-on approach, students learn to locate online, and conventional sources of funding at federal, foundation, and corporate levels in order to produce a finished, usable grant proposal. (3 credits) Elective

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 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 cumulating 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)

OTD 8101—Introduction to Didactic, Clinical, and Capstone 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. (1 credit)

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. (3 credits)

OCT 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 Capstone 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
This is the first course in a four-course series on research. It provides students with fundamental knowledge that will help them to 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. (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
This course is the second of four in a series of evidence-based practice and research methods. Students develop a viable research proposal. At the end of the semester, students will complete a research proposal and have it ready to submit for IRB review. (2 credits)

OTD 8262L—Research Design Lab
Please see description of OTD 8262—Research Design. (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 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. (10 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. (10 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 8363—Capstone Project I
This is the third in the series of four 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. (2 credits)

OTD 8363L—Capstone Project I
Please see description of OTD 8363—Capstone Project I. (1 credit)

OTD 8391—Fieldwork Experience II
This course is a 12-week, supervised internship in an approved practice setting. Prerequisite: completion of formal predoctoral certification courses (12 credits)

OTD 8392—Doctoral Certification and Introduction to Residency Program
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 (0 credit)

OTD 8464—Capstone Project II: Reflections and Exit Colloquium
This is the final course of the four-course series of research methods. It culminates with the opportunity for the student to prepare the presentation of a capstone project to the community and to reflect on the entire experience leading to an O.T.D. degree. Prerequisite: completion of doctoral residency and capstone project (2 credits)

OTD 8494—Doctoral Residency
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. Prerequisite: doctoral certification (16 credits)

Specialized Course
These courses provide the student with the opportunity to select two courses of 3 credits each from the four specialized courses listed below. (3 credits)

OTD 8300—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 8340—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 8360—Applying Measurement Theory to Evaluation
Prerequisite: 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 8370—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.
**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—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—Grant Writing and Publication**
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)
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. More than 900,000 people a day are helped by physical therapists to restore health, alleviate pain, and prevent the onset of disease.

The mission of the Nova Southeastern University Department of Physical Therapy is to prepare entry-level and postprofessional physical therapists with the requisite skills needed to practice, educate, lead, and conduct research in interdisciplinary environments. The programs are committed to strategies that enhance the contemporary practice of physical therapy. The department promotes accessibility to physical therapy education through innovative instructional delivery models. Faculty and students are committed to active participation in the profession in all areas of scholarship, in mentoring, and in serving community populations, including the medically underserved and uninsured, through service learning and clinical education experiences.

Entry-Level Doctor of Physical Therapy (D.P.T.)

Course of Study

The entry-level 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 main campus in greater Fort Lauderdale and a Hybrid D.P.T. program at our Tampa location. The traditional program in Fort Lauderdale is completed in three years, while the hybrid program in Tampa 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: Blend of online and face-to-face instruction so that students have three weeks of structured online instruction followed by four days (Thursday–Sunday) of hands-on instruction and clinical interactions on our Tampa campus. Students do not have to live in Tampa to attend the Hybrid D.P.T. Program.

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 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 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: http://www.capteonline.org. The entry-level Physical Therapy Program was granted its initial full accreditation by the Commission on Accreditation of Physical Therapy Education (CAPTE), of the American Physical Therapy Association in October 1996. In May of 2011, the Fort Lauderdale and the Tampa programs received a 10-year 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
The entry-level Doctor of Physical Therapy Program selects students based on prior academic performance, education, work experience, references, interview score, written application, and letters of evaluation. Selection is also based on the following factors:

1. A bachelor’s degree from a regionally accredited college or university is required.
2. Applicants must achieve a minimum 2.9 cumulative, prerequisite, and science GPA on a 4.0 scale.
3. Students must complete all of the following prerequisite courses with a grade of C or better:
   - English composition or writing (one semester)
   - introduction to statistics (one semester)
   - psychology/sociology—two semesters (one general psychology and an additional psychology or sociology)

The following sciences must be taken in their respective departments. No applied or modified science courses will be accepted.

- biology, anatomy, and physiology (three semesters with at least two in anatomy and physiology—may be separate or combined)
- physics with laboratory (two semesters)
- chemistry with laboratory (two semesters)
4. All applicants are required to submit official scores from the Graduate Record Exam (GRE). Writing scores must be included. These test scores must be less than five years old.
5. All prerequisite courses must be completed before the first day of classes. No exceptions will be made.

Applicants must demonstrate evidence of computer skills. 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 is empowered to evaluate the total qualification of every applicant and to modify requirements in unusual circumstances.

Computer Requirements
D.P.T. Program—Fort Lauderdale Campus
System Requirements
- laptop computer with native camera
- https://www.nova.edu/publications/it-standards

Recommended Web Browsers

Word Processing and Presentation Software
- Microsoft Office Suite or Apple iWork (pages, keynote, numbers)

NSU Student Technology Support
- The Office of Innovation and Information Technology (OIIT) offers a wide variety of technological resources to support NSU’s students.
- www.nova.edu/cwis/oit/stuservices.html

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.
- If you have problems with any of the programs available through the website, please contact the NSU Help Desk at (954) 262-HELP (4357).

Blackboard Help
- www.nova.edu/help/blackboard/index.html

Audio Capability
A quality external microphone is required. This can be a headset or microphone-only model. (Note: many laptops come with integrated microphones; these often offer inadequate sound quality.)

D.P.T. Program—Tampa Campus
System Requirements
- https://www.nova.edu/publications/it-standards
- laptop computer
- additional video card requirements: 3D hardware accelerated graphics card, minimum DirectX 9 (PC) or Open GL 2.0 (Mac)

Recommended Web Browsers

High Speed Internet Connection
- Broadband connection: At least 10–15 mbps
Word Processing and Presentation Software
• Microsoft Office Suite or Apple iWork (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 may be necessary to edit or format photos for assignments; acceptable software to use can be
  – iPhoto and Preview for Mac (both free or included with 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.)
• webcam 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 may be necessary to edit or format videos for assignments
  – free examples for PC
    • YouTube Editor (http://www.youtube.com/create_detail/YouTubeVideoEditor)
  – iMovie for Mac (included with operating system)
  – Mpeg Streamclip for Mac converts iMovie files to mp4 (http://www.squared5.com/)
• video player software
  – Windows Media Player, QuickTime, Real Player

Audio Capability
• A quality external microphone is required. This can be a headset or microphone-only model. (Note: many laptops come with integrated microphones; these often 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.
  • www.nova.edu/cwis/oit/stuservices.html

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.
  • If you have problems with any of the programs available through the website, please contact the NSU Help Desk at (954) 262-HELP (4357).

Blackboard Help
• www.nova.edu/help/blackboard/index.html

Essential Functions of the D.P.T. Student
The entry-level 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 Essential Functions of the D.P.T. Student document on admission and while matriculating through the programs. To view the form, visit www.nova.edu/chcs/pt/forms/nsu-dpt-essential-function.pdf.

Application Procedures
The entry-level Doctor of Physical Therapy Programs at Nova Southeastern University uses the Physical Therapist Centralized Application Service (PTCAS). The PTCAS may take up to six weeks to verify supporting documents, therefore, early application is highly recommended. Note: The NSU Fort Lauderdale and Tampa programs have two separate portals in PTCAS.

1. Candidates for admission must complete the online PTCAS application between July 15 and December 16. All applicants to the entry-level D.P.T. program should apply online (www.ptcas.org). Separate applications are required for the Fort Lauderdale and Tampa programs.

2. Send the following supporting documents directly to PTCAS at the address following.
   a. an official transcript from the registrars of all colleges and universities attended, mailed directly to PTCAS by the college or university
b. three completed evaluations on the required forms from individuals, other than relatives, such as academic instructors and professors, health professionals, work supervisors, or volunteer supervisors, at least one from a physical therapist

PTCAS
PO Box 9112
Watertown, MA 02471
Email: ptcasinfo@ptcas.org
Phone: (617) 612-2040

3. Once the PTCAS application has been received by Nova Southeastern University, a supplemental application will be made available online. Please follow the instructions to complete and submit the supplemental application and fee by the deadline of January 31. The supplemental application should be sent directly to

Nova Southeastern University
Enrollment Processing Services
College of Health Care Sciences
Physical Therapy Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905

4. Official Graduate Record Exam (GRE) scores (less than five years old) must be submitted to PTCAS. The NSU PT program code is 7741.

5. Once NSU receives the GRE scores, the supplemental application, and the $50 fee, the applicant's file will be reviewed by the admissions counselor. The applicant will not be considered for a possible interview until all of the requirements have been met.

Undergraduate/Entry-Level 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 Natural Sciences and Oceanography 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 an entry-level doctor of physical therapy degree upon completion of the three-year D.P.T. curriculum.

For complete information and requirements, contact the Office of Admissions, Halmos College of Natural Sciences and Oceanography, Nova Southeastern University, 3301 College Avenue, Fort Lauderdale, Florida 33314-7796.

Tuition and Fees

Tuition and fees are equivalent for the Fort Lauderdale and Tampa programs; however the three-year tuition is prorated over four years for the Tampa program.

• For Fort Lauderdale students, tuition for 2015–2016 is $27,775 per year.
• For Tampa students, tuition for 2015–2016 is $20,831 per year.
• 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 nonrefundable in the event of a withdrawal.
• A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 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 three 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 throughout the program. Students may avail themselves of the hospitalization insurance plan obtainable through the university.

Requirements for Graduation

In order to be eligible for the D.P.T. degree, students must

• be of good moral character and uphold professional ethics and behavior
• complete all academic requirements, semester hours, and coursework including self assessment
• satisfactorily complete the program of study required, in sequence in prescribed time, with a minimum grade of 75 percent in all courses
• have satisfactorily met all financial and library obligations
• successfully complete the clinical internships
• complete a program portfolio
• successfully pass a comprehensive examination at the end of the didactic component of the program
• fulfill all professional activity requirements including professional association membership
• fulfill all community service requirements
• have satisfactorily complied with all university, Health Professions Division, College of Health Care Sciences, and Department of Physical Therapy policies and procedures including dress code and all student handbook policies and procedures
• attend in person the commencement program at which time the degree is conferred
• demonstrate professional behavior and required attendance throughout the program
• compliance with other requirements as advised

Physical Therapy Student Organizations

Student Council
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

Full-Time Entry-Level Doctor of Physical Therapy Curriculum Outline

First Year—Summer Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHY 5400 Physiology</td>
<td>3</td>
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<tr>
<td>ANA 5420 Anatomy</td>
<td>5</td>
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<tr>
<td>PHT 5611 Introduction to Physical Therapy</td>
<td>3</td>
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<tr>
<td>PHT 5610 Clinical Anatomy for Physical Therapists</td>
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Total 12

First Year—Fall Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>PHT 6710 Clinical Skills I</td>
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<tr>
<td>PHT 6714 Pharmacology</td>
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<tr>
<td>PHT 6715 Essentials of Biomechanics and Kinesiology</td>
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<tr>
<td>PHY 6716 Medical Pathology for Physical Therapists</td>
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<tr>
<td>PHT 6705 Essentials of Exercise Physiology</td>
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Total 16
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<thead>
<tr>
<th>First Year—Winter Semester</th>
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<tbody>
<tr>
<td>PHT 6720 Clinical Skills II</td>
<td>3</td>
</tr>
<tr>
<td>PHT 6725 Cardiovascular and Pulmonary PT</td>
<td>3</td>
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<tr>
<td>PHT 6722 Integumentary System PT</td>
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<tr>
<td>ANA 5423 Neuroanatomy</td>
<td>3</td>
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<tr>
<td>PHT 6706 Tier IA Clinical Education—Topics in Gerontology</td>
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<tr>
<td>PHT 6700 Evidence-Based Practice I—Introduction to Research Methods and Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHT 6811 Tier IB Clinical Education</td>
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<tr>
<td>PHT 6721 The Health Care Educator</td>
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<tbody>
<tr>
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<tr>
<td>PHT 6815 Physical Agents</td>
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<tr>
<td>PHT 6817 Pediatrics I</td>
<td>1</td>
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<thead>
<tr>
<th>Second Year—Fall Semester</th>
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<tbody>
<tr>
<td>PHT 6820 Musculoskeletal II</td>
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<td>PHT 6820L Musculoskeletal II Lab</td>
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<td>PHT 6816 Neuroscience</td>
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<td>PHT 6802 Evidence-Based Practice II—Using Research to Inform Clinical Decision Making</td>
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<tbody>
<tr>
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<tr>
<td>PHT 6830 Neuromuscular I</td>
<td>3</td>
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<tr>
<td>PHT 6830L Neuromuscular I Lab</td>
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<tr>
<td>PHT 6835 Medical Screening and Differential Diagnoses for Physical Therapists</td>
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<tr>
<td>PHT 6813 Gender-Specific Issues in PT</td>
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### First Year—Summer Semester (12 weeks)

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### First Year—Fall Semester (16 weeks)

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<tr>
<td>PHTT 6705</td>
<td>Essentials of Exercise Physiology*</td>
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<td>PHTT 6714</td>
<td>Pharmacology</td>
<td>3</td>
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<tr>
<td>PHTT 5610</td>
<td>Clinical Application of Anatomy for Physical Therapists</td>
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<tr>
<td>PHTT 5611</td>
<td>Professional Issues in Physical Therapy</td>
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### Hybrid Entry-Level Doctor of Physical Therapy Curriculum Outline—Tampa

#### Third Year—Summer Semester

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>PHT 6823</td>
<td>The Business of Physical Therapy</td>
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<tr>
<td>PHT 6914</td>
<td>Neuromuscular II</td>
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<tr>
<td>PHT 6914L</td>
<td>Neuromuscular II Lab</td>
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<tr>
<td>PHT 6915</td>
<td>Prosthetics and Orthotics</td>
<td>3</td>
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<td>PHT 6920</td>
<td>Applied Clinical Decision Making</td>
<td>4</td>
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<tr>
<td>PHT 6912</td>
<td>Tier II Orientation</td>
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#### Third Year—Fall Semester

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<tr>
<td>PHT 6911</td>
<td>Tier IIA Clinical Education Internship</td>
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<td>PHT 6921</td>
<td>Tier IIB Clinical Education Internship</td>
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#### Third Year—Winter Semester

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<td>Tier IIC Clinical Education Internship</td>
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<tr>
<td>PHT 6930</td>
<td>Wrap-up</td>
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#### Elective

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<tr>
<td>PHT 6904</td>
<td>Independent Study Research Project</td>
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328 College of Health Care Sciences—Department of Physical Therapy
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
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<td>PHTT 6700</td>
<td>Introduction to Evidence-Based Practice</td>
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<td>PHTT 6701</td>
<td>Communication and Cultural Competence</td>
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<tr>
<td>PHTT 6715</td>
<td>Essentials of Biomechanics and Kinesiology</td>
<td>3</td>
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<tr>
<td>PHTT 6716</td>
<td>Medical Pathology for PTs</td>
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<td>PHTT 6720</td>
<td>Clinical Skills II*</td>
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<tr>
<td>PHTT 6811</td>
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*Includes integrated clinical experiences

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<td>PHTT 6722</td>
<td>Integumentary PT</td>
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</tr>
<tr>
<td>PHTT 6915</td>
<td>Patient/Client Management Post Amputation</td>
<td>2</td>
</tr>
<tr>
<td>PHTT 6802</td>
<td>Application of Evidence-Based Practice</td>
<td>3</td>
</tr>
<tr>
<td>PHTT 6815</td>
<td>Physical Agents*</td>
<td>3</td>
</tr>
<tr>
<td>PHTT 6823</td>
<td>The Business of Physical Therapy</td>
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*Includes integrated clinical experiences

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<tr>
<td>PHTT 5423</td>
<td>Neuroanatomy and Neurophysiology</td>
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</tr>
<tr>
<td>PHTT 6813</td>
<td>Gender-Specific Health Issues in Physical Therapy</td>
<td>2</td>
</tr>
<tr>
<td>PHTT 6725</td>
<td>Cardiovascular and Pulmonary PT*</td>
<td>3</td>
</tr>
<tr>
<td>PHTT 6822</td>
<td>Health Promotion, Disease Prevention, and Wellness</td>
<td>2</td>
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*Includes integrated clinical experiences

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<tr>
<td>PHTT 6816</td>
<td>Motor Control Across the Life Span</td>
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<tr>
<td>PHTT 6810</td>
<td>Musculoskeletal I</td>
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<tr>
<td>PHTT 6810L</td>
<td>Musculoskeletal I Lab*</td>
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*Includes integrated clinical experiences
### Third Year—Fall Semester (10 academic and 6 clinical education weeks)

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<td>PHTT 6820L</td>
<td>Musculoskeletal II Lab*</td>
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<tr>
<td>PHTT 6835</td>
<td>Differential Diagnosis for Physical Therapists</td>
<td>3</td>
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<tr>
<td>PHTT 6817</td>
<td>Pediatrics*</td>
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*Includes integrated clinical experiences

Total 11

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### Third Year—Winter Semester (16 weeks)

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<td>PHTT 6821</td>
<td>Musculoskeletal III</td>
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<td>Musculoskeletal III Lab*</td>
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<td>PHTT 6830</td>
<td>Neuromuscular I</td>
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<td>PHTT 6830L</td>
<td>Neuromuscular I Lab*</td>
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<td>PHTT 6812</td>
<td>Topics in Clinical Education</td>
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*Includes integrated clinical experiences

Total 11

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### Fourth Year—Summer Semester (12 weeks)

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<td>Neuromuscular II Lab*</td>
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<td>PHTT 6920</td>
<td>Applied Clinical Decision Making*</td>
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*Includes integrated clinical experiences

Total 8

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### Fourth Year—Fall Semester (16 weeks) and Winter Semester (18 weeks)

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<th>Course Name</th>
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<tbody>
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<td>PHTT 6911</td>
<td>Tier IIA Clinical Education Internship (12 weeks)</td>
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<td>Tier IIB Clinical Education Internship (12 weeks)</td>
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<td>PHTT 6931</td>
<td>Tier IIC Clinical Education Internship (12 weeks)</td>
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Winter (first and second week of May) Prior to Graduation

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<tr>
<td>PHTT 6930</td>
<td>Wrap Up and Review</td>
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<tr>
<td>PHTT 6904</td>
<td>Evidence in Practice Capstone Project</td>
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Total 21

Total Credits for Program 116
**Entry-Level Doctor of Physical Therapy Course Descriptions**

**PHY 5400—Physiology**  
The course is 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 human life. It provides an examination of the physiological processes essential for students in the College of Health Care Sciences and reference to clinical applications is made 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)*

**ANA 5420—Anatomy**  
The study of structural and functional features of the human body addressed in both lecture and cadaver lab format. The student will have an anatomical basis for understanding and applying information presented in basic science and clinical courses and for understanding clinical problems. *(5 credits)*

**PHT 5610—Clinical Applications of 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, neural innervations, and contribution to movement. Palpation of key bony- and soft-tissue structures will be introduced.  
**Corequisite:** ANA 5420 *(1 credit)*

**PHT 5611—Introduction to Physical Therapy**  
This course introduces the new PT student to the program and the PT profession. It addresses the history of physical therapy, the Guide to Physical Therapist Practice, and medical terminology. Professional socialization begins through introduction to ethical and professional standards (including decision making, supervision, and delegation) and state and federal laws governing PT practice (including issues requiring advocacy). Certifications required for clinical practice such as CPR, AIDS, etc. will be acquired. Students are required to join the American Physical Therapy Association. *(3 credits)*

**PHT 6705—Essentials of Exercise Physiology, Health Promotion, and Wellness**  
Describes the response to exercise and training on the cardiac, pulmonary, musculoskeletal, neural, and endocrine systems of the human body. It explains nutritional considerations, as well as enhancing supplements, 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. The 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, and 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**  
Introduces students to basic PT examination and interventions in accordance with the patient management model found in the Guide to Physical Therapist Practice. Students will safely interact and communicate with patients including history taking and producing documentation of patient status. Safe performance of psychomotor skills such as patient postural assessments, positioning and draping, palpation addressing surface anatomy of the head, trunk and extremities, bed mobility, transfers, the use of assistive gait devices, vital signs monitoring, and patient guarding and handling techniques will be emphasized. An overview of the terms related to CPT-coding and reimbursement will be provided. The course will provide students with an understanding of how cultural beliefs are an integral part of clinical practice, giving students an opportunity to develop self-awareness, knowledge, and skills related to providing and promoting culturally competent patient care. *(4 credits)*

**PHT 6714—Pharmacology**  
This course is clinically oriented to address the physical therapist’s knowledge of clinical pharmacology to the Doctor of Physical Therapy level. Prescription, over-the-counter, and common herbal supplements will be included. Drug classification, pharmacokinetics, pharmacodynamics, mechanism of action, and indications for use will be addressed. Drug action, therapeutic dosage schedules, drug interactions, and common side effects will be brought into the clinical perspective of patient management. Recognition of expected drug effects, side
effects, idiosyncratic reactions, and signs of abuse or noncompliance will be explored. Emphasis will be placed on the therapist's incorporation of pharacoherapeutic knowledge into physical therapy patient-client management. (3 credits)

PHT 6715—Essentials of Biomechanics and Kinesiology
This is a foundational 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 6716—Medical Pathology for Physical Therapists
This course provides an introductory overview of medical pathology commonly seen by physical therapists across the life span. Students will be introduced to immunity, tissue response to injury, and healing processes. Students will gain knowledge of signs and symptoms, pathogenesis, and differential diagnosis of selected pathological disorders. Medical management of selected disorders will be introduced as well as prognosis associated with each disorder. Application of the Disablement Model will be used to determine the effect of pathological disorders on functional ability. Students will also gain a brief understanding of the role of the physical therapist in prevention and treatment of selected pathological and biopsychosocial disorders. Discussion will take place regarding cultural and other factors affecting diagnosis, treatment, and prevention of pathological disorders and biopsychosocial disorders currently affecting society. (3 credits)

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)

PHT 6700—Evidence-Based Practice I: Introduction to Research Methods and Data Analysis
This course allows the learner to gain skill in reviewing research literature. It includes an overview of the principles of measurement, reliability, and validity; 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 the student 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 and role of research in clinical practice. (3 credits)

PHT 6706—Tier IA Clinical Education—Topics in Gerontology
This is a self-contained, collaborative, clinical education model where students are directly supervised in the clinic by academic faculty. Students practice evaluation and treatment skills learned in the curriculum concurrently and cumulatively in a skilled nursing facility and acute care hospital joint replacement unit. Students see patients and clients three full days over the course of the semester to apply learned examination, evaluation, and treatment skills in underserved geriatric populations and other adult populations. Emphasis is on developing skills in professional behavior, clinical safety, communication, therapeutic presence, assessment, examination, screening, basic treatment planning, and performance of basic skill intervention based primarily on Clinical Skills I with introduction of some of the skills in Clinical Skills II. Theories, research, and unique characteristics and behaviors related to aging, geriatric medicine, and physical therapy will be explored in light of current health care trends, clinical practice, and predictions. (2 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. Students will learn to safely apply assessment and intervention techniques that address range of motion and strength deficits. Safe performance of psychomotor skills such as goniometric measurements, MMT, therapeutic exercises, PNF, and tilt and standing table and parallel bars will be emphasized. (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. (1 credit)

**PHT 6722—Integumentary System**
The structure and function of the integument is presented. Skin functions in homeostasis including protection, regulation of body temperature, sensory reception, water balance, synthesis of vitamins and hormones, and absorption of materials. Students will be able to evaluate, treat, and document disorders of the skin that are frequently treated by PTs. The students will also be able to determine whether a skin disorder needs referral to another appropriate health care provider. (2 credits)

**PHT 6725—Cardiovascular and Pulmonary PT**
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 cardiopulmonary examination and intervention for given pathologies. Students will be able to evaluate, treat, and document disorders of the skin that are frequently treated by PTs. The students will also be able to determine whether a skin disorder needs referral to another appropriate health care provider. (2 credits)

**PHT 6802—Evidence-Based Practice II : Using Research to Inform Clinical Decision Making**
In this course, students will be exposed to Sackett’s model for laying 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 Hooke on Evidence as methods for critiquing the literature. Lastly, students will contribute to APTA’s Hooked on Evidence database. (3 credits)

**PHT 6113—Neuroscience**
This course provides the foundation knowledge necessary for patient/client management of patients with neuromuscular conditions through two modules:
neurophysiology and motor control/motor learning. Students review the structure and function of the nervous system, emphasizing neurophysiological processes that relate to physical therapy and movement dysfunction. Principles of motor control and motor learning are discussed as they relate to normal human movement and movement dysfunction that result from neurologic disorders. Concepts of neuroplasticity and the recovery of function are also addressed. Classroom activities include case studies, group discussions, literature reviews, simulations, and lectures. 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 focuses on the physical therapy management of the pediatric patient/client and the role of family-centered care. Students apply foundational knowledge and skills gained in Pediatrics I in the evaluation and treatment of 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. The course is designed to promote critical thinking and decision-making in physical therapy management of the pediatric client. Physical therapist practice patterns (examination, evaluation, diagnosis, prognosis, and evidence-based interventions) are applied in context. Management, incorporating use/need for assistive devices, technologies, adapted equipment (e.g., 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, interdisciplinary team management, cultural issues, reimbursement, and patient/family and teacher education are explored. 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, ICD9 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
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-9 codes, examination, evaluation, diagnosis, prognosis, and interventions related to these patterns. Corequisites: PHT 6820 (2 credits)

PHT 6831—Tier IC Clinical Education
This is a full-time clinical internship. Under the direct supervision of clinical faculty members, students apply evaluation and treatment skills in orthopedic settings. Students improve professional behavior, clinical safety, communication, therapeutic presence, assessment, examination, screening, and treatment-planning skills while providing targeted interventions to a population with orthopedic disorders. (2 credits)

PHT 6841—Tier ID Clinical Education
This course utilizes a self-contained clinical education model where students are directly supervised in the clinic by academic faculty members. Students concurrently practice the evaluation and treatment skills learned in the curriculum. (1 credit)

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. Basic examination and intervention techniques will be practiced in a simulated environment. (2 credits)

PHT 6821—Musculoskeletal III
This course 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
This course will emphasize the psychomotor and affective skills required when providing the associated musculoskeletal examination and interventions addressed in PHT 6821. 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 6830—Neuromuscular Systems 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 Systems 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 testing); job/school/play reintegration testing; and assistive/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 6835—Medical Screening and Differential Diagnoses 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 scope. The focus is differential diagnosis through history and physical exam and not physical therapy intervention. The differential diagnosis is between musculoskeletal conditions and medical/psychological conditions commonly seen in outpatient settings. The course emphasizes conditions that should not be treated by physical therapists or conditions that require physical therapy intervention in direct consultation with other health care professionals (mainly physicians, dentists, and psychotherapists). The course will cover common laboratory tests applied to physical therapy (blood tests, urine analysis, synovial fluid analysis, cerebral spinal fluid). The course will also discuss the findings of imaging tests in diseases affecting the musculoskeletal system. Students are encouraged to apply the information learned in this course in their clinical internships and discuss each topic among themselves and
with the instructors. **Prerequisites:** PHT 6810 and PHT 6716 (3 credits)

**PHT 6823—The Business of Physical Therapy**
This course is devoted to understanding the structure and function of the United States health care delivery system. It explores the regulatory, economic, and financial responsibilities of the physical therapy manager in the utilization of human and material resources within a variety of health care environments. Students will develop knowledge and skills to effectively manage in various health care settings. (3 credits)

**PHT 6912—Tier II Orientation**
This course will include all final preparation necessary for the students to begin their Tier II Clinical Internships. (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**
Students will acquire the skills needed to manage movement-related problems in patients with amputations because of diabetes, burns, trauma, oncological problems, and genetic conditions. They will study upper and lower extremity prosthetics and orthotics and spinal orthotics. Orthotic needs associated with obesity, arthritis, pain, etc., will be addressed, as well. (3 credits)

**PHT 6920—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 6911—Tier IIA Clinical Education Internship**
This is the first of three senior, full-time, clinical affiliation courses. This course will provide senior physical therapy students with the opportunities to practice clinical decision making based on evidence and develop entry-level physical therapy skills for patient/client management in a variety of clinical settings on a full-time basis. Students will apply their knowledge, skills, attitudes, and behaviors in community-based physical therapy settings. Tier II clinical education encompasses on-campus orientation and 32 weeks of full-time, senior-level clinical internships during fall and winter semesters. Students will typically rotate through four, eight-week clinical placements 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 for student achievement
of entry-level competency and professional behaviors in all settings. Students must complete at least one internship in an acute care/inpatient or subacute setting; a neurorehabilitation setting; an outpatient setting. The remaining internship may be completed in the venue or setting of the student's choice, including outpatient clinics; rehabilitation hospitals or units; specialty practices such as pediatrics, sports, or workers' compensation/ergonomics; or women's and men's health, as available. During the full-time internship, students will focus on patient/client management models by performing patient examinations and evaluations and by determining 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 Tier II clinical education experiences, students will demonstrate appropriate management skills of patients/clients across the adult life span or across the continuum of care commonly seen in physical therapy practice. Students are expected to demonstrate effective communication and documentation skills and to develop their professionalism consistent with the APTA core values, cultural competence, and ethical and legal practice. (5 credits)

PHT 6921—Tier IIB Clinical Education Internship
This is the second of three senior, full-time, clinical affiliation courses. Students will complete an extended internship in multifaceted health care organizations with the goal of bringing their skills to entry level for both inpatient and outpatient care. Students will also have the opportunity to choose a specialty area in physical therapy practice and complete a portion of the internship in that specialty area. See PHT 6911. (6 credits)

PHT 6930—Wrap-up
The course provides a conclusion to TIER II as well as the didactic portion of the curriculum. A comprehensive examination covering all topics addressed in the curriculum will be administered. Additionally, the management of the graduation process and commencement exercises will occur. (2 credits)

PHT 6931—Tier IIC Clinical Education Internship
This is the final of three senior, full-time, clinical affiliation courses. Students will complete an extended internship in multifaceted health care organizations with the goal of bringing their skills to entry level for both inpatient and outpatient care. Students will also have the opportunity to choose a specialty area in physical therapy practice and complete a portion of the internship in that specialty area. See PHT 6911. (5 credits)

PHT 6904—Independent Study Research Project
The student will complete a comprehensive literature review, case report, or research study on a topic approved by the student's faculty adviser. The quality of the written assignment must be such that it is publication ready for a peer-reviewed journal or scholarly presentation. This course requires the permission of the program director. (1–3 credits)

PHT 6910—Independent Study
Individualized study completed under the supervision of an instructor. Requires permission of the program director (1–6 credits)

Hybrid Entry-Level Doctor of Physical Therapy Course Descriptions

PHY 5400—Physiology
The course is intended to provide students in the Physical Therapy Program with an understanding of the basic physicochemical 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 College of Health Care Sciences and reference to clinical applications is made 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)

ANA 5420—Anatomy
This foundational science course develops the knowledge of human anatomy necessary for the practice of the profession. It presents the anatomy of the human body in both lecture and lab format. It addresses gross structures of the human body and integrates topographic and radiographic anatomy, stressing the importance to clinical practice. (5 credits)

PHTT 6705—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. 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, and factors affecting performance and fitness 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. (3 credits)

PHTT 6714—Pharmacology
This course is clinically oriented to address the physical therapist’s knowledge of clinical pharmacology to the Doctor of Physical Therapy level. Prescription, over-the-counter, and common herbal supplements will be included. Drug classification, pharmacokinetics, pharmacodynamics, mechanism of action, and indications for use will be addressed. Drug action, therapeutic dosage schedules, drug interactions, and common side effects will be brought into the clinical perspective of patient management. Recognition of expected drug effects, side effects, idiosyncratic reactions, and signs of abuse or noncompliance will be explored. Emphasis will be placed on the therapist’s incorporation of pharmacotherapeutic knowledge into physical therapy patient-client management. (3 credits)

PHTT 5610—Clinical Application of Anatomy for Physical Therapists
This course addresses anatomical knowledge specific to the 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. (1 credit)

PHTT 5611—Professional Issues in Physical Therapy
The professional roles and responsibilities of physical therapists provide a framework for discussion of contemporary health care issues and the history of the American Physical Therapy Association. Ethical principles, core values, standards of practice, and key professional documents that guide clinical practice serve as the basis for student socialization into the profession of physical therapy. This transition into the profession of physical therapy is celebrated symbolically during the White Coat Ceremony. This course also addresses the roles of physical therapists (patient manager, educator, consultant, critical inquirer, and administrator) in their professional development over time from novice to expert practitioner. Students analyze their roles as members of health care teams and determine the broader position of the profession in society. (3 credits)

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. Emphasis will be on research evidence from primarily quantitative research about diagnosis, prognosis, interventions, and outcomes. (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. Basic biomechanics serves as the foundation for understanding kinesiology. The study of kinesiology will be separated 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 facilitate the students to learn and comprehend complex kinesiologic analysis: gait, posture, and functional movements. (3 credits)

PHTT 6716—Medical Pathology for Physical Therapists
This course provides an introductory overview of medical pathology across the life span commonly seen by physical therapists. Students will be introduced to immunity, tissue response to injury, and healing processes. Students will gain knowledge of signs and symptoms, pathogenesis, and differential diagnosis of selected pathological disorders. Medical management of selected disorders will be introduced as well as prognosis associated with each disorder. Application of the Disablement Model will be used to determine the effect of pathological disorders on functional ability. Students will also gain a brief understanding of the role of the physical therapist in prevention and treatment of selected pathological and biopsychosocial disorders. Discussion will take place regarding cultural and other factors affecting diagnosis, treatment, and prevention of pathological disorders and biopsychosocial disorders currently affecting society. (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. Discussions will include epidemiology and health care access issues as they relate to cultural barriers. (2 credits)

PHTT 6811—Introduction to Clinical Education
This course addresses the preparatory requirements needed to participate in on-campus Integrated Clinical Education (ICE) experiences occurring in the second and third academic years. The purpose of ICE is to provide students with patient interactions early within the Hybrid D.P.T. curriculum. These clinical experiences have been integrated into the classroom lab time of specific courses in order to allow for immediate application of learned skills and concepts to actual patients. During the progression of these experiences, students will develop skills in all domains of learning (cognitive, psychomotor, and affective) in preparation for full-time clinical internships. Course topics cover compliance requirements for clinical education and patient interaction, including physical therapy documentation, sample behaviors of the Clinical Performance Instrument, medical errors training, blood-borne pathogens and HIV/AIDS training, and HIPAA training. (1 credit)

PHTT 6710—Clinical Skills I
This course introduces students to physical therapy examination and evaluation, including a) obtaining a history from patients and other sources; b) performing systems reviews; c) administering culturally appropriate and age-related tests and measures including reflexes, posture, gait, balance, range of motion/muscle length, and muscle strength; and d) producing documentation of examination. Students will also learn to evaluate data from the history review, system's review, and tests/measures in order to make clinical judgments and determine the diagnosis, prognosis, and goals. Both psychomotor skills and clinical reasoning skills are addressed based on the descriptions in the Guide to Physical Therapist Practice. (3 credits)

PHTT 6720—Clinical Skills II
This course introduces students to basic clinical skills that are used in physical therapy interventions related to therapeutic exercise and functional training as described in the Guide to Physical Therapist Practice. Students will develop psychomotor skills in therapeutic exercise (including flexibility/stretching exercises, balance/coordination training, and strength/power/endurance training of muscles) and functional training (including balance training, posture re-education, gait training, and assistive/adaptive device training). Students will learn how to develop and document a plan of care that includes frequency/duration, coordination/communication, patient-related instruction, and direct interventions. (3 credits)

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 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 and the 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 6915—Patient/Client Management
Post Amputation
This course focuses on the patient/client management of people with amputations, including examination, evaluation, diagnoses, prognoses, plan of care, interventions, and outcomes. Topics include the etiology, 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 function and outcomes. Students will 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. (3 credits)

PHTT 6815—Physical Agents
This course will emphasize both cognitive and psychomotor knowledge related to the appropriate use of physical agents in physical therapy patient management. Basic science information related to physiological effects as well as indications and contra-indications for physical agents will be discussed. (3 credits)

PHTT 6802—Application of Evidence-Based Practice
Evidence-based practice (EBP) integrates evidence from three sources to answer clinically relevant questions. These are 1) research literature; 2) clinician knowledge, experience, and judgment; and 3) 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 continuing to integrate critical inquiry and evidence-based practice throughout the curriculum. Emphasis will be on the use of statistical tools in appraising evidence, as well as the introduction of more complex sources of evidence, such as systematic reviews, meta-analysis, Cochrane reviews, clinical prediction rules, and clinical practice guidelines. The role of qualitative and mixed-methods research designs also will be explored. (3 credits)

PHTT 6823—The Business of Physical Therapy
Potential opportunities and career paths that can lead to mid-level and executive management positions for physical therapists are presented in the context of the complex world of contemporary health care organizations and their unique business models. Current issues that impact the roles of leaders and managers and their responsibilities in five different types of health care settings are presented. Students will prepare a feasibility study or business plan for a new physical therapy practice or program. (3 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. (3 credits)

PHTT 6813—Gender-Specific Health 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, lymphedema 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. Basic examination and intervention techniques will be practiced in a simulated environment. (2 credits)

PHTT 6725—Cardiovascular and Pulmonary PT
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 cardiopulmonary examination and intervention for given pathologies. Students will demonstrate PT cardiovascular and pulmonary examination, procedures, 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. Case studies are used in conjunction with lecture, and interactive teaching and learning to assist students in integrating didactic knowledge into simulated and real-life scenarios including laboratory skills Prerequisites: PHTT 6705 and PHTT 6714 (3 credits)

PHTT 6822—Health Promotion, Disease Prevention, and Wellness
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, evaluating program/teaching effectiveness, facilitating behavior change, creating professional presentations, and engaging in clinical education. Students will explore learning styles and factors that impact learning across the life span. The physical therapist’s professional role as an advocate of health, wellness, and prevention will be analyzed. The course will examine the 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 wellness considerations for special populations. Students will have the opportunity to design their own wellness program, applying the principles and strategies covered in this course. Learning will occur through reading, research, critical analysis of the literature, class discussion, lecture, collaborative learning, case studies, presentation, peer review, and writing. (2 credits)

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 also provides the foundations for neurologic and pediatric physical therapy through a review of normal human development, postural control, mobility, and the control of reach/grasp/manipulation. Classroom activities include lectures, case studies, lab simulations, and observation/analysis of normal childhood development. **Prerequisite:** PHTT 5423 (3 credits)

**PHTT 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 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 PHTT 6820, PHTT 6820L, PHTT 6821, and PHTT 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)

**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. **Corequisite:** PHTT 6810 (2 credits)

**PHTT 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, ICD9 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)

**PHTT 6820L—Musculoskeletal II Lab**

Emphasizes the psychomotor and affective skills required when providing the musculoskeletal interventions and tests addressed in PHTT 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, ICD9 codes, examination, evaluation, diagnosis, prognosis, and interventions related to these patterns. **Corequisite:** PHTT 6820 (2 credits)

**PHTT 6835—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 scope. The focus is differential diagnosis through history and physical exam and not physical therapy intervention. The differential diagnosis is between musculoskeletal conditions and medical/psychological conditions commonly seen in outpatient settings. The course emphasizes conditions that should not be treated by physical therapists or conditions that require physical therapy intervention in direct consultation with other health care professionals (mainly physicians, dentists, and psychotherapists). The course will cover common laboratory tests applied to physical therapy (blood tests, urine analysis, synovial fluid analysis, cerebral spinal fluid). The course will also discuss the findings of imaging tests in diseases affecting the musculoskeletal system. Students are encouraged to apply the information learned in this course in their clinical internships and discuss each topic among themselves and with the instructors. **Prerequisites:** PHTT 6810 and PHTT 6716 (3 credits)

**PHTT 6817—Pediatrics**

This course focuses on the physical therapy management of the pediatric patient/client and role of family-centered care. Students gain an understanding of typical infant and child development as it relates to movement. Using this foundation, students will analyze movement dysfunction exhibited in high-risk infants and children who have common childhood pathologies. Typical development is presented in the context of applying current motor control theories to predictable developmental sequences, motor progressions, and achievement of motor milestones. 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. Students become familiarized with commonly used pediatric screens, tests, and measurements. **Guide to Physical Therapist Practice** patterns (examination, evaluation, diagnosis, prognosis, and evidence-based interventions) are applied in context. Management incorporating use/need for assistive devices, technologies, adapted equipment (i.e., wheelchair prescription and seating), orthotics, and bracing, as well as 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, interdisciplinary team management, cultural issues, reimbursement, and patient/family and teacher education are explored. Content is presented through lecture, lab, case studies, large and small group discussion, and community-based activities. (3 credits)

PHTT 6821—Musculoskeletal III
This course 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)

PHTT 6821L—Musculoskeletal III Lab
This course will emphasize the psychomotor and affective skills required when providing the associated musculoskeletal examination and interventions addressed in PHTT 6821. 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: PHTT 6821 (2 credits)

PHTT 6830—Neuromuscular Systems I
Neuromuscular Systems I addresses the examination and interventions for adults with neuromuscular disorders. Students will apply knowledge from Neuroanatomy and Neurophysiology 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 and examination of motor function, motor learning, coordination, cranial nerve integrity, functional mobility, self-care, activities of daily living, community function, arousal, attention, cognition, 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. (3 credits)

PHTT 6830L—Neuromuscular Systems I Lab
This course is the laboratory component of Neuromuscular Systems I, which addresses the psychomotor skills and clinical reasoning needed for the examination and treatment of patients with neuromuscular disorders. The students will become competent in performing and documenting a variety of clinical tests and outcome 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 testing); job/school/play reintegration testing; and assistive/adaptive device testing. Disease-specific tests and measures will also be performed. Students will demonstrate competence in psychomotor intervention skills such as 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 positioning and facilitation; manual therapy techniques, positioning, and facilitation; and prescription and application of assistive and supportive devices; as well as physical agents and electrotherapeutic modalities. Documentation of all aspects of care is also emphasized. (2 credits)

PHTT 6812—Topics in Clinical Education
This course prepares students for the full-time clinical education experience through the exploration of laws and regulations related to physical therapist practice; expected professional behaviors; communication; and roles/responsibilities of the student, clinical instructor, and director of clinical education. Topics will also include student/clinical instructor expectations, supervision, conflict management, goal writing, and program clinical education policies. (2 credits)

PHTT 6914—Neuromuscular II
Neuromuscular II integrates concepts from Neuroanatomy and Neurophysiology and Motor Control Across the Life Span and Neuromuscular Systems I to engage students in the patient/client management of individuals 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. 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 addresses 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 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 neurologic conditions. 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 Neuromuscular 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, performing procedural interventions, providing patient instruction, and communicating with caregivers. (2 credits)

PHTT 6920—Applied Clinical Decision Making
This course integrates diagnostic (hypothesis driven) and narrative (patient-experience driven) clinical-reasoning skills using complex clinical cases through all elements of patient/client management, such as examination, evaluation, diagnosis, prognosis, plan of care, and interventions. Content experts facilitate student psychomotor skills and clinical decision making through small-group work, discussion, and analysis. Paper and video cases help students develop metacognitive and reflective skills, while considering ethical and legal issues, business management, delegation, documentation, patient-related instruction, and reimbursement. Students use the best available evidence to guide their decision making in order to defend their clinical decisions. (4 credits)

PHTT 6911—Tier IIA Clinical Education Internship
This is the first of three full-time, clinical affiliation courses occurring in the fourth year. This course will provide senior physical therapy students with the opportunity to intern in a physical therapy practice setting. Students will apply their knowledge and skills to develop skills in patient/client management, clinical decision making, and evidence-based practice. All fourth-year clinical internships are 12 weeks in length and occur during the fall and winter semesters. The culmination of these three internships is achievement of entry-level practice in all criteria of the APTA Clinical Performance Instrument. Over the three internships, students are required to participate in settings that, in total, represent the depth and breadth of physical therapy practice—including continuum of care, acuity, life span, and medical complexity. During the full-time clinical internships, students will execute the patient/client management model utilizing the Guide to Physical Therapist Practice by performing patient examinations and evaluations, establishing diagnoses and prognoses, developing the plan of care, and performing interventions. (6 credits)

PHTT 6921—Tier IIB Clinical Education Internship
This is the second of three senior, full-time, clinical affiliation courses. Students will complete an extended internship in multifaceted health care organizations with the goal of bringing their skills to entry level for both inpatient and outpatient care. Students will also have the opportunity to choose a specialty area in physical therapy practice and complete a portion of the internship in that specialty area. See PHTT 6911. (6 credits)

PHTT 6931—Tier IIC Clinical Education Internship
This is the final of three senior, full-time, clinical affiliation courses. Students will complete an extended internship in multifaceted health care organizations with the goal of bringing their skills to entry level for both inpatient and outpatient care. Students will also have the opportunity to choose a specialty area in physical therapy practice and complete a portion of the internship in that specialty area. See PHTT 6911. (6 credits)

PHTT 6930—Wrap-up and Review
The course provides a conclusion to TIER II as well as the didactic portion of the curriculum. Students present their values portfolio and participate in licensure examination preparation classes and seminars. (1 credit)

PHTT 6904—Evidence in Practice Capstone Project
Students present their Evidence in Practice Capstone to faculty members, classmates, and the local physical therapy community. This presentation is the culmination of work completed during Tier II clinical internships and demonstrates the ability to apply research evidence in clinical practice. (2 credits)
Postprofessional Doctoral Programs in Physical Therapy

The Physical Therapy Department at Nova Southeastern University offers two postgraduate programs for practicing physical therapists: the clinical doctorate—or transition Doctor of Physical Therapy (T-D.P.T.), and the research doctorate—the Doctor of Philosophy in Physical Therapy (Ph.D.). These two distinct programs are designed to meet the diverse needs of physical therapists who are seeking to advance their education and skills from an accredited institution. Applicants with a baccalaureate or master's degree may be accepted for either of these doctoral programs. Both programs are 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 one–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.

Transition Doctor of Physical Therapy Program (T-D.P.T.)
Given the increasingly complex health care environment and the growing body of knowledge in the physical therapy profession, entry-level education in physical therapy has shifted toward the clinical doctorate degree. The vision of the American Physical Therapy Association (APTA) is that by the year 2020, physical therapy will be provided by physical therapists who are doctors of physical therapy. In support of this vision, the Physical Therapy Department at Nova Southeastern University offers the transition Doctor of Physical Therapy (T-D.P.T.) Program. The transition D.P.T. program is a postprofessional curriculum designed to advance the knowledge, attitudes, and skills of practicing physical therapists to those commensurate with the current entry-level doctorate in physical therapy. This program focuses on the professional roles of the D.P.T., clinical reasoning and differential diagnosis, evidence-based practice, and patient/client management related to optimizing movement, function, and health. The degree awarded upon completion of the program is the Doctor of Physical Therapy degree.

Program Outcomes
The transition D.P.T. program will prepare physical therapists who will

• demonstrate competent and relevant patient/client management skills across the continuum of care, including examination, evaluation, diagnosis, prognosis and plan of care, interventions, and outcome measurement

• synthesize current evidence and experience into clinical decision making, incorporating client beliefs, values, and abilities to promote effective and efficient treatment plans in a direct access, autonomous, health care environment

• engage in critical self-reflection/assessment and life-long learning to enrich core values of professionalism as defined by APTA, including altruism, accountability, compassion/caring, excellence, integrity, professional duty, and social responsibility in all professional roles

• integrate health promotion, fitness, wellness, and prevention with patients, groups, community, organizations, and society as educators, consultants, administrators, and collaborators

• conduct analysis of patient, organization, and community needs, abilities, and concerns from a systemic perspective to achieve measurable outcomes that demonstrate effective change

Admissions Requirements
The following are requirements for admission:

1. Applicants must have graduated from an entry-level physical therapy (PT) program that is accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE), or have a current physical therapy license in the United States. Graduates from physical therapy schools in other countries are also eligible after review of academic credentials by an appropriate agency and a review of their Test of English as a Foreign Language (TOEFL), International English Language Testing System (IELTS), or Pearson Test of English—Academic (PTE—A) scores.

2. Students who are within two months (60 days) of graduation from an entry-level PT program are also eligible for admission. These individuals must provide proof of graduation by the 61st day of their first T-D.P.T. semester or they will have to withdraw from classes until the subsequent semester, when and if proof of graduation is presented.

3. Applicants must have a grade point average of 75 percent or higher from the entry-level physical therapy coursework. If the GPA is lower than 75 percent, applicants must achieve a minimum score of 500 on both the verbal and quantitative portions (145 on the revised scale) of the Graduate Record Examination (GRE). The GRE is only required for students whose GPA is below 75 percent.
4. Selection of students for the transition D.P.T. program is based on a review of the application, prior academic performance, and three letters of recommendation. We seek students who are motivated and self-directed learners, with strong oral and written communication and critical thinking skills.

5. Applicants can also apply to be nonmatriculated students in the T-D.P.T. program. Nonmatriculated students can take selected courses, but are not officially admitted to the program as degree-seeking students. To apply to be a nonmatriculated student, an applicant must submit a nonmatriculated application and provide proof that he or she has completed a physical therapy academic program. Official transcripts and records are not required for application as a nonmatriculated student, other than to show proof that the applicant is a graduate physical therapist. Students can take up to 12 credit hours as a nonmatriculated student. A nonmatriculated student that wants to matriculate into the T-D.P.T. program must submit an official matriculated student application, transcripts, and official credentialing evaluation (as appropriate) to the program office, as well as meet all entering requirements for a degree-seeking student. Once the applicant is accepted as a degree-seeking student, courses taken as a nonmatriculated student with an earned grade of 80 percent or higher will be counted toward the T-D.P.T. graduation requirements.

The dean is empowered to evaluate the total qualifications of every student and to modify requirements in unusual circumstances.

**Application Procedures**

Applicants must submit:

- a completed application form along with a nonrefundable application fee of $50
- official transcripts from all undergraduate, professional, and graduate institutions attended, sent directly to Nova Southeastern University Enrollment Processing Services College of Health Care Sciences Physical Therapy Department Admissions 3301 College Avenue, P.O. Box 299000 Fort Lauderdale, Florida 33329-9905
- three letters of evaluation from individuals who can evaluate the applicant’s performance as a physical therapist and/or the applicant’s ability for doctoral studies (Letters of reference should be sent on an NSU applicant recommendation form—available on NSU’s website—or on letterhead.)
- official GRE scores and TOEFL, IELTS, or PTE—A scores, when appropriate

Students can transfer up to 6 semester hours (two classes) from another accredited postprofessional program based on the assessment by the Office of Admissions and the program director. The Office of Admissions evaluates all requests for transfer credits and assessment of professional credentials. After an evaluation of credentials, qualified applicants may be interviewed. Applications are accepted year-round.

**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
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.ece.org

- Foreign Credentialing Commission on Physical Therapy*
  (FCCPT)
  511 Wythe Street
  Alexandria, VA 22314, USA
  (703) 684-8406
  www.fcpt.org

- International Consultants of Delaware, Inc.
  3600 Market Street
  Suite 450
  Philadelphia, PA 19104
  (215) 222-8454, ext. 603
  www.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, College of Health Care Sciences, Department of Physical Therapy Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.
Transition D.P.T. Tuition and Fees
Tuition for 2015–2016 is $510 per credit hour. An NSU student services fee—ranging from $175 to $350, dependent on number of credit hours taken—is required each semester, with a maximum fee of $1,050 due annually. Tuition is subject to change by the board of trustees without notice.

Students that have served as clinical instructors for NSU’s entry-level D.P.T. students can receive ‘vouchers’ that can be used for tuition for courses taken in the T-D.P.T. program.

T-D.P.T. students who are members of the American Physical Therapy Association (APTA) will receive a 15 percent tuition discount each term (with written proof of membership).

The first term’s tuition and fees are due at time of course registration. Tuition for each subsequent semester is due on or before the appropriate registration day.

Curriculum Overview
The transition D.P.T. program offers three semesters per year. These are winter (January–May), summer (May–July), and fall (August–December). The summer term is designated primarily for elective and selected patient/client management courses. Classes are designed using a hybrid model, meaning coursework is offered mostly online with on-campus time required each semester for every core course taken. The on-campus sessions are generally two days per course and occur midway through the semester (March, June, October). These sessions are mandatory for all students.

The curriculum is designed for working physical therapists, where students can enroll part-time (3–7 credit hours) or full time (8–12 credit hours). The required coursework and total number of hours needed to graduate vary depending on the previous educational background of each applicant. Applicants with a baccalaureate degree must complete 13 classes (45 credits), including 7 core courses and 6 elective courses. Applicants with a master's degree from another university must complete seven core classes (27 credits). Applicants with an M.P.T. from Nova Southeastern University must complete six core courses (24 credits). Applicants with a Ph.D./Ed.D. degree must complete five core courses (20 credits). The patient/client management course requirement is waived for those holding an APTA specialty certification.

Requirements for Graduation
In order to graduate from the transition D.P.T. program, students must

• be of good moral character
• complete the required number of semester hours as outlined

• satisfactorily complete all program requirements for the degree within six years from the first date of classes
• have a minimum GPA of 80 percent for all T-D.P.T. coursework
• satisfactorily meet all financial and library obligations
• complete the T-D.P.T. exit survey

Course of Study
Applicants with a master's degree take seven core courses (see below). Applicants with a baccalaureate degree as their highest degree take seven core courses and six electives.

Seven Core Courses
• PHT 7215—Introduction to Clinical Reasoning, Differential Diagnosis, and Disablement Models (3 credits)
• PHT 7405—Professional Roles of the Doctor of Physical Therapy (4 credits)
• PHT 7415—Radiology and Pharmacology (4 credits)
• PHT 7605—Applying Research in Evidence-Based Practice (4 credits)
• PHT 7615—Advanced Differential Diagnosis (4 credits)
• PHT 7805—Contemporary Theories of Movement, Exercise, and Motor Learning (4 credits)
• PHT 7815—Patient/Client Management (4 credits).

(choice of seven practice areas: neuromuscular, manual therapy, geriatrics, pediatrics, women's health, sports, or practice management)

Elective Courses (six courses chosen from the following list)
• PHT 7015 (MHS 5003)—Current Trends and Cultural Issues in Health Care (3 credits)*
• PHT 7025—The Health Care Educator (3 credits)
• PHT 7065/7075—Independent Study: Case Report (1–3 credits)
• PHT 7925 (DHS 8100)—Alternative and Complementary Medicine (4 credits)*
• MHS 5521—Ethical Issues in Health Care (3 credits)*

*These courses are offered through other programs within the College of Health Care Sciences and may be taken upon approval of the T-D.P.T. program director.

Applicants with a Master of Physical Therapy degree from NSU: six courses (24 credits)
• PHT 7405—Professional Roles of the Doctor of Physical Therapy (4 credits)
• PHT 7415—Radiology and Pharmacology (4 credits)

College of Health Care Sciences—Department of Physical Therapy
• PHT 7605—Applying Research in Evidence-Based Practice (4 credits)
• PHT 7615—Advanced Differential Diagnosis (4 credits)
• PHT 7805—Contemporary Theories of Movement, Exercise, and Motor Learning (4 credits)
• PHT 7815–75—Patient/Client Management (4 credits)

Applicants with a Doctor of Philosophy degree: five courses (20 credits)
• PHT 7605—Applying Research in Evidence-Based Practice (4 credits)
• PHT 7415—Radiology and Pharmacology (4 credits)
• PHT 7615—Advanced Differential Diagnosis (4 credits)
• PHT 7805—Contemporary Theories of Movement, Exercise, and Motor Learning (4 credits)
• PHT 7815–75—Patient/Client Management (4 credits)

Transition D.P.T. Course Descriptions

Core Courses
PHT 7215—Introduction to Clinical Reasoning, Differential Diagnosis, and Disablement Models
Students explore the conceptual basis for effective clinical reasoning and differential diagnosis using the disablement model, clinical decision-making model, elements of patient/client management, and reflective practice theories. (3 credits)

PHT 7405—Professional Roles of the Doctor of Physical Therapy
This course explores the emerging roles of the physical therapist as a Doctor of Physical Therapy (D.P.T.). Emphasis is on the role of the D.P.T. in patient/community education; prevention and health promotion; and managing services through administration, consultation, and supervision. The class is organized into two modules: Module 1—Teaching/Learning and Health Promotion/Disease Prevention and Module 2—Managing Services Through Administration, Consultation, and Supervision. (4 credits)

PHT 7415—Radiology and Pharmacology
This course provides an overview of current medical diagnostic tests and medical interventions so that physical therapists can recognize the indications and implications for medical diagnostic tests, including diagnostic imaging; augment information obtained from the physical therapy examination with information provided by the referral source; and communicate effectively with other health care providers regarding medical diagnosis and treatment. Course content is organized throughout the semester based in two subsections: diagnostic imaging and pharmacology. Students will synthesize information from these two key areas of medical management, including radiological/imaging exams and clinical pharmacology. (4 credits)

PHT 7605—Applying Research in Evidence-Based Practice
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 rate an article based on the PEDro Scale and be exposed to APTA’s PT NOW. (4 credits)

PHT 7615—Advanced Differential Diagnosis
This course is designed to offer students the skills to make clinical decisions and screen medical diseases independently from a physician, dentist, or psychologist. It is not the intent of this course to instruct the students in becoming medical diagnosticians, but rather to give the students the tools to rule out medical problems in which physical therapy is contraindicated or that may require additional medical or psychological evaluation or treatment. Course content includes subjective and physical exam of the cardiovascular, pulmonary, gastrointestinal, urogenital, integumentary, and endocrine systems, among others. (4 credits)

PHT 7805—Contemporary Theories of Movement, Exercise, and Motor Learning
This course addresses current theories of motor function (motor control and motor learning), exercise training (therapeutic exercise and aerobic conditioning), and movement science to enhance the practitioner’s ability to choose and apply appropriate examinations and interventions for patients with movement-related dysfunction. Students will apply contemporary theories to develop treatment strategies related to their current practice environment or patient population. (4 credits)
Patient/Client Management

Students expand their current scope of practice in one of seven practice areas or one of six manual therapy courses. This allows the practitioner to direct his or her learning to a defined practice area using the elements of patient/client management, including examination (tests and measures), evaluation, diagnosis, prognosis and plan of care, interventions, and outcome measurement. Each Patient/Client Management course provides both didactic and laboratory experiences to integrate theory with practice. There will be two or three days of intensive, hands-on training mid-way through the semester. Any student can also take additional practice areas as electives.

PHT 7825—Patient/Client Management—Neuromuscular

In this course, students will expand their current scope of practice in the neuromuscular practice area. This allows the practitioner to direct his or her learning to a defined practice area using the elements of patient/client management, including examination (tests and measures), evaluation, diagnosis, prognosis and plan of care, interventions, and outcome assessment. This Patient/Client Management course provides both didactic and clinical experiences to integrate theory with practice. There will be two days of intensive, hands-on training mid-way through the semester. (4 credits)

PHT 7835—Patient/Client Management—Women's Health

Women consist of at least 50 percent of any given health care setting and have, at times, specific needs and consideration requiring physical therapy intervention. Drawing from the student’s present knowledge base of physical therapy diagnosis and intervention, this course will expand into women’s health topics including pregnancy, uro-gynecological and colorectal dysfunction, and the significance of estrogen across the life span. Students will closely examine the relationships of abdomino-pelvic anatomy, including the muscles of the abdominal core, and explore the impact of lifestyle/health choices on wellness of the woman for a lifetime. (4 credits)

PHT 7845—Patient/Client Management—Pediatric Practice

The focus of this course is to enhance the practicing physical therapist’s clinical decision making by application of evidence-based practice and current theories of motor development, motor control, and motor learning in the treatment of the pediatric client. Through utilization of the elements of the physical therapist patient/client management model (examination, evaluation, diagnosis, prognosis, and intervention), students will implement practical, efficient, and effective plans of care for managing children of all ages with various neurological disorders. Clinicians will use a patient-centered approach incorporating patient/family/education goals in the development of appropriate plans of care based on the ICF enablement and rehabilitation model for neurological rehabilitation. The goal of the course is to provide students with the conceptual basis, strategies, and methods likely to lead to improved pediatric patient outcomes. (4 credits)

PHT 7855—Patient/Client Management—Geriatric Practice

Through the utilization of the elements of the physical therapist patient/client management model (examination, evaluation, diagnosis, prognosis, and intervention), students will apply and advance clinical skills, strategies, and decision making for managing older adults with impairments, functional limitations, and disabilities. Students will practice identifying appropriate and relevant tests, assessments, evaluations, and interventions to be used with the older adults who exhibit functional limitations; interpreting the findings of tests and measurements; augmenting findings with information from other members of the health care team; and developing comprehensive plans of care for older adults that are appropriate to the practice setting. Theories and research related to aging and geriatric physical therapy are explored in light of current health care trends and predictions. A case study format will be used to integrate comprehensive treatment planning and development of team strategies in order to address the needs of the older adult in various settings. (4 credits)

PHT 7865—Patient/Client Management—Sports Practice

Through the utilization of the elements of the physical therapist patient/client management model (examination, evaluation, diagnosis, prognosis, and intervention), students will apply and advance clinical skills, strategies, and decision making for managing athletes with impairments, functional limitations, and disabilities. Students will practice identifying appropriate and relevant tests, assessments, evaluations, and interventions to be used with athletes who exhibit functional limitations; interpreting the findings of tests and measurements; augmenting findings with information from other members of the health care team; and developing comprehensive plans of care for athletes that are appropriate to the practice setting. Theories and research related to sports medicine and orthopedic physical therapy are explored. A case study format will be used to integrate comprehensive treatment planning and development of team strategies in order to address the needs of athletes in various settings. (4 credits)
requirements, financial management, and human resource management—and the ability to utilize this knowledge on a consistent basis within the context of the daily operations of a physical therapy clinic or facility. Recognizing the amount of time available for this course and the inability to introduce and effectively instruct the student in all the areas related to successful practice management, this introductory course is designed to provide students with a focused introduction to five key areas: position of profession in health care delivery system, CPT codes and RBRVS, documentation issues, regulatory compliance, and financial statement analysis. (4 credits)

Patient/Client Management—Manual Therapy Track

PHT 7435—Vertebral Column I (VC I)

This course will address orthopedic evaluation and intervention of the lumbar, thoracic, and cervical spine and address in detail the evaluation, diagnosis, prognosis, intervention, and outcome assessment of orthopedic disorders. The anatomy, physiology, biomechanics, and pathophysiology of all joints of the spine will be covered, emphasizing an evidenced-based approach to physical therapy and medical intervention of the joints of the spine. Patient examination and intervention will include manual therapy techniques, special tests, and exercises. Intervention methods will include classic manipulative therapy procedures for the spine (including traction), stability exercises, stretching/strengthening exercises, and directional preference exercises for common disorders of the vertebral column. The course will also address indications and contra-indications for manipulative therapy for neuromuscular and rheumatologic conditions. The campus session will focus on psychomotor skills, with the online portion focusing on theory. (5 credits)

PHT 7436—Vertebral Column II (VC II)

This course will address advanced manipulative therapy of the lumbar spine and sacroiliac joint. It will review the anatomy and biomechanics of the lumbar spine and address the anatomy and biomechanics of the sacroiliac (S-I) joint. Advanced examination (with a variety of special tests) and intervention techniques for the lumbar spine and sacroiliac joint will be covered. The manipulative therapy procedures provided for the lumbar spine will be more advanced in this course than those provided in VC I. The interventions for the lumbar spine will cover examination and intervention procedures requiring higher psychomotor skills than those covered in VC I. In addition, the course will cover examination and treatment of common lumbar/SI musculoskeletal disorders resistant to physical therapy intervention as well as uncommon lumbar/SI musculoskeletal syndromes that respond well to manipulative therapy. The campus session will focus on psychomotor skills, with the online portion focusing on theory. Recommended Prerequisite: PHT 7435 (4 credits)

PHT 7440—Vertebral Column III (VC III)

This course will address advanced manipulative therapy and review the anatomy and biomechanics of the cervical and thoracic spine and the rib cage. It will address advanced examination (with more variety of special tests than VC I) and intervention techniques for the cervical and thoracic spine and the rib cage. The manipulative therapy interventions will cover specific techniques for the upper cervical spine, as well as examination and intervention procedures for the cervical and thoracic spine, requiring higher psychomotor skills than those covered in VC I. In addition, the course will include examination and treatment of common cervical/thoracic musculoskeletal disorders resistant to physical therapy intervention as well as uncommon cervical/thoracic musculoskeletal syndromes that respond well to manipulative therapy. The campus session will focus on psychomotor skills, with the online portion focusing on theory. Recommended Prerequisite: PHT 7435 (4 credits)

PHT 7437—Peripheral Joints I (PJ I)

This course will address orthopedic evaluation and intervention of all peripheral joints of the body (shoulder, elbow, wrist/hand, hip, knee, and ankle/foot). This will include evaluation, diagnosis, prognosis, intervention, and outcome assessment of orthopedic disorders. The anatomy, physiology, biomechanics, and pathophysiology of all joints of the extremities will be discussed in detail. Physical therapy and medical intervention of the joints of the extremities will be addressed with focus on evidence-based practice. The course will cover a plan of care for patients with common neuromusculoskeletal disorders of upper and lower extremities. Intervention methods will cover classic manipulative therapy procedures for the peripheral joints (including distraction), stability exercises, stretching exercises, and strengthening exercises. The course will also address indications and contra-indications for manipulative therapy of neuromusculoskeletal and rheumatologic conditions. The campus session will focus on psychomotor skills, with the online portion focusing on theory. (4 credits)

PHT 7438—Peripheral Joints II (PJ II)

This course will address advanced manipulative therapy of the peripheral joints, reviewing the anatomy and biomechanics of these joints. It will include advanced examination (with more variety of special tests than PJ I) and intervention techniques for peripheral joints (including thrust techniques) that require higher psychomotor skills than those covered in PJ I. In addition, the course will cover examination and treatment of common peripheral musculoskeletal disorders resistant to physical therapy intervention as well as uncommon peripheral musculoskeletal syndromes that respond well to manipulative therapy. The campus session will focus on psychomotor skills, with the online portion focusing on theory. (3 credits)
PHT 7439—Soft Tissue Mobilization
This course will introduce and expand upon concepts and techniques of soft tissue mobilization. It will specifically address histology, pathohistology, neurophysiology, and anatomy as it is applicable to the performance of manual physical therapy in all forms. Students will be instructed on various techniques for the extremities and the spine and will learn to apply these techniques safely and appropriately based on a variety of case scenarios and presentations. Positional release techniques will be introduced as well as the clinical application when applying soft tissue mobilization. Examples and/or explanation of specific exercises post-STM will be discussed, but the focus will be maintained on the manual application. This course will combine online instruction for didactic material with an intensive, two-day laboratory course to emphasize psychomotor skills. (4 credits)

PHT 7445—Manual Therapy Certification
This course is designed to prepare physical therapists for the manual therapy certification competency exam offered through the T-D.P.T. program at NSU. This course will review manipulative therapy principles and application as well as the anatomy, physiology, and biomechanics of the spine and extremities. It will address evaluation and management of musculoskeletal disorders and review manual evaluation and treatment skills employed in the management of musculoskeletal disorders. This course will also review the theory and clinical skills from VC I, VC II, VC III, PJ I, and PJ II. This course includes online and on-campus components. The online portion will guide students to review the theoretical course content addressed on the competency exam, while the on-campus portion will guide students in a review of psychomotor skills included on the competency examination. The manual therapy competency exam will take place on-campus and will include a multiple choice and a practice examination. After successful completion of the competency exam, the student will receive a certification entitled Certified Musculoskeletal Manual Physical Therapist (CMMPT).
Prerequisites: PHT 7435, PHT 7436, PHT 7440, PHT 7437, PHT 7438 (6 credits)

Electives
PHT 7025—The Health Care Educator
Patient education is an integral part of health care in every setting, from patient treatment to health and wellness promotion to injury and illness prevention. The focus of this course is to explore the many issues that impact patient education, from both a health care professional and a 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 students will examine. (3 credits)

PHT 7065/7075—Independent Study/Case Report
Students engage in individualized programs of study that may include development of clinical programs and/or management projects/proposals for implementation in their clinical settings or developing and writing case reports based on their own practices using guidelines from the American Physical Therapy Association. The process of writing a case report includes identification of an appropriate case, a review of the literature, identification of valid and reliable outcome measures, and documentation of the elements of patient/client management: examination, evaluation, diagnosis, prognosis and plan of care, and interventions. (1–3 credits)

PHT 7975—The Physical Therapist in Home Health Care
This course addresses common issues affecting the physical therapist in the evolving home care environment. The student will develop an understanding of the various types of home care organizations and identify optimal methods to work effectively within each. Included in this course will be a review of regulatory guidelines, assessment principles, care planning, and identification and implementation of targeted interventions to achieve successful outcomes. Principles of interdisciplinary case management using evidence-based standards of care will be reviewed for the most common home care diagnoses. The common legal and ethical principles including patient rights, abuse, and neglect will also be addressed. (3 credits)

PHT 7925—Survey of Alternative and Complementary Therapies
Synthesize information from various alternative and/or complementary therapies in order to help clients make informed choices. The course includes a survey of alternative health care practices in different cultures and a comparison between eastern and western practices (available through the health science program as DHS 8100). (4 credits)

Additional electives are available through the D.H.Sc./M.H.Sc. program. Prior approval must be granted by the T-D.P.T. program director for registration in D.H.Sc./M.H.Sc. courses.
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 Physical Therapy Department 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.

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—A scores, when appropriate.

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 (https://www.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
   College of Health Care Sciences
   Physical Therapy Department Admissions
   3301 College Avenue, P.O. Box 299000
   Fort Lauderdale, Florida 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—A, scores, if appropriate

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 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
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
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.ece.org

- Foreign Credentialing Commission on Physical Therapy*
  511 Wythe Street
  Alexandria, VA 22314, USA
  (703) 684-8406
  www.fccpt.org

- International Consultants of Delaware, Inc.
  3600 Market Street
  Suite 450
  Philadelphia, PA 19104
  (215) 222-8454, ext. 603
  www.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, College of Health Care Sciences, Department of Physical Therapy Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

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 beyond a master’s degree
- 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:

Requirements Semester Hours
Required HPD core courses .........................................12
Required PT core courses.............................................23
Specialty and elective courses .................................9
Dissertation ............................................................16

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.

Doctoral Tuition and Fees
Tuition for 2015–2016 (subject to change by the board of trustees without notice) is $620 per credit hour. An NSU student services fee of $1,050 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.
Doctor of Philosophy in Physical Therapy Course Descriptions

Note: Listed after each entry are semester credits.
*Required core course
**PHT 7500 or PHT 7510 is a required course.
†May be required for students who enter the program with an undergraduate degree in physical therapy

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—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)*

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 II
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 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 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 7130—Dissertation 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 7500—Designing Educational Materials for CDs/DVDs
Students are initially exposed to concepts and principles underlying the design and development of courseware. Then students apply teaching and learning theories to the creation of courseware, on the topic of their choice, saved to a zip disk or CD. The goal of the course is for students become proficient in the analysis, design, development, implementation, and evaluation of effective courseware. (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 WebCT. (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 credits)

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)*
Physician Assistant Program

Department of Physician Assistant—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. The United States Bureau of Labor Statistics (BLS) projects that employment of PAs is expected to grow 38 percent from 2012 to 2022.

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.

During the clinical year of study, the student participates in challenging clinical rotations at a variety of health care facilities associated with the program. The five required core rotations are in family medicine, emergency medicine, pediatrics, surgery, and internal medicine. The students also complete one four-week selective rotation in orthopedics, dermatology, or cardiology, followed by two weeks of gynecology/prenatal care. In addition, the students complete three elective rotations in any area of medicine they wish to pursue. The required subject, selective, and 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 physician assistants who will provide quality health care in rural, urban, underserved, and culturally diverse communities; to increase the accessibility of quality health care in the primary care setting; 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 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 including lab* (4 semester hours)
   - human physiology including lab* (4 semester hours)
   - biochemistry or organic chemistry (3 semester hours)
   - genetics (3 semester hours)

*If anatomy and physiology are taken as a combined course, both Anatomy and Physiology I and II must be taken.

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 the end of the fall semester, prior to matriculation, and within 10 years of the application date.) Additionally, science prerequisites must be completed prior to being invited for a personal interview.

The following courses are recommended:
   - biochemistry or organic chemistry laboratory (1 semester hour)
   - medical terminology (1 semester hour)

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 course of the applicant’s choosing.

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 www.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 applications are submitted online at www.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.

Three letters of recommendation/evaluation must be sent to CASPA. One letter of recommendation/evaluation must be provided by an academic adviser, professor, coworker, supervisor, or similar individual. Two letters of recommendation/evaluation must be from health care professionals, one of which must be from a physician or PA with whom you have worked or volunteered. None of the letters should be from family, friends, or personal practitioners.

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 31.

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 31 in order to be considered for admission for the June 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
a. competitive cumulative and science GPA
b. competitive GRE score
c. three letters of recommendation (including one from a physician or physician assistant)
d. health care experience
e. completion of all science prerequisites

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 March. 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 May in order to be considered for the June entering class. If, at the time of application, coursework is in progress or anticipated, please identify these courses on the supplemental application. Applicants who have completed their science prerequisites will be favored for early interview invitations.

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 2015–2016 (subject to change by the board of trustees without notice) is $31,025. Tuition for 2016–2017 will be subsequently posted on our website (www.nova.edu/PA).
• 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 $1,050 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 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 14 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 13 months of clinical training with required clinical rotations in family medicine, emergency medicine, pediatrics, surgery, and internal medicine. The students also complete one selective rotation in orthopedics, dermatology, or prenatal care/gynecology and three elective rotations in any area of medicine they wish to pursue. The required subject, selective, and 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: 14 months  
Clinical: 13 months

<table>
<thead>
<tr>
<th>First Semester—Summer I (June–August)</th>
<th>Lecture</th>
<th>Laboratory</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ANA 5420 Anatomy</td>
<td>54</td>
<td>28</td>
<td>5</td>
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<tr>
<td>PHS 5400 Physiology</td>
<td>54</td>
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<td>3</td>
</tr>
<tr>
<td>PAC 5400 Clinical Pathophysiology</td>
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<td>0</td>
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<tr>
<td>PAC 5000 Physical Diagnosis I</td>
<td>34</td>
<td>35</td>
<td>3</td>
</tr>
<tr>
<td>PAC 5002 Medical Terminology</td>
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<td>0</td>
<td>1</td>
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<tr>
<td>PCO 5300 Biomedical Principles</td>
<td>18</td>
<td>0</td>
<td>1</td>
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<tr>
<td>PAC 5001 Introduction to the PA Profession</td>
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<tr>
<td><strong>Total Hours:</strong></td>
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<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 Microbiology</td>
<td>52</td>
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<tr>
<td>PAC 5404 Legal and Ethical Issues in Health Care</td>
<td>34</td>
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<tr>
<td>PAC 5400 Physical Diagnosis II</td>
<td>30</td>
<td>36</td>
<td>3</td>
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<tr>
<td>PCO 5400 Pharmacology I</td>
<td>38</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>PAC 5400 Clinical Medicine and Surgery I</td>
<td>120</td>
<td>0</td>
<td>8</td>
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<tr>
<td>PAC 5410 Clinical Laboratory Medicine I</td>
<td>20</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>PAC 5229 Electrocardiography</td>
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<td>2</td>
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<tr>
<td><strong>Total Hours:</strong></td>
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<td>38</td>
<td>21</td>
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<table>
<thead>
<tr>
<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 Physical Diagnosis III</td>
<td>32</td>
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<td>3</td>
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<tr>
<td>PAC 5210 Clinical Medicine and Surgery II</td>
<td>120</td>
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<tr>
<td>PAC 5310 Clinical Medicine and Surgery III</td>
<td>112</td>
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<tr>
<td>PAC 5412 Interpretation and Evaluation of Medical Literature</td>
<td>30</td>
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<tr>
<td>PAC 5311 Clinical Laboratory Medicine II</td>
<td>36</td>
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<td>2</td>
</tr>
</tbody>
</table>

360 College of Health Care Sciences—Department of Physician Assistant
### College of Health Care Sciences — Department of Physician Assistant

#### Fourth Semester — Summer II Advanced Didactic (June–July)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Lecture</th>
<th>Laboratory</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>PAC 5460</td>
<td>Life Support Procedures and Skills</td>
<td>24</td>
<td>40</td>
<td>3</td>
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<tr>
<td>PAC 5510</td>
<td>Clinical Procedures and Surgical Skills</td>
<td>58</td>
<td>28</td>
<td>5</td>
</tr>
<tr>
<td>PAC 5129</td>
<td>Health Promotion and Disease Prevention</td>
<td>45</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>PAC 5010</td>
<td>Core Competencies</td>
<td>20</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PAC 5407</td>
<td>Clinical Pharmacology</td>
<td>50</td>
<td>6</td>
<td>3</td>
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<tr>
<td>PAC 5408</td>
<td>Clinical Genetics</td>
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</table>

**Total Contact Hours:** 233

#### 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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</thead>
<tbody>
<tr>
<td>PAC 6304</td>
<td>Selective (choose one for four weeks)</td>
<td>6</td>
<td>270</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>• Orthopedics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Dermatology</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Cardiology</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>AND</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Prenatal Care and Gynecology (for two weeks)</td>
<td></td>
<td></td>
<td></td>
</tr>
<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>
<td>6</td>
</tr>
<tr>
<td>PAC 6318</td>
<td>Family Medicine</td>
<td>6</td>
<td>250</td>
<td>6</td>
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<tr>
<td>PAC 6401</td>
<td>Elective I</td>
<td>6</td>
<td>270</td>
<td>6</td>
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<tr>
<td>PAC 6402</td>
<td>Elective II</td>
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<td>270</td>
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<td>PAC 6308</td>
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<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. (54-28-5)

**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. (52-0-3)

**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 (34-35-3)**

**PAC 5001—Introduction to the Physician Assistant Profession**
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 including exposure to interprofessional management. During this course, we will explore and participate in PA professional organizations and the roles these organizations play in the profession. (20-0-1)

**PAC 5002—Medical Terminology**
Use of medical language for appropriate and accurate communication in patient care. Students acquire a medical vocabulary, knowledge of medical terminology, and terminology reference material. (14-0-1)

**PAC 5010—Core Competencies***
This course has two components. First, the 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. Second, the course will introduce concepts and computer techniques in electronic medical records in an effort to facilitate use of this equipment during clinical rotations. (20-3-2)

**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 (30-36-3)**

**PAC 5110—Clinical Medicine and Surgery I**
Lectures, group discussions, case studies, evidence-based medicine, problem-based learning, online coursework, clinical simulation, web-based education, independent study, EKG, and diagnostic or 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. (120-0-8)
PAC 5129—Health Promotion and Disease Prevention

The course will focus on wellness through preventative interventions and services. This course emphasizes the 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 course will also discuss the structures and administrative principles in health care organizations, the role of the practicing PA in unique environments including rural and underserved medicine, cultural issues in health care, reimbursement for services rendered, quality assurance, federal health care programs, and other issues involving patient care. (22-0-2)

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. (20-0-1)

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. (36-0-2)

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. (45-0-3)

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 (30-2-2)

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. (112-0-7)

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. (30-0-2)

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. (34-0-2)

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. 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. 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. (50-6-3)

PAC 5408—Clinical Genetics
This course covers basic principles of genetics and the application of these principles in the primary care physician assistant clinical practice. The discussions include the basic structures and behavior of genes, the human genome, the role of genetics in medicine, genetic basics of human disease, application of genetics, and ethical considerations. (36-0-2)

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). (24-40-3)

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. (58-28-5)

PAC 6304—Selective Core
In this required core rotation, students select a four-week clinical experience in one of three areas of medicine (orthopedics, dermatology, or cardiology). Students also complete a two-week clinical experience in the area of prenatal care/gynecology. Prerequisite: completion of PAC 6311 or PAC 6318 (160-0-4)

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. (270-0-6)
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. (270-0-6)

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. (300-0-6)

PAC 6311—Surgery
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. (270-0-6)

PAC 6317—Pediatrics
This is a required, six-week rotation that takes place in outpatient and/or inpatient settings. Students learn to diagnose, treat, and manage the pediatric patient. Emphasizes surgical entities commonly encountered 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. (270-0-6)

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. (0-0-3)

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. (18-0-1)

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. (38-0-2)

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. (72-0-4)

PHS 5400—Physiology
The course provides an overview of physiological processes of critical importance to students in the 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. (54-0-3)
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. Forbes.com ranked physician assistant studies as the number one best master's degree for jobs in 2012. The United States Bureau of Labor Statistics (BLS) projects that employment of PAs is expected to grow 38 percent from 2012 to 2022.

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 Department of Physician Assistant—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 2018. The department is a member of the Physician Assistant Education Association (PAEA).

Mission Statement
In keeping with the ideology of both the university and the College of Health Care Sciences mission statements, the NSU Physician Assistant Program—Fort Myers endeavors to:

- provide an exemplary educational experience that emphasizes primary medical care, and enables graduates to demonstrate competency and skill in a variety of clinical environments
- prepare students for lifelong learning
- prepare students for leadership roles, enabling them to focus on improving access to health care
- promote 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 baccalaureate degree from a regionally accredited college or university.

The program requires the students to earn a grade of C (2.0) or better in each of the 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 grade point averages in the range of 3.0 to 3.3 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 algebra or higher (3 semester hours)
   - English (6 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* (3 semester hours)
   - human physiology* (3 semester hours)
   - biochemistry or organic chemistry (3 semester hours)
   - medical terminology (1 semester hour)
   - electives (43 semester hours) Applicants are encouraged to complete their elective coursework in the areas of behavioral, physical and social sciences, or the humanities.

*Note: These science courses must have been completed within seven years prior to application to the program.

The following courses are recommended:
   - genetics (3 semester hours)
   - biochemistry or organic chemistry laboratory (1 semester hour)
   - anatomy laboratory (1 semester hour)
   - physiology laboratory (1 semester hour)

Upon review of a student’s record, the committee on admissions may require additional coursework and testing as a condition of acceptance.

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 www.gre.org or by telephone at (609) 921-9000.

Computer Requirements

All students are required to have a laptop computer or tablet device with wireless Internet capability, a printer, and a webcam. Students must have access to Microsoft Office or its equivalent. Please see the Hardware Guidelines for Computing at NSU, available at https://www.nova.edu/publications/it-standards/#/1/, for more detail regarding minimum specifications.
The clinical year will require the student to track clinical experiences via a web-based program. Students may elect to keep handwritten copies of clinical experiences to input into their laptop or tablet device at a later date or may elect to use their laptop, tablet device, a Windows-compatible PDA, or a mobile phone with Internet connectivity to help aid in the clinical year tracking.

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 www.caspaonline.org or by writing

CASPA
P.O. Box 9108
Watertown, MA 02471

Questions regarding completion of the online application may be directed to CASPA’s email address, caspainfo@caspaonline.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. Three letters of recommendation/evaluation must be sent to CASPA. The first letter must be from a physician or physician assistant. The second letter must be from a health care professional involved with direct patient care. The third may be from an individual such as an academic adviser, professor, coworker, or supervisor. None of the three 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 February 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 February 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.

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.
Undergraduate/Physician Assistant Dual Admission Program with Hodges University

Nova Southeastern University’s College of Health Care Sciences has established an articulation agreement with Hodges University for a select number of highly motivated, qualified students interested in pursuing professional studies in the Physician Assistant Program. Candidates must complete all Hodges University core requirements and all prerequisite courses for entry into the NSU PA Program—Fort Myers and will earn a baccalaureate degree from Hodges University prior to entry into the PA Program. In addition, candidates must maintain a specified grade point average during the undergraduate years and must achieve scores on the Graduate Record Examination (GRE) that are no less than the mean scores for each element of the GRE of those students admitted to the NSU PA Program—Fort Myers the prior year. Candidates who meet the specified requirements receive a formal nomination to the NSU PA Program—Fort Myers from the chair of the Health Studies Program of Hodges University and are guaranteed an interview. There is no guarantee of automatic admission to the PA program.

Tuition and Fees

- Tuition for 2015–2016 (subject to change by the board of trustees without notice) is $31,025.
- 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 $250. This is due February 15, under the same terms as the acceptance fee.
- Preregistration fee is $250. This is due April 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 $1,050 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

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<tr>
<th>First Semester—Summer (May/June–August)</th>
<th>Lecture</th>
<th>Laboratory</th>
<th>Credit Hours</th>
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<tr>
<td>PAN 5000 Anatomy</td>
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<td>PAN 5100 Physiology</td>
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<td>PAN 5300 Physical Diagnosis I</td>
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<td>PAN 5400 History Taking and Communication Skills</td>
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<td>PAN 5003 Fundamentals of Medical Imaging</td>
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<td>PAN 5409 Cultural Issues in Health Care</td>
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<td>Second Semester—Fall (August–December)</td>
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<td>PAN 5200 Microbiology</td>
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<td>PAN 5403 Legal and Ethical Issues in Health Care</td>
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<td>PAN 5600 Clinical Laboratory Medicine I</td>
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<td>PAN 5420 Pharmacology II</td>
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<td>PAN 5540 Clinical Behavioral Medicine</td>
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<td>PAN 5560 Clinical Procedures and Surgical Skills</td>
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<td>PAN 5008 Health Promotion and Disease Prevention</td>
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<td>PAN 5423 Interpretation and Evaluation of Medical Literature</td>
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Clinical Curriculum—Second Year (August–August)

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<td>PAN 6330</td>
<td>Internal Medicine</td>
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<td>PAN 6350</td>
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<td>PAN 6360</td>
<td>Surgery</td>
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<td>Behavioral Health</td>
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<td>Otorhinolaryngology</td>
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<td>Graduate Project</td>
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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

**Physician Assistant—Fort Myers Course Descriptions**

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. (55-38-5)

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. (28-4-2)

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. (30-6-2)
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. (22-0-1)

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. (18-0-1)

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. (54-0-3)

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. (45-0-3)

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. (45-0-3)

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 (42-20-3)

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 (36-36-3)

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. (50-30-4)

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. (18-0-1)

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. (45-0-3)

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. (38-0-2)
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. (72-0-4)

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. (50-30-4)

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). (24-40-3)

PAN 5500—Clinical Medicine and Surgery I
Etiology, clinical manifestations, appropriate diagnostic evaluation, and the management of selected disease entities. (112-0-7)

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. (120-0-8)

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. (112-0-7)

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. (45-0-3)

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. (44-24-3)

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. (36-4-2)

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. (32-0-2)

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)
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. The United States Bureau of Labor Statistics (BLS) projects that employment of PAs is expected to grow 38 percent from 2012 to 2022. 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.

Department of Physician Assistant—Orlando

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 Publication Skills and Medical Research (MMS 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. (4-90-3)
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, 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

At its March 2014 meeting, the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) placed the Nova Southeastern University—Orlando Physician Assistant program, sponsored by Nova Southeastern University—Orlando on Accreditation Probation until its next validation review in March 2016. Probation is a temporary status of accreditation limited to two years and conferred when a program does not meet the Standards and when the capability of a program to provide an acceptable educational experience for its students is threatened. Once placed on probation, programs that still fail to comply with accreditation requirements in a timely manner, as specified by the ARC-PA, may be scheduled for a focused site visit and/or risk having their accreditation withdrawn.

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

1. Maintain a first-time PANCE pass rate above the national average.
2. Maintain PANCE scores in each of the content areas at or above the national average.
3. Maintain an attrition rate below 10 percent and a graduation rate above 90 percent.
4. Assure all graduates meet the program-defined graduate competencies, which align with the PA Core Competencies, as endorsed by AAPA, PAEA, and NCCPA.

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. Degrees conferred greater than 10 years prior to the application date will not be accepted without 18 semester hours (or equivalent quarter hours) of prerequisites or upper division science classes for science majors (typically defined as a course number beginning with a 3 or a 4) within the previous five years. The program requires the students to earn a grade of C (2.0) or better in each of the 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 at the time of application and continuing through matriculation.

2. The college requires the students to earn a grade of C (2.0) or better in each of the following required courses:
• college algebra or higher (3 semester hours, not including statistics)
• English composition (3 semester hours)
• English literature (3 semester hours)
• humanities/arts (3 semester hours)
• social sciences (9 semester hours)
• general biology (or zoology), including laboratory (4 semester hours)
• general microbiology, including laboratory (4 semester hours)
• general chemistry I and II, including laboratory (8 semester hours)
• human anatomy and human physiology (3 semester hours of each subject or 6 semester hours of combined subject courses)
• biochemistry or organic chemistry (3 semester hours)
• introductory statistics (3 semester hours)
• medical terminology (1 semester hour)

The required science courses must be specifically for science majors and must be completed within 10 years of application date. 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. CLEP placement exams are not accepted for science prerequisites. 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)

Upon review of a student’s record, the Committee on Admissions may require additional coursework and testing as a condition of acceptance.

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 must be upper-level science courses for science majors of the applicant’s choosing.

4. All applicants are required to have official scores from the Graduate Record Examination (GRE) general test submitted directly to the NSU PA 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 www.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
All students are required to have a laptop computer (PC preferred) and a printer. The computer must have the following minimum specifications:
• Intel core i5 or i7
• sound capability and speakers
• Internet connection with private Internet service provider (ISP) for universal access to the Internet
• wireless capability
• combo DVD and RW drive
• printer
• internal or external webcam

The following are recommended features:
• Windows 7 or higher OR Mac OS X version 10.7 or higher
• Microsoft Office 2007 with PowerPoint, Word, and Excel minimum
• surge suppressor
• 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 applications are available online at www.caspaonline.org. Questions regarding completion of the online application may be directed to CASPA’s email address, caspainfo@caspaonline.org, or by telephone to (617) 612-2080.
The CASPA application may be submitted as early as April 16, the year prior to the admission cycle. The CASPA application deadline is January 15 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 to CASPA.

Three letters of recommendation/evaluation must be sent to CASPA or the application will not be considered. One letter of recommendation/evaluation must be sent from an individual (other than a relative or friend) such as an academic adviser, professor, coworker, or supervisor. 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 or 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 February 15.

4. Complete Supplemental Application
Once the CASPA application has been received by Nova Southeastern University, a supplemental application will be mailed to the applicant.

5. Send Supplemental Application
Send the completed supplemental application to EPS at the address below.

Nova Southeastern University
Enrollment Processing Services
College of Health Care Sciences
Department of Physician Assistant Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905
Phone: (954) 262-1101 or 877-640-0218
Fax: (954) 262-2282

Your complete supplemental application must be received no later than February 15 in order to be considered for admission for the June entering class. Once we receive your GRE scores; copies of all professional certifications, registrations, licenses, or relevant credentialing materials; your supplemental application; and the nonrefundable, $50 application 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 $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 meets program criteria 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.

Inquiries should be directed to
Nova Southeastern University
Department of Physician Assistant—Orlando
Coordinator of Student Services and Recruitment
4850 Millenia Boulevard
Orlando, Florida 32839-6012
Phone: (954) 262-1101 or 877-640-0218
Fax: (954) 262-2282

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 2015–2016 (subject to change by the board of trustees without notice) $31,025. A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 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 $250. 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.

• Preregistration fee is $250. This is due March 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 with an E.

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, 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 (six weeks)
  - Orthopedics (six weeks)
  - Dermatology (six weeks)
  - Otorhinolaryngology (six weeks)
• 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 elective 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 on required specialty rotations will occur on scheduled end-of-rotation days (EORs). OSCE, Pack Rat, 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

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<td>PAO 5460</td>
<td>Life Support Procedures and Skills</td>
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## Clinical Curriculum—Second Year (August–August)

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<th>Course Code</th>
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<td>Pediatrics</td>
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<td>• Geriatrics</td>
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<td>• Dermatology</td>
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<td></td>
<td>• Otorhinolaryngology</td>
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**Total Weeks/Hours/Credits (second year)**

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<td>52</td>
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Curriculum is subject to change as directed by the department.

*one of four selectives required, may use other selectives as electives

### Physician Assistant—Orlando Course Descriptions

**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 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, and application of genetic science to cancer, genetics in clinical medicine for diagnosis, treatment, and ethical considerations. (20-30-2)

PAO 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. (16-0-1)

PAO 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. 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. (28-0-2)

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. (30-0-2)

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. (20-36-3)

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. (42-0-3)

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. (30-0-2)
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. (18-0-1)

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
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. (26-30-3)

PAO 5420—Clinical Medicine and Surgery I
Etiology, clinical manifestations, appropriate diagnostic evaluation, and the management of disease entities of gastroenterology, OB/GYN, geriatrics, and neurology. (114-0-7)

PAO 5422—Research Methodology
Emphasis and overview of the importance of data collection, research methods, and application of scientific thought to research findings. 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. (24-0-2)

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). (20-24-2)

PAO 5500—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. (172-0-11)

PAO 5510—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. This course is a prerequisite for clinical rotations. (32-32-3)

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. (40-0-3)

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 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 1
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. Each four-week elective may be taken sequentially at the same site or separately. (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. (240-0-6)

PAO 6406—Selective
Choose one of the four 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.

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)
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. The United States Bureau of Labor Statistics (BLS) projects that employment of PAs is expected to grow 38 percent from 2012 to 2022.

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 Department 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, and surgery, all complemented by three elective rotations. 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—Jacksonville Physician Assistant Program sponsored by Nova Southeastern University—Jacksonville. 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 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 develop the necessary skills to pursue lifelong learning; to foster leadership qualities, which will enable graduates to improve access to quality, affordable health care; and to heighten the status 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, 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 (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 human physiology (6 semester hours)
   - biochemistry or organic chemistry (3 semester hours)
   - genetics (3 semester hours)

Applicants are encouraged to complete their elective coursework in the areas of behavioral, physical, and social sciences or in the humanities.

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 www.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 www.caspaonline.org or by writing to

CASPA
P.O. Box 9108
Watertown, MA 02471

The CASPA application deadline is January 15 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.

Three letters of recommendation/evaluation must be sent to CASPA. One letter of recommendation/evaluation must be sent from an individual (other than a relative or friend) such as an academic adviser, professor, or supervisor. Two letters of recommendation/evaluation must be from health care professionals, one of which must be from a physician or PA with whom you have worked, shadowed, or volunteered.

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 February 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 February 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 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. Interviews will be held from mid-September through mid-May. 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 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, 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 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 communications 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, Florida 32202
(904) 632-3388

Tuition and Fees
- Tuition for 2015–2016 (subject to change by the board of trustees without notice) is $31,025. A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 is also required annually
- A clinical support charge of $400 will be assessed in each of the three semesters of clinical training.

388 College of Health Care Sciences—Department of Physician Assistant
• 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, and internal medicine. Students must also complete three elective rotations, for a total of nine clinical rotations. The required rotations and 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 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:** June  
**Length:** 27 months  
**Degree:** Master of Medical Science (M.M.S) in Physician Assistant  
**Didactic:** 15 months  
**Clinical:** 12 months

### First Semester—Summer I (June–August)

<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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<tr>
<td>PAJ 5506</td>
<td>Cultural Issues in Health Care</td>
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<tr>
<td>PAJ 5000</td>
<td>Anatomy</td>
<td>59</td>
<td>38</td>
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<tr>
<td>PAJ 5001</td>
<td>Pharmacodynamics</td>
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<tr>
<td>PAJ 5002</td>
<td>Introduction to the PA Profession</td>
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<td>PAJ 5003</td>
<td>Fundamentals of Medical Imaging</td>
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<tr>
<td>PAJ 5100</td>
<td>Physiology</td>
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<td>PAJ 5004</td>
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### Second Semester—Fall (September–December)

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<td>Legal and Ethical Issues in Health Care</td>
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<tr>
<td>PAJ 5006</td>
<td>Electrocardiography</td>
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<td>4</td>
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<td>PAJ 5101</td>
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<td>PAJ 5200</td>
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<td>PAJ 5500</td>
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<td>Clinical Laboratory Medicine I</td>
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<td>Credit Hours</td>
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**Total Hours** 447  40  31

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<td>Clinical Pharmacology</td>
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<td>PAJ 5508</td>
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<td>PAJ 5560</td>
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<td>PAJ 5008</td>
<td>Health Promotion and Disease Prevention</td>
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<td>PAJ 5009</td>
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<td>PAJ 5570</td>
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**Total Hours** 229  64  16

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<tr>
<td>PAJ 6320</td>
<td>Family Medicine</td>
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</tr>
<tr>
<td>PAJ 6330</td>
<td>Internal Medicine</td>
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<tr>
<td>PAJ 6340</td>
<td>Pediatrics</td>
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<td>PAJ 6350</td>
<td>Prenatal Care and Gynecology</td>
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<td>PAJ 6390</td>
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<td>Graduate Project</td>
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**Total Hours** 52  2,140  55

Curriculum is subject to change as directed by the program.
Note: Listed at the end of each entry are lecture clock hours, laboratory clock hours, and semester hours.

**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. *(59-38-5)*

**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 (16-0-1)*

**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. *(16-0-1)*

**PAJ 5003—Fundamentals of Medical Imaging**
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. *(18-0-1)*

**PAJ 5004—Medical Terminology**
Use of medical language for appropriate and accurate communication in patient care. Students acquire a medical vocabulary, knowledge of medical terminology, and terminology reference material. *(0-25-1)*

**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 effect on medicine. *(18-0-1)*

**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. *(18-4-1)*

**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. *(22-0-1)*

**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. *(30-0-2)*

**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 (54-0-3)*

**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 physiologic 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 pathophysiological 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 resultant clinical signs and symptoms. This course builds on PAJ 5101. *(34-0-2)*

**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 the prevention, control, and diagnostic laboratory tests of 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 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. 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 (60-30-4)

PAJ 5310—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. 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. (20-36-2)

PAJ 5320—Physical Diagnosis III

This course is a continuation of PAJ 5310. 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 student's 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. 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 use knowledge acquired from previous and concurrent didactic courses to develop these skills. (30-40-4)

PAJ 5410—Pharmacology I

Understanding the basis for pharmacologic intervention in patient care is the foundation for treatment of disease. This 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, and pharmacokinetic considerations for special patient populations are discussed. Prerequisite for PAJ 5507 (38-0-2)

PAJ 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 will be discussed. 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 will also be gone over. Prerequisite for PAJ 5507 (72-0-5)

PAJ 5500—Clinical Medicine and Surgery I

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. (45-0-3)

PAJ 5504—Legal and Ethical 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. (112-0-7)

PAJ 5506—Cultural Issues in Health Care

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. 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. (16-0-1)

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. (30-0-2)

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. (120-0-8)

PAJ 5512—Epidemiology/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. (45-0-3)

PAJ 5520—Clinical Medicine and Surgery III
This course is a continuation of Clinical Medicine and Surgery II. It will include disease entities of major organ systems. Lectures in primary care aspects of disease evaluation and treatment will be given. (112-0-7)

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. (45-0-3)

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). (24-40-3)

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. (44-24-3)

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. (20-0-1)

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. (34-0-2)

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. (240-0-6)

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. (240-0-6)

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. (240-0-6)
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. (240-0-6)

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. (300-0-6)

PAJ 6370—Clinical Elective I
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. (240-0-6)

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. (240-0-6)

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. (160-0-4)

PAJ 6600—Graduate Project
With the guidance of a faculty adviser, students will use the skills acquired in Epidemiology and Interpretation of the Medical Literature 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. (0-0-3)

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, Virginia 22314
  www.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, Virginia 22314-2544
  (703) 548-5538
  www.paconline.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, Georgia 30097
  (678) 417-8100
  www.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, D.C. 20212-0001
  www.bls.gov
Department of Speech-Language Pathology

Bachelor of Science (B.S.) in Speech-Language and Communication Disorders

The Bachelor of Science (B.S.) in Speech-Language and Communication Disorders (SLCD) is designed as a preprofessional degree and provides students with the ability to address some of the academic requirements for American Speech-Language-Hearing Association (ASHA) certification. Additionally, the program is designed to serve as a pathway to the Master of Science degree in Speech-Language Pathology offered at Nova Southeastern University, or elsewhere, by providing the necessary prerequisite coursework. Depending on the state in which students reside, graduates of the undergraduate program can apply for licensure as speech-language pathology assistants, permitting them to work under the direction of a certified and licensed speech-language pathologist in education and health-related settings. Students will be provided with a research-based, academic foundation in the concepts and principals in speech, hearing, language, and human communication disorders. The curriculum provides the scientific basis for subsequent coursework in the area of assessment and treatment of various communication disorders, instills a research philosophy in communication sciences and disorders, and introduces the profession as a career. Additionally, students will develop critical thinking and problem solving skills in their courses.

Admissions Requirements

Undergraduate admissions requires graduation from a regionally accredited high school, or a GED or homeschool equivalent, with a cumulative grade point average (GPA) and standardized test scores at or above the minimum entrance requirements.

Minimum Entrance Requirements*

High School GPA: 3.0 (Overall)

SAT: 1000 (Combined Math and Critical Reading Only) or ACT: 22 (Overall)**

* Satisfying these minimum entrance requirements does not guarantee admission.

**NSU will combine the best individual math and critical reading SAT exam scores or best individual ACT exam scores from multiple test instances to measure against the minimum entrance requirements. Applicants are encouraged to test multiple times to ensure the best possible total score is received.

Application Procedures

1. Submit an Application

Complete the Nova Southeastern University undergraduate admissions application. All applications must include a $50, nonrefundable application fee. Access the undergraduate application online by logging in to your VIP account (www.nova.edu/viplogin). If you don’t have a VIP account, create one by going to the application website (www.nova.edu/info-apply/undergraduate.html)

2. Request Official Transcripts

Request that official transcripts from all current and previous schools and/or institutions be sent directly to the NSU Enrollment Processing Services at the address below. Utilize the transcript request form at www.nova.edu/undergraduate/admissions/forms/transcript-request.pdf. NSU does not process received transcript request forms for prospective students. Therefore, download and print one transcript request form for each of your previous schools and/or institutions and mail it directly to them.

Home School Education Students, send Verification of Compliance and Completion of Home Education Program, to include

• copy of teacher’s evaluation or district confirmation

OR

• verification of a passing score on the state student assessment test (FCAT—Florida), administered by a certified teacher

For more information on AP and IB courses, please visit Transfer Evaluation Services for Undergraduate Students (www.nova.edu/registrar/tes).

3. Submit SAT/ACT Scores

Request that official SAT and/or ACT score reports be sent directly to NSU’s Enrollment Processing Services. All first-year applicants (students who have never attended college or who have fewer than 24 credit hours of transfer credit), must provide official test scores. Students without the appropriate SAT/ACT scores or prerequisites for college-level math and/or English will be placed in foundation courses.
NSU’s SAT school code is 5514, and the ACT school code is 6706.

Nova Southeastern University
Enrollment Processing Services
College of Health Care Sciences
Speech-Language Pathology Admissions
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905
Phone: (954) 262-1101 or 877-640-0218
Fax: (954) 262-2282

Tuition and Fees
Tuition for 2015–2016 (subject to change by the board of trustees without notice) is
• $26,910 for the full-time, day program
• $897 per credit hour for the part-time, day program
• $751 per credit hour for existing students in the evening program at the Fort Lauderdale/Davie Campus
• $897 per credit hour for new students in the evening program at the Fort Lauderdale/Davie Campus
• $751 per credit hour for existing students in the evening program online
• $897 per credit hour for new students in the evening program online
• $604 per credit hour for existing students in the evening program at the regional campuses
• $897 per credit hour for new students in the evening program at the regional campuses

View degree and program offerings at www.nova.edu/academics/college-program-degrees.html for details on specific programs.

Tuition for 2016–2017 will subsequently be posted on our website (www.healthsciences.nova.edu/slp/speech-language-communication-disorders.html).

Full-time, day students should anticipate the following additional approximate expenses:
• Room—$7,280, based on a double room for fall and winter semesters
• Meal Plan—$2,600, based on a declining balance per year
• Books (estimated)—$100–$250 per course

Additional Fees
• Application fee is $50.
• Registration fee is $25 per semester.
• An NSU student services fee is $350 per semester, not to exceed $1,050 annually.
• Laboratory fee varies by program.*

*Refer to the NSU Undergraduate Student Catalog for specific program fees.

Requirements for Graduation
All degree-seeking students must be matriculated and complete the minimum credits as designated by their chosen major. The following conditions are also required:
1. completion of at least 120 credits, including major, minor, general education, specialization, concentration, exams, and elective coursework, as specified by program requirements
2. attainment of a 2.0 cumulative grade point average
3. attainment of a 2.25 grade point average in the major area
4. completion, at NSU, of at least 30 credits (not including CLEP, proficiency examinations, or prior experiential learning credits)
5. completion of at least 50 percent of the credits in the major area at NSU (not including CLEP, proficiency examinations, or prior experiential learning credits)
6. submission of a degree application form and payment of the diploma fee, preferably no later than the last semester

Academic Dismissal and Readmission in the Speech-Language and Communication Disorders Program
Academic Progress is separate from the standards for Satisfactory Academic Progress (SAP) for financial aid purposes. For detailed information about maintaining SAP for financial aid eligibility, visit www.nova.edu/sap. For further information about academic dismissal or readmission, please refer to the NSU Undergraduate Student Catalog (www.nova.edu/undergraduatestudies/forms/2015-16_undergraduate_catalog.pdf).
Course of Study

General Education Requirements (30 credits)
Students are required to complete 30 credit hours as part of the general education program. For specific course requirements, refer to the General Education Program section in the Academic Resources and Procedures segment of the NSU Undergraduate Student Catalog at www.nova.edu/undergraduatestudies/forms/2015-16_undergraduate_catalog.pdf.

Required General Education Coursework
• written composition (6 credits at or above COMP 1500)
• mathematics (3 MATH credits at or above MATH 1040 and STATS 1060 or 2020)
• humanities (6 credits in any course with a prefix of ARTS, FILM, HIST, HUMN, LITR, PHIL, SPAN, or WRIT, or any foreign language)
• social and behavioral sciences (6 credits in any course with a prefix of COMM, GEOG, GEST, GLBS, POLS, PSYC, ECN, INST, or SOCL)
• natural and physical sciences (6 credits in any courses with a prefix of BIOL, MBIO, CHEM, or PHYS)

Total: 30 semester hours

B.S. in Speech-Language and Communication Disorders Curriculum Outline

Program Requirements (24 credits) Credits
ESOL 2903 Cross-Cultural Studies 3
PSYC 2390 Adulthood and Aging 3
EDUC 3350 Survey of Exceptional Student Education 3
BHS 4150 The Science of Sound 3
BIOL 1070 Basics of Human Heredity 3
PSYC 2300 Behavior Modification 3
BHS 4001 Individuals with Disabilities and Special Needs 3
Any SPCH (Oral Communication course) 3

Major Requirements (42 credits) Credits
CSAD 2010 Communication Disorders Through Film and Media 3
CSAD 3010 Phonetics 3
CSAD 3020 Anatomy and Physiology of Speech, Language, and Hearing 3
CSAD 3025 Language Science 3
CSAD 3030 Speech and Language Development 3
CSAD 3035 Foundations of Language and Literacy 3
CSAD 3040 Neuroanatomy 3
CSAD 3050 Hearing and Speech Science 3
Program Requirements (24 credits)

ESOL 2903—Cross-Cultural Studies
This course will enable students to expand their knowledge of a multiplicity of cultural groups nationwide. This knowledge will allow them to identify culture-specific verbal and nonverbal communications and school behaviors resulting from cultural variations and their influence on student behavior/attitudes. The use of recent research findings and cross-cultural awareness will assist participants in maximizing student learning and in designing culturally sensitive instructional materials while exhibiting appropriate teacher behaviors in cross-cultural school settings. In addition to class meetings, a 10-hour field experience is required for this course. (3 credits)

PSYC 2390—Adulthood and Aging
This course goes over the developmental experiences of maturity. Physiological and psychological aspects of aging are also discussed. Prerequisite: PSYC 1020 or 1020H (3 credits)

EDUC 3350—Survey of Exceptional Student Education
This course goes over the foundations in exceptional student education in which historical perspectives, student characteristics, prevalence, incidence, etiology, and medical aspects of exceptional learners are discussed. Techniques of prevention and intervention, from infancy through adulthood, are explored through classification processes, the continuum of services, and the utilization of community services. Current trends and issues will be investigated. In addition to class meetings, a minimum of 10 hours of observation and participation in a field setting is required. Prerequisites: COMP 1500, COMP 2000 or COMP 2020, and MATH 1040 (3 credits)

BHS 4150—The Science of Sound
This course is designed to introduce students to acoustics. Students will study production of sound waves in general, and more specifically, the production of sound waves during speech. Students will also study the characteristics of sound waves, how sound waves are propagated through a medium, and the perception of sound. (3 credits)

BIOL 1070—Basics of Human Heredity
This course examines basic concepts of genetics and their application to human heredity and diversity. Topics covered include structure and function of DNA, genes, and chromosomes; the role of genes in heredity; tracing of genetic traits in family trees; and advances in genetic technologies as applied to human medicine. This course is not intended for biology majors. Prerequisite: MATH 1030 (3 credits)

PSYC 2300—Behavior Modification
Behavior modification techniques applied to diverse areas such as mild and severe behavior problems in children and adults, behavioral medicine, organizational behavior, sports psychology, and self-management. Prerequisite: PSYC 1020 or PSYC 1020H (3 credits)

Speech-Language and Communication Disorder Course Descriptions

Program Electives (24 credits)
Total Credits Required for Degree Completion: 120
BHS 4001—Individuals with Disabilities and Special Needs
With the continued graying of the American population and the extending life expectancy of individuals with disabilities, there are a growing number of individuals facing chronic life challenges. These individuals are consumers of health care. It is incumbent on health care providers to understand how different challenges affect a person's abilities. Topics of discussion include laws that impact services, the history of disability care, and specific disabilities and their impact on functioning. (3 credits)

Any one of the following Oral Communication courses

SPCH 1010—Public Speaking
This course offers training and practice in the fundamentals of public speaking, including audience analysis, topic development, research, organization, language use, and delivery. (3 credits)

SPCH 1010H—Public Speaking Honors
This course offers training and practice in the fundamentals of public speaking, including audience analysis, topic development, research, organization, language use, and delivery. It is for honors students only. (3 credits)

SPCH 2000—Fundamentals of Human Communication
This course surveys major concepts, theories, and research in the study of human communication. The course assists students in developing knowledge and skills in the development of their own communication competence. It covers basic human communication processes in the contexts of interpersonal, group/team, and public communication. Prerequisite: COMP 1500 or COMP 1500H (3 credits)

SPCH 2020—Argument and Debate
This course offers training and practice in fundamentals of oral argumentation, including methods of obtaining and organizing materials, delivery, and audience analysis, with an emphasis on researching evidence and constructing and refuting an argument in a debate format. Prerequisite: COMP 1500 or COMP 1500H (3 credits)

SPCH 3120—Speech Communication for the Professions
This course has an emphasis on the public communication skills required in business and/or professional settings. Topics include business interviews, public speaking, presentation aids, listening, team communication, and cultural diversity in the workplace. (3 credits)

SLCD Major Requirements (42 credits)

CSAD 2010—Communication Disorders Through Film and Media
Overview of communication disorders through a representation in films, literature, and media. This course provides an overview of speech, language, and hearing disorders from a clinical perspective. Communication disorders will be examined through the perception of society. Prerequisite: COMP 1500 (3 credits)

CSAD 3010—Phonetics
This course deals with the basic concepts of articulatory and acoustic description of speech sound production, dialect variations, and language differences; development of phonetic transcription skills with emphasis on English phonetics; and clinical applications to developing and disordered speech. Prerequisite: CSAD 2010 (3 credits)

CSAD 3020—Anatomy and Physiology of Speech, Language, and Hearing
This course is an introduction to the anatomy and physiology of the auditory and vocal mechanisms. The structure and function of the skeletal, neurological, and muscular systems involved in respiration, phonation, resonance, articulation, and audition are reviewed. The normal anatomy and functioning of these systems is contrasted with disordered or damaged systems. Prerequisites: PHYS 1020 and BIOL 1100 (3 credits)

CSAD 3025—Language Science
This course will provide the foundation for understanding the morphological and syntactic processes in typical language development. Students will learn to apply this knowledge to the clinical analysis of language and the study of syntactic and morphological processes as they relate to clinical analysis of language. Prerequisite: COMP 1500 (3 credits)

CSAD 3030—Speech and Language Development
This course will deal with the study of prelinguistic and psycholinguistic variables related to normal development from infancy through adolescence, application of analytic methods of development, and cultural variations in speech and language. Prerequisite: CSAD 3025 (3 credits)

CSAD 3035—Language and Literacy
This course will explore the foundations of language and literacy development as content background for effective language and literacy instruction, birth to age five. Topics include theories of language and literacy development, history of reading and writing instruction, literacy and technology, cultural and linguistic aspects of literacy, and various perspectives and models of literacy learning. Prerequisite: CSAD 3030 (3 credits)
CSAD 3040—Neuroanatomy
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. Prerequisite: CSAD 3020 (3 credits)

CSAD 3050—Hearing and Speech Science
This course covers the nature of sound, sound transmission, and units of measurement necessary to understand the physiologic, acoustic, and perceptual parameters of hearing and speech production. A basic review of instrumentation and technology available and utilized in speech, hearing, and language research, intervention, and assessment is provided. Prerequisite: CSAD 3020 (3 credits)

CSAD 3060—Directed Observation
Students must observe 25 clinical clock hours of evaluation and treatment by an ASHA-certified and state-licensed speech-language pathologist (SLP) as an orientation to the clinical aspect of speech-language pathology. Observation hours must be completed at university-affiliated sites and must precede clinical assignments. Prerequisites: CSAD 4010 and CSAD 4030 (1 credit)

CSAD 3080—Introduction to Research in CSD
This course will provide an introduction to research methods used in speech-language and communication disorders. Research studies will be used to illustrate research designs used in the discipline. Ethics of research will be discussed. Academic writing and APA style will be highlighted. Prerequisites: MATH 1040, MATH 1060, or MATH 2020; COMP 1500; CSAD 4010; and CSAD 4030 (3 credits)

CSAD 4010—Evaluation of Speech and Language Disorders
Principles of screening and evaluation of clients typically seen in a clinic, school, hospital, or nursing home setting, including administration of specific evaluation instruments, are discussed for the purpose and diagnosis of speech and language disorders. Prerequisites: CSAD 3010 and CSAD 3030 (3 credits)

CSAD 4030—Treatment of Speech and Language Disorders
This course provides an overview of treatment strategies and professional terminology used in the management of communication disorders. There is a rudimentary focus on various intervention approaches for populations ranging from childhood to adult. Basic information is delivered on the Code of Ethics from the American Speech-Language-Hearing Association. Prerequisites: CSAD 3010 and CSAD 3030 (3 credits)

CSAD 4050—Introduction to Audiology
This course provides information regarding the normal anatomy and physiology of the auditory and vestibular system, including neural pathways, the brainstem, and auditory cortex. Instruction in test administration and interpretation of standard and specialized tests of auditory function are covered. Pathologies of the hearing and balance mechanism are discussed, with emphasis on interpretation of audiological results. Information about the evaluation and treatment of hearing disorders is provided. Adult and pediatric test procedures and outcomes are discussed and common etiologies for different types of hearing loss are addressed for both groups, including central auditory processing disorders. Adult and pediatric audiogram and letter report interpretation will be covered. Prerequisite: CSAD 4050 (3 credits)

CSAD 4070—Rehabilitation for the Hearing Impaired
This course covers the habilitation and rehabilitation of the hearing impaired as related to hearing aid use, speech-reading, auditory training, and communication with emphasis on prevention and remediation of communication problems resulting from hearing impairment in populations ranging from birth to geriatrics. Prerequisite: CSAD 4050 (3 credits)

CSAD 4080—Capstone
A culminating experience that incorporates knowledge gained in coursework in speech-language and communication science and disorders. The capstone experience offers students the opportunity to bridge theory-to-practice. This experience may be a service-learning project, research paper, or clinical experience. Prerequisites: CSAD 3080, CSAD 4010, and CSAD 4030 (2 credits)
The Master of Science in Speech-Language Pathology (M.S.) focuses on training speech-language pathologists to provide a full range of services to communicatively disordered clients 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 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 Requirement
Prior to matriculation, applicants must have received a baccalaureate or graduate degree from a regionally accredited college or university with 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.

Application Procedures
To apply, go to www.nova.edu/graduate/index.html and follow directions to complete the interest page. All prospective students must submit a completed application with a $50, nonrefundable fee (required for each application submitted to Nova Southeastern University).

Final, official transcripts from all previously attended, postsecondary institutions are required. Transcripts should be forwarded directly from the issuing institution in a sealed envelope in order to be considered an official transcript. Applicants with transcripts from institutions that generate electronic transcripts can have them sent to electronictranscript@nova.edu. Photocopies and facsimiles will not be accepted as final, official transcripts.

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.

All official application information must be sent directly from the submitting institution to NSU’s Enrollment Processing Services at the address below.

Nova Southeastern University
Enrollment Processing Services
College of Health Care Sciences
Department of Speech-Language Pathology
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905

Applicants may be provisionally admitted based on a preliminary review of unofficial transcripts and/or program-specific admissions requirements. However, full admission to any degree program requires the submission of all final, official documents required for admission within 90 calendar days from the official start date of the term. Once provisional acceptance is granted, any student who does not attain full admittance within 90 calendar days from the official start date of the term will not be permitted to continue his or her studies. Registration will be prohibited and other services may be suspended.

Tuition and Fees
Master of Speech-Language Pathology tuition for 2015–2016 (subject to change by the board of trustees without notice) is $1,195 per credit hour. An NSU student services fee of $350 is required per semester, not to exceed $1,050 annually. Tuition for 2016–2017 will subsequently be posted on our website (www.healthsciences.nova.edu/slp/master-speech-language-pathology.html).

Requirements for Graduation
To be eligible for graduation, all students must

- successfully complete all required courses
- successfully complete the required clinical experiences totaling a minimum of 400 accrued hours, including 25 hours of directed observation
- successfully complete the required capstone course
- successfully complete the required portfolio
- maintain a cumulative grade point average (CGPA) of 3.0 or higher
- successfully demonstrate the 2014 Standards and Implementation Procedures for the Certificate of Clinical Competence in Speech-Language Pathology (Standard IV: Knowledge Outcomes), required by 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 College of Health Care Sciences and Nova Southeastern University financial obligations

**Computer Requirements**
Throughout the program, students will be required to conduct online library research, communicate via NSU email, and use word-processing programs for writing papers and clinical reports. Students are required to own a computer and obtain an Internet service provider account (ISP).

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### Master of Science in Speech-Language Pathology Curriculum Outline

#### Program Prerequisite Requirements (28 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>SLP 5001</td>
<td>Anatomy and Physiology of the Speech and Hearing Mechanisms</td>
<td>3</td>
</tr>
<tr>
<td>SLP 5002</td>
<td>Phonetics</td>
<td>3</td>
</tr>
<tr>
<td>SLP 5003</td>
<td>Neuroanatomy</td>
<td>3</td>
</tr>
<tr>
<td>SLP 5004</td>
<td>Hearing and Speech Science</td>
<td>3</td>
</tr>
<tr>
<td>SLP 5005</td>
<td>Speech and Language Development</td>
<td>3</td>
</tr>
<tr>
<td>SLP 5007</td>
<td>Directed Observation</td>
<td>1</td>
</tr>
<tr>
<td>SLP 5008</td>
<td>Evaluation of Speech and Language Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLP 5010</td>
<td>Treatment of Speech and Language Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLP 5300</td>
<td>Audiology</td>
<td>3</td>
</tr>
<tr>
<td>SLP 5400</td>
<td>Rehabilitation for the Hearing Impaired</td>
<td>3</td>
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</tbody>
</table>

#### Core Courses (41 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLP 6000</td>
<td>Diagnosis of Language and Speech Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6011</td>
<td>Language and Learning Disabilities in School-Age Children and Adolescents</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6012</td>
<td>Communication Disorders in Infancy Through Preschool</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6015</td>
<td>Clinical Processes</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6020</td>
<td>Language Disorders in Adults</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6025</td>
<td>Augmentative and Alternative Communication</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6030</td>
<td>Voice Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6040</td>
<td>Fluency Disorders</td>
<td>2</td>
</tr>
<tr>
<td>SLP 6050</td>
<td>Motor Speech Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6055</td>
<td>Dysphagia</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6060</td>
<td>Articulation and Phonological Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6070</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------------------------------------------</td>
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<tr>
<td>SLP 6075</td>
<td>Seminar in Professional Issues in Speech-Language Pathology</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6078</td>
<td>Technological Applications in Communication Science and Disorders</td>
<td>0*</td>
</tr>
<tr>
<td>SLP 6091</td>
<td>Multicultural and Counseling Issues</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6200</td>
<td>Capstone</td>
<td>0</td>
</tr>
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</table>

*Attendance at the Fort Lauderdale/Davie Campus is required.

**Electives (6 credits)**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>SLP 6013</td>
<td>Autism Assessment: A Communication-Based Perspective</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6014</td>
<td>Autism Spectrum Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6021</td>
<td>Cognitive Communication Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6037</td>
<td>Craniofacial Anomalies</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6045</td>
<td>Augmentative and Alternative Communication in Educational Settings</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6057</td>
<td>Medical Aspects of Communication Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLP 6080</td>
<td>Directed Research</td>
<td>1–6</td>
</tr>
<tr>
<td>SLP 6201/6202</td>
<td>Special Topics</td>
<td>1–3</td>
</tr>
<tr>
<td>SLP 6203</td>
<td>Organization and Management of School-Based Speech-Language Pathology Programs</td>
<td>3</td>
</tr>
</tbody>
</table>

**Clinical Practicums, Labs, and Externships (5 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLP 6005</td>
<td>Diagnostics II Practicum</td>
<td>1</td>
</tr>
<tr>
<td>SLP 6101</td>
<td>Clinic Lab I Practicum</td>
<td>1</td>
</tr>
<tr>
<td>SLP 6102</td>
<td>Clinic Lab II Practicum</td>
<td>1</td>
</tr>
<tr>
<td>SLP 6110</td>
<td>Externship: Adult</td>
<td>1</td>
</tr>
</tbody>
</table>

(And one of the following pediatric externships)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLP 6120</td>
<td>Externship: School</td>
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<tr>
<td>SLP 6130</td>
<td>Externship: Pediatric Non-School</td>
<td>1</td>
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<tr>
<td>SLP 6140</td>
<td>Approved Program School Externship</td>
<td>1</td>
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</tbody>
</table>

Total Credits for Degree Completion: 52
Master of Science in Speech-Language Pathology Course Descriptions

**Prerequisite Courses**

**SLP 5001—Anatomy and Physiology of the Speech and Hearing Mechanisms**  
This course is an introduction to the anatomy and physiology of the auditory and vocal mechanisms. The structure and function of the skeletal, neurological, and muscular systems involved in respiration, phonation, resonance, articulation, and audition are reviewed. The normal anatomy and functioning of these systems is contrasted with disordered or damaged systems. (3 credits)

**SLP 5002—Phonetics**  
This class will cover the study of the history, theory, and application of phonetics. Students will review sampling and transcription techniques and applications to clinical practice. (3 credits)

**SLP 5003—Neuroanatomy**  
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. (3 credits)

**SLP 5004—Hearing and Speech Science**  
This course covers the nature of sound; sound transmission; and units of measurement necessary to understand the physiologic, acoustic, and perceptual parameters of hearing and speech production. A basic review of instrumentation and technology available and utilized in speech, hearing, and language research, intervention, and assessment is provided. (3 credits)

**SLP 5005—Speech and Language Development**  
The study of prelinguistic and psycholinguistic variables related to normal development from infancy through adolescence; application of analytic methods of development and cultural variations in speech and language are discussed. (3 credits)

**SLP 5007—Directed Observation**  
Students must observe 25 clinical clock hours of evaluation and treatment by an ASHA-certified SLP as an orientation to the clinical aspect of speech-language pathology. Observation hours must be completed at university-affiliated sites and must precede clinical assignments. (1 credit)

**SLP 5008—Evaluation of Speech and Language Disorders**  
Principles of screening and evaluation of clients typically seen in a clinic, school, hospital, or nursing home setting, including administration of specific evaluation instruments, are discussed for the purpose and diagnosis of speech and language disorders. Prerequisites: SLP 5002 or CSAD 3010 and SLP 5005 or CSAD 3030 (3 credits)

**SLP 5010—Treatment of Speech and Language Disorders**  
This course provides an overview of treatment strategies and professional terminology used in the management of communication disorders. There is a rudimentary focus on various intervention approaches for populations ranging from childhood to adult. Prerequisites: SLP 5002 or CSAD 3010 and SLP 5005 or CSAD 3030 (3 credits)

**SLP 5300—Audiology**  
This course provides information regarding the normal anatomy and physiology of the auditory and vestibular system, including neural pathways, the brainstem, and auditory cortex. Instruction in test administration and interpretation of standard and specialized tests of auditory function are covered. Pathologies of the hearing and balance mechanism are discussed, with emphasis in interpretation of audiological results. Information about the evaluation and treatment of hearing disorders is provided. Adult and pediatric test procedures and outcomes are discussed and common etiologies for different types of hearing loss are addressed for both groups, including central auditory processing disorders. Adult and pediatric audiograms and report interpretation will be covered. Prerequisites: SLP 5001 or CSAD 3030 and SLP 5004 or CSAD 3050 (3 credits)

**SLP 5400—Rehabilitation for the Hearing Impaired**  
This course provides information regarding the prevention and remediation of communication problems resulting from hearing impairment in populations from birth to geriatrics. Prerequisites: SLP 5005 or CSAD 3030, SLP 5010 or CSAD 4030, and SLP 5300 or CSAD 4050 (3 credits)

**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. Prerequisites: SLP 5008 or CSAD 4010 (3 credits)
SLP 6011—Language and Learning Disorders in School-Aged 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–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 communication and language skills. There will also be discussion of collaborative strategies and disciplinary teaming models for facilitating effective parent-professional partnerships. Prerequisite: SLP 5005 or CSAD 3030 (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 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, and SLP 6060 (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. Prerequisites: SLP 5003 or CSAD 3040 and SLP 6070 (3 credits)

SLP 6022—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. Prerequisite: 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. Prerequisites: SLP 5001 or CSAD 3020, SLP 5003 or CSAD 3040, SLP 5004 or CSAD 3050, SLP 5008 or CSAD 4010, SLP 5010 or CSAD 4030, and SLP 6070 (3 credits)

SLP 6040—Fluency Disorders
Etiology, diagnosis, and management of children and adults with disorders of fluency (e.g., developmental stuttering, neurologically based stuttering, cluttering, and other nonfluent speech conditions) will be studied. Prerequisite: SLP 5010 or CSAD 4030 (2 credits)

SLP 6050—Motor Speech Disorders
This course deals with education and training in the assessment and management of motor speech disorders across the life span. There will be discussion of the nature, etiology, diagnosis, and management of motor speech disorders with focus on developmental stuttering and treatment. Prerequisites: SLP 5001 or CSAD 3020, SLP 5003 or CSAD 3040, SLP 5004 or CSAD 3050, SLP 6060, and SLP 6070 (3 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 concerns in the management of dysphagia are presented. Students are afforded the opportunity to view fiberoptic endoscopic evaluation and treatment of swallowing (FEES). Video views of normal and abnormal swallows through videofluoroscopic evaluation are provided through a noncredit required lab. Prerequisite: SLP 6050 (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. **Prerequisite:** SLP 5002 or CSAD 3010 (3 credits)

SLP 6070—Research Methods
This course provides exposure to critical analysis of the field’s literature with respect to research design and statistical application (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 6078—Technological Application in Communication Science and Disorders
This course provides an overview of technological applications used by professionals in speech-language pathology with an introduction to computer applications in the field. This course also provides the technological foundation necessary for students to complete the master's degree. (0 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 6101 (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.** (0 credits)

**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. **Prerequisite:** SLP 6000 (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 6105 (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 6101 (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 and by a university supervisor (site visitor). **Prerequisites:** SLP 6005 and SLP 6102 (1 credit)
(All students choose ONE from the following pediatric externships.)

SLP 6120—Externship: 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 and by a university supervisor (site visitor). 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 and by a university supervisor (site visitor). Prerequisites: SLP 6005 and SLP 6102 (1 credit)

SLP 6140—Approved Program School Externship
The school externship requires a full-time placement (minimum of 32 hours/week for an entire semester) in a school setting with which NSU has a current legal affiliation. The school externship must be taken by students seeking Department of Education certification in speech-language pathology (SLP). 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 school-based clinical faculty (SLP) who are ASHA certified and state licensed and by a university supervisor (site visitor). 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, and videotaped demonstrations. 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 will be 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
This course offers advanced study of selected theoretical, clinical, or professional issues in speech pathology and audiology. It may be taken for credit, CEU, or recertification. (1–3 credits)

Doctor of Speech-Language Pathology (SLP.D.) Program

The Doctor of Speech-Language Pathology (SLP.D.) is designed to foster the continued academic education of speech-language pathologists pursuing an advanced, professional doctoral degree. This program fosters the development of knowledge, leadership, and problem-solving skills through scientifically based curricula that incorporate current research, ethical decision making, and models of best practice. 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 doctoral program in speech-language pathology fulfills a commitment to society by providing practicing clinicians with a variety of forums to keep their knowledge base current. 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.

Admissions Requirements
The following are specific admissions requirements for entry into the doctoral program in Speech-Language Pathology.

- a master's degree from a regionally accredited college or university
- a minimum of a 3.2 cumulative GPA on a 4.0 scale from a master's degree in speech-language pathology from a regionally accredited college or university

Application Procedures
All applicants for admissions must submit, or be responsible for the submission of,

- a nonrefundable application fee of $50
- a completed application
- an official transcript indicating conferral of a master's degree in speech-language pathology by a regionally accredited institution with a minimum graduate GPA of 3.2
- documentation of the Certificate of Clinical Competence and copies of all professional certifications, licenses, or relevant credentialing materials
- complete current resume or curriculum vita documenting professional experiences and continuing education activities, professional affiliations, publications, and/or presentations (supporting documentation of continuing education, publications, and/or presentations is recommended)
- three letters of recommendation from individuals who can attest to the applicant's ability to be successful in doctoral studies, e.g., employers, faculty members, and professional in-field colleagues (must be professional references submitted on the forms provided)
- written responses to questions relating to the field of communication sciences and disorders
• test score report showing that the applicant received a raw score of 37 (scaled score 391–396) on the Miller Analogies Test (MAT) or GRE scores of 1100 (combined Verbal and Quantitative scores only)

The test must have been taken within the past five years.

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 www.nova.edu/registrar/instructions.html.

Tuition and Fees
Doctor of Speech-Language Pathology tuition for 2015–2016 (subject to change by the board of trustees without notice) is $1,180 per credit hour. An NSU student services fee of $1,050 is required annually. Tuition for 2016–2017 will subsequently be posted on our website (www.healthsciences.nova.edu/slp/doctor-speech-language-pathology.html).

Doctor of Speech-Language Pathology (SLP.D.) Curriculum Outline (53 credits minimum)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ARC 9300</td>
<td>Advanced Leadership Development</td>
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Core Courses (26 credits)

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<tr>
<td>SLPD 7000 Technology and Instrumentation in Communication Sciences</td>
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<tr>
<td>SLPD 7030 Gerontology</td>
<td>2</td>
</tr>
<tr>
<td>SLPD 7040 Supervision</td>
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</tr>
<tr>
<td>SLPD 7060 Genetics</td>
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<tr>
<td>SLPD 7070 Pharmacology</td>
<td>2</td>
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<tr>
<td>SLPD 7075 Counseling</td>
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<tr>
<td>SLPD 7080 Business Management and Leadership</td>
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</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>
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<tr>
<td>SLPD 7250 Advanced Seminar in Augmentative and Alternative Communication (AAC)</td>
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### Research Courses (12 credits)

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<tr>
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<tr>
<td>EDD 9300</td>
<td>Methods of Inquiry</td>
<td>6</td>
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<tr>
<td>ARC 8912</td>
<td>Statistical Methods</td>
<td>3</td>
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Choose one of the following:

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<tr>
<td>ARC 8913*</td>
<td>Program Evaluation</td>
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<tr>
<td>ARC 8915*</td>
<td>Survey Research</td>
<td>3</td>
</tr>
<tr>
<td>ARC 8919*</td>
<td>Single Subject Research</td>
<td>3</td>
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</table>

*prerequisite EDD 9300

### 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 education. 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.

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<thead>
<tr>
<th>Course</th>
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<tr>
<td>ARC 8966</td>
<td>Applied Dissertation Seminar I—Concept Paper</td>
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</tr>
<tr>
<td>ARC 8967</td>
<td>Applied Dissertation Seminar II—Proposal</td>
<td>5</td>
</tr>
<tr>
<td>ARC 8968</td>
<td>Applied Dissertation Seminar III—Dissertation</td>
<td>5</td>
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### Continuing Dissertation Services

If the program is not completed within 24 months, continuing dissertation services will begin on the 25th month. Students will be automatically enrolled in ADS 8090 between the 25th and 36th months of their program and must enroll themselves in ADS 8091 beginning the 37th month of their program in order to receive dissertation services from their committee chair and or the applied research center.

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<tr>
<td>ADS 8090</td>
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<tr>
<td>ADS 8091</td>
<td>Applied Dissertation Services II</td>
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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 presents advanced applications in the use of computer hardware and software in communication sciences and disorders. Doctoral students 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
Emphasis 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 be exposed to role-play situations for use with clients demonstrating a variety of audiologic and/or speech-language problems. (2 credits)

Winter Semester (8 credit hours)

SLPD 7080—Business Management and Leadership
Doctoral candidates will learn basic management principles as they relate to the conduct of speech-language or audiology 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)

EDD 9300—Methods of Inquiry
The purpose of this core course is to train doctoral students in the use of the scientific approach in educational and social science research, to ensure informed decision making grounded in empirical research. After receiving training on the utilization of library database applications and various research methodologies, students will develop (a) the elements of a research examination, based on a problem in the workplace or field of interest, (b) a related literature review, (c) a purpose statement, and (d) research questions. Students will be expected to complete the online CITI training modules, a requirement for research submitted for Institutional Review Board approval. Upon completion of the course, students should maintain the tools necessary to begin working on their concept paper, the first of three benchmarks in the SLP.D. dissertation process. Prerequisite: EDD 9200 (6 credits)

Summer Semester (8 credit hours)

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)
ARC 9300—Advanced Leadership and Development
This course focuses on research design, implementation, and analysis, and their places in leading educational change. The course requires a one-week, face-to-face component at the annual summer residency with both national and international research leaders and members of the student’s dissertation committees. The course also includes both pre- and post-conference activities and assessment. Prerequisite: EDD 9200 (3 credits)

ARC 8966—Applied Dissertation Seminar I—Concept Paper
The content of Applied Dissertation Seminar I—Concept Paper focuses on developing a preliminary literature review and formulating research questions of the concept paper. The committee chair and member roles are discussed as well as the roles and responsibilities of the Applied Research Center's faculty and staff. 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)

ARC 8912—Statistical Methods
Statistical Methods is a course in applied statistics that will introduce concepts and methods in descriptive and inferential statistics. The course is designed to provide students with the statistical background required for doctoral-level research while emphasizing the application of statistics. Prerequisite: EDD 9300 (3 credits)

Winter Semester (7 credit hours)
SLPD 7070—Pharmacology
The goal of this course is to introduce the student 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)

ARC 8967—Applied Dissertation Seminar II—Proposal
The content of Applied Dissertation Seminar II—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 seminar, 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: ARC 8966 (5 credits)

Summer Semester (6 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)
**Research Elective**

Students have the opportunity to select one of the three courses listed below, related to the research area. (3 credits)

**ARC 8913—Program Evaluation**

This course will examine key concepts, methods, and approaches in the field of evaluation research. Students will be exposed to the theoretical and methodological diversity inherent in current evaluation practice across a number of substantive areas (e.g., social services, education, and business). The comprehensive range of activities involved in designing, implementing, and assessing the utility of social and educational programs will be a primary focus of the course. **Prerequisite: EDD 9300 (3 credits)**

**ARC 8915—Survey Research**

The Survey Research course is designed to provide doctoral students with an overview of survey research methods. Topics in the course will include survey design, implementation, sampling, data collection, follow-up, analyses, and ethics. Students will design a pilot survey in preparation for their dissertation research. **Prerequisite: EDD 9300 (3 credits)**

**ARC 8919—Single-Subject Research**

This course covers basic concepts and methods employed in single-subject research. Participants will learn about single-subject research designs including the case study, AB and its variations, changing criterion, multiple baseline, and alternating treatment. Important factors in designing and critically reviewing single-subject research will be presented, along with options for analyzing data from single-subject research studies. Ethical issues in single-subject research will also be reviewed. **(3 credits)**

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**Year Three**

**Fall Semester (6 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)**

**Winter Semester (5 credit hours)**

**ARC 8968—Applied Dissertation Seminar III—Dissertation**

Applied Dissertation Seminar III—Dissertation 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: ARC 8967 (5 credits)**
College of Medical Sciences
College of Medical Sciences

Mission Statement
The mission of the College of Medical Sciences is to train students in the basic medical sciences and to prepare them for careers in health care and higher education. In accordance with this mission, the College of Medical Sciences offers a Master of Biomedical Sciences degree and provides basic science instructors for the colleges within the Health Professions Division.

Administration
Harold E. Laubach, B.S., M.S., Ph.D.
Dean
Howard S. Hada, B.A., M.S., Ph.D.
Assistant Dean for Academic Affairs
Lori B. Dribin, B.A., M.S., Ph.D.
Assistant Dean for Student Affairs

Degree Programs
In line with its mission, the College of Medical Sciences currently offers a Master of Biomedical Sciences (M.B.S.) degree program.

Accreditation
While there is no specific accreditation process for basic science or medical sciences, this portion of our educational process has always been evaluated by visiting accreditation teams of the several professions and has always received highest grades and commendation.

Admissions Requirements
In order to be considered for admission into the master’s program, the student must meet the following requirements:

- completion of a bachelor’s degree from a regionally accredited college or university
- completion of 3 semester hours with a minimum 2.0 grade point average in biochemistry
- completion of 8 semester hours with a minimum 2.0 grade point average in each of the following: general biology, general chemistry, organic chemistry, and general physics, all with laboratory, as well as six semesters of English
- a minimum cumulative GPA of 2.5 on a 4.0 scale.
- submit scores from one of the following: the Medical College Admission Test (MCAT) or the Dental Admission Test (DAT)

Scores may not be more than three years old.

It should be noted that many criteria, in addition to academic credentials, play a role in the admissions process to professional schools. While the biomedical science program does provide an opportunity for the student to demonstrate academic capability, it does not ensure admission to any professional school. Admission to the graduate program or completion of courses will not guarantee admission to any other program of Nova Southeastern University.

Application Procedures
Candidates for admission must submit

1. a completed application form along with a $50, nonrefundable application fee (Application deadline is April 1.)
2. official transcripts of all undergraduate, graduate, and professional coursework, submitted directly to
   Nova Southeastern University
   Enrollment Processing Services
   College of Medical Sciences, Office of Admissions
   3301 College Avenue, P.O. Box 299000
   Fort Lauderdale, Florida 33329-9905.
3. official reports of standardized test scores such as the MCAT or DAT, not more than three years old
4. one letter of recommendation from a preprofessional advisory committee, or, if this does not exist, two letters may be substituted from instructors who can testify to the student’s characteristics, integrity, application, and aptitude in science (If an applicant has been in the work world for a considerable period of time, two letters of
recommendation may be substituted from employers who can testify to the student’s characteristics, integrity, application, and aptitude in science.)

Upon receipt of the completed application and required credentials, the committee on admissions will select those applicants to be interviewed. All applicants who are eventually accepted into the program must be interviewed. An invitation to appear for an interview should not be construed by the applicant as evidence of acceptance.

The dean of the College of Medical Sciences 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 starting January 1, and the deadline is April 1 of the year of matriculation.

Tuition and Fees
1. Tuition for 2015–2016 is $37,140 (subject to change by the board of trustees). A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 is also required annually. A microscope/lab fee of $100 is required of all students for the first year.

2. 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 case of withdrawal. It is payable within two weeks of the applicant’s acceptance.

3. Student activities fee is $100, payable at each fall registration.

The first semester’s tuition and fees, less the $1,000 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.

Transfer of Credits
Transfer credit of no more than 6 semester hours and waiver policies will be granted at the discretion of the dean, but shall be in accordance with the educational mission and objectives of the College of Medical Sciences.

• Transfers from one graduate college to another graduate college shall require that the last year of instruction be completed within a graduate college.

• Transfer credits shall be given only if the student is eligible for readmission to the previously attended graduate college.

Dismissal and Suspension
Students may be dismissed from the College of Medical Sciences if

• they earn less than an 80 percent grade in more than seven hours of classroom courses in any semester or overall

• they do not maintain an overall average, at any time, of 80 percent in the program

• they fail a course during any semester

• they fail a course they are repeating

• they exceed a 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

• in the opinion of the dean, circumstances of a legal, moral, behavioral, ethical, or academic nature warrant such action, or if, in the dean’s opinion, there are factors that would interfere with or prevent them from meeting appropriate professional standards

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 dean, the student has not attained the academic level and/or has deviated significantly from the standards of behavior established by the College of Medical Sciences.

Readmission Following Dismissal or Suspension
If a student is dismissed from the College of Medical Sciences, he or she may reapply to the dean for admission and will be considered, provided that he or she can present adequate evidence that the conditions and/or factors that caused the prior poor academic performance have changed significantly so that there is reasonable expectation that the applicant can perform satisfactorily if permitted to resume his or her studies.
Readmission will be solely at the discretion of the dean. The student's prior academic record will remain part of his or her overall academic record and will be recorded on the permanent transcript, but none of the prior grades will be calculated in the new grade point average.

If a student is suspended from the College of Medical Sciences, he or she may return to the college when, in the opinion of the dean, 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. The student's prior academic record will remain part of his or her overall academic record and will be recorded on the permanent transcript, but none of the prior grades for courses being retaken will be calculated in the new GPA.

**Graduation Requirements**

Degrees and/or certificates 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:

- be of good moral character
- satisfactorily pass all required examinations
- complete a minimum of 36 semester hours of coursework for the Master of Biomedical Sciences degree
- complete a minimum of 19 semester hours of coursework for the Certificate in Anatomical Studies
- satisfactorily complete the program requirements for the degree, including all assignments, with a minimum GPA of 80 percent and with no course credit hours below 80 percent
- have satisfactorily met all financial and library obligations
- attend in person the commencement program, at which time the degree is awarded

**Course of Study**

The master of biomedical sciences is a full-time degree program that is completed in two years. Students are admitted in August every year. The program includes four semesters of on-campus study. Students select an adviser who directs their program of study. Coursework is completed along with students in the professional programs and select coursework is offered by the College of Medical Sciences. Many of the courses offered in the College of Medical Sciences are taught to students within other HPD colleges. Students will enroll in the seminar course each semester.

**Student Organization**

**Student Council**—The College of Medical Sciences Student Council is the official voice of all students in the college. The organization is open to all students and welcomes participation from the student body. Its responsibilities include expressing student opinions and dispensing funds for student activities.
College of Medical Sciences Course Descriptions

The college offers courses for graduate credit within the other Health Professions Division colleges. Each course can be found listed under the appropriate college. Courses are identified by their College of Medical Sciences course number, with specific college-designation and number. Courses are titled in accordance with their titles in their specific college, and may bear no relationship with other courses in this list.

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

Anatomy
Chairman and Professor: G. R. Conover | Professors: L. Dribin, N. Lutfi, A. Mariassy, C. Purvis, R. K. Yip | Associate Professor: P. Greeman | Assistant Professor: A. Ahmadi | Instructor: D. McNally
ANA 5500—Neuroanatomy
The study of the structure and function of the spinal cord, brain stem and cerebrum. Primary emphasis is on major motor and sensory pathways, spinal and cranial nerves, and integrative mechanisms of the central nervous system. Laboratory studies include the use of CAT and MRI scans. (36-18-3)
ANA 5713—Histology
The study of microscopic and submicroscopic anatomy of the cells, tissues, and organs of the body combining lecture and laboratory. (36-36-3)
ANA 5714—Medical Histology
The study of the microanatomy of the cells, tissues, and organs of the body; correlating structure; and function. (36-36-3)
ANA 5723—Neuroanatomy
The study of the structure and function of the spinal cord, brain stem and cerebrum. Primary emphasis is on major motor and sensory pathways, spinal and cranial nerves, and integrative mechanisms of the central nervous system. Laboratory studies include the use of CAT and MRI scans. (36-18-3)
ANA 5727 —Gross Anatomy
The study of the structure and function of the human trunk, extremities, head, and neck. Course includes laboratory dissection of cadavers. (80-72-6)
ANA 5744—Gross Anatomy
The study of the structure and function of the human body. Emphasis on the detailed anatomy of the head and neck region. (56-54-5)
ANA 6700—Special Topics
Topics and hours to be arranged. (1 to 6 semester hours)

Biochemistry
Chairman and Professor: R. E. Block | Professors: E. E. Groseclose, K. V. Venkatachalam | Associate Professor: W. G. Campbell
BCH 5715—Medical Biochemistry
Introduces functions of the important carbohydrates, lipids, nucleic acids, proteins, and properties of enzymes. Covers the pathways of normal metabolism and their controls. Genetics is introduced. DNA replication, transcription, and translation are discussed. Includes hemostasis with details of coagulation factors, nutrition and biochemical aspects of digestive, visual, musculoskeletal, and endocrine systems. (86-0-5.5)
BCH 5735—Biochemistry
Introduces the structures and functions of the carbohydrates, lipids, nucleic acids, and proteins. Covers the pathways of normal metabolism and their controls, as well as nutrition, digestion, and absorption. Includes biochemical aspects of the dental, neural, visual, respiratory, musculoskeletal, and endocrine systems. (72-0-5)
BCH 6700—Special Topics
Topics and hours to be arranged. (1 to 6 semester hours)

Microbiology
Chairman and Professor: H. Hada | Professors: D. Burris, K. Davis, H. E. Laubach | Associate Professor: B. Mayi
MIC 1710—Dental Microbiology I
Basic aspects of infections of the oral cavity, oral microbial ecology, and normal flora involving bacteria, fungi, and viruses are covered. (54-0-3)
MIC 1711—Dental Microbiology II
Essential principles of innate and acquired immunity including the immune response at mucosal surfaces, immune dysfunctions, and transplantation immunology are presented. (36-0-2)
MIC 5727-Medical Microbiology I
Comprehensive study of immunology and of disease producing micro-organisms. Covers the taxonomy, epidemiology, pathogenesis, diagnosis, and treatment of human pathogens. (102-0-5.5)
MIC 5031—Medical Microbiology II
Comprehensive study of disease producing micro-organisms covering the taxonomy, epidemiology, pathogenesis, diagnosis, and treatment of human pathogens. (24-0-1.5)

MIC 6700—Special Topics
Topics and hours to be arranged. (1 to 6 semester hours)

Pathology
Chairman and Assistant Professor: E. Murdoch | Professors: B. C. Jones, A. B. Trif | Assistant Professor: A. Varela

PTH 5500—General Pathology
The course is to provide the student with the basic pathologic processes of human disease, with a scientific foundation in etiology, pathogenesis, morphologic alterations, and effects of disease of the organ systems, and with an emphasis on bone pathology and relevant disease states that affect the orofacial region. (54-0-3)

PTH 6700—Special Topics
Topics and hours to be arranged. (1 to 6 semester hours)

Pharmacology
Chairman and Associate Professor: M. Parker | Professors: T. Panavelil, C. Powell | Assistant Professor: M. Zhao

PCO 5504—Pharmacology I
Introduces basic receptor theory, pharmacokinetics, and basic principles of drug action. Discusses mechanisms of action, indications, contraindications, and adverse reactions of drugs affecting major organ systems. (50-0-4)

PCO 5503—Pharmacology II
A continuation of PCO 5504—Pharmacology I, with particular emphasis on drugs used in oral medicines and dentistry as well as oral manifestations of systemic drugs. (48-0-3)

PCO 6700—Special Topics
Topics and hours to be arranged. (1 to 6 semester hours)

Physiology
Chairman and Professor: W. A. Schreier | Professors: H. N. Mayrovitz, S. Taraskevich, Y. Zagvazdin | Associate Professor: L. Lyons | Assistant Professor: A. Mashukova

PHS 5500—Physiology
Physiology covering organ systems, cell function, membrane functions, membrane translocation, electrophysiology, muscle physiology, neurophysiology, and the cardiovascular, renal, respiratory, gastrointestinal, endocrine, and nervous systems. (64-0-4)

PHS 5723—Medical Physiology I
The first semester of a two-semester course covering the study of general physiology (cell function, membrane translocation, electrophysiology, and muscle physiology), the autonomic nervous system, and cardiovascular physiology. (54-0-3)

PHS 5724—Medical Physiology II
The continuation of Medical Physiology I. This semester includes the study of renal, respiratory, endocrine, reproductive, gastrointestinal and nervous systems. (72-0-4)

PHS 6700—Special Topics
Topics and hours to be arranged. (1 to 6 semester hours)

Core Courses
COMS 5702—Seminar
Students and faculty members observe and present research seminars on selected topics. Topics and hours to be arranged. (1 to 4 semester hours)

COMS 6700—Special Topics
Coursework is designed to advance knowledge in a specific area of science. Topics and hours to be arranged. (1 to 6 semester hours)
Mission Statement
The mission of the College of Dental Medicine (CDM) is to educate students to become competent in all phases of the general practice of dental medicine, and postdoctoral residents to become proficient in their respective specialty fields. The CDM is committed to ensuring graduates’ excellence in the art and science of dental medicine and their commitment to independent, lifelong learning. This mission requires graduates to be knowledgeable in the biological sciences, clinically skilled, technologically proficient, compassionate, and sensitive to the needs of the public. The graduate will be competent to function as a member of, or in conjunction with, an interdisciplinary primary care health team.

The CDM fosters leadership and excellence in dental education through a commitment to:

- recruitment and retention of the highest caliber of self-motivated students, residents, and faculty members
- innovative teaching methods, research, scholarship, professionalism, and ethical principles
- continuing education
- service to the local, national, and international communities
- interdisciplinary research with a focus on biomaterials, regenerative medicine, clinical product testing, public health, and health services research

The CDM has a special commitment to educate students and residents to provide culturally sensitive care to the underserved and special needs populations.

Administration
Linda Niessen, D.M.D., M.P.H., M.P.P.
Dean
Abby J. Brodie, D.M.D., M.S.
Associate Dean for Academic Affairs
Steven Haas, D.M.D., J.D.
Associate Dean for Clinic Services
Steven Kaltman, D.M.D., M.D.
Assistant Dean for Extramural and Hospital Affairs
Peter Keller, D.D.S.
Executive Associate Dean for Academic and Clinical Resources
Steven M. Kelner, D.M.D., M.S.
Associate Dean for Institutional Affairs
Hal Lippman, D.D.S.
Executive Associate Dean for Admissions and Student and Clinical Affairs
Ana Karina Mascarenhas, Dr.P.H., M.P.H., B.D.S.
Associate Dean for Research
William Parker, D.D.S.
Associate Dean for Advanced Educational Programs
Albert Whitehead, D.M.D., M.Ed., eM.B.A.
Assistant Dean for Continuing Education

Dental Medicine
If you are considering a career in dentistry, your education will focus on producing a competent, confident, and mature professional. You will be trained 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 almost limitless. The options can be fulfilling and rewarding. The skilled dentist may choose to practice individually in urban, suburban, or rural environments; join an established, respected, and successful 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 training is extensive and complete. The nationally recognized faculty of Nova Southeastern University 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.
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.

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 Associate 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 December 1, 2015, for the class entering August 2016.

Applications are available from

American Association of Dental Schools
Application Service (AADSAS)
1625 Massachusetts Ave., NW
Suite 600
Washington, D.C. 20036-2212
(202) 667-1886
800-353-2237

Applicants may also obtain their application through www.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 31, 2015:

- 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, Florida 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 2015–2016 (subject to change by the board of trustees without notice) is $62,350 for Florida residents and $62,850 for out-of-state students. A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 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 April 15 must pay their acceptance fee immediately.

- Preregistration fee is $1,000 and is due April 15, under the same terms as the acceptance fee.

- A microscope fee of $125 per year is required of all four-year predoctoral program students.

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—$1,200
- second year—$1,200
- third year—$1,200
- fourth year—$1,200

Students should anticipate the following approximate expenses for instruments and equipment:

- first year—$12,000
- second year—$8,000
- third year—$4,000
- fourth year—$4,500

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 recommended that students have an electronic device of their choice.

### 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; a psychomotor bench test; and a clinical case presentation. The psychomotor bench test and clinical case presentation may include the following: Canadian wax carving examination, typodont tooth preparation and restoration in amalgam, and typodont tooth preparation for a full metal crown. The clinical case presentation will consist of an oral presentation related to a clinical scenario. 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 and clinical case presentation 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 the Enrollment Processing Services (EPS) by January 1, 2016.
   - 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, 2016, 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, New York 10274-5087
     (212) 966-6311
     www.wes.org
   - Josef Silny & Associates, Inc
     7101 SW 102nd Avenue
     Miami, Florida 33173
     (305) 273-1616
     (305) 273-1338 fax
     www.jsilny.com
   - Educational Credential Evaluators, Inc.
     P.O. Box 514070
     Milwaukie, Wisconsin 53203-3470
     (414) 289-3400
     www.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, Florida 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, Illinois 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, Florida 33329-9905

Tuition and Fees
- Tuition for 2015–2016 (subject to change by the board of trustees without notice) is $66,175.
- A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 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—$1,600
- second year—$1,600
- third year—$1,600

Students should anticipate the following approximate expenses for instruments and equipment:
- first year—$20,000
- second year—$4,000
- third year—$4,500
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 are 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, and professional qualities deemed necessary for the successful and continued study and practice of dental medicine
- 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 satisfactorily completed all assigned curriculum requirements for the D.M.D. degree with a numerical average of 70 percent or higher
- have passed the National Board Dental Examination (NBDE) Part I
- 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.

**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.
### 2015–2016 Curriculum Outline
Calculations based on an 18-week semester (subject to change)

#### Fall 2015—D1, Class of 2019

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**Summer 2016—D1, Class of 2019**

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**Winter 2016—D2, Class of 2018**

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**Summer 2016—D2, Class of 2018**

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**Winter 2016—D3, Class of 2017**

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College of Dental Medicine
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College of Dental Medicine Course Descriptions

Interdisciplinary Biomedical Sciences

Anatomy—Chair and Professor: G. R. Conover | Professors: L. Dribin, N. Lufti, A. Mariassy, C. Purvis, R. K. Yip | Associate Professor: P. Greenman | Assistant Professor: A. Ahmadi | Instructor: D. McNally

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. The laboratory sessions include the study of tissue specimens with light microscopes.

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 | Associate Professor: W. G. Campbell

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: H. Hada | Professors: D. Burris, K. Davis, H. Laubach, B. May

CDM 1110—Microbiology
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 Professor: E. Murdock | Professor: B. Jones, K. Khin, A. B. Trif | Assistant Professor: A. Varela

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 Associate Professor: M. Parker | Professors: T. Panavelil, C. Powell | Assistant Professors: P. Rose, M. Zhao

CDM 2010—Pharmacology I
Introduces pharmacological concepts and principles, clinical indications, contraindications, risks, complications, and toxicity of drugs and pharmacological agents.

CDM 2130—Pharmacology II
Particular emphasis on the drugs and drug interactions important to the dentist as well as the principles and concepts of pharmacology and pharmacological actions and drug interactions.

Physiology—Chair and Professor: W. Schreier | Professors: H. Mayrovitz, P. S. Taraskevich, Y. Zagvazdin | Associate Professor: L. Lyons | Assistant Professor: A. Mashukova

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 current, 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**—Adjunct Assistant Professor: M. Fimiani

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.


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—Multidisciplinary Introduction to Record Keeping
This course will give first-year dental students hands-on experience with completing dental treatment records by making entries in a “chart” made for the student’s typodont. The students will participate in clinical exercises to generate their own dental records as well. The content in this course will be integrated with the content in the following courses: Clinic Experience I and II and Ethics and Professionalism.

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 clinical query searches 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 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 carioloogy 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 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 D1 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 course is designed to train the sophomore students to understand and develop dental treatment plans using the electronic health record software system axiUm that is currently used at NSU CDM. The students will use the knowledge from various dental disciplines to develop treatment plans for patient presentation while learning how to navigate the axiUm program.

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 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, in a team leader model, 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 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 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 4240—Advanced Comprehensive Treatment Planning
This course is designed to build upon the foundations of comprehensive dental treatment planning for application to more advanced treatment planning cases. Students will have the opportunity to interact with faculty members and other classmates during patient case-based group discussions and seminars.

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 overlying 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.

CDM 4700—Extramural Primary Care Rotation
This course is intended to provide senior dental students with 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 comprehensive dentistry in an extramural clinic environment. Students will also better understand the public health context for the care they will be providing. Students will complete a reflective observation activity at the end of their rotation. It 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 to prepare for and learn from service experiences.

Department of Community and Public Health Sciences—Chair, Interim Postgraduate Program Director, and Associate Professor: D. Ede-Nichols | Assistant Professors: R. Block, S. Ellen, F. Slavichak, B. Waterman | Clinical Instructor: A. Bezerra | Adjunct Faculty: M. Ben-Shalom, N. Browner, A. Burch, A. Epstein, M. Fimiani, 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 Institute for Special Needs Dentistry, whose state-of-the-art clinic is located on NSU’s North Miami Beach Campus. The institute 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 3090—Introduction to the Dental Profession
Practice management and organizational theory, economic theory, and practical aspects of managing a dental practice.
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 patients with special needs. 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 4060—Practice Management
The 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 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 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 Prosthodontics—Chair and Professor: S. C. Siegel | Predoctoral Co-Clinical Director and Associate Professor: R. Castellon | Professors: J. Antonelli, J. Thompson | Postgraduate Director and Assistant Professor: M. Nahon | Assistant Director and Assistant Professor: M. Pasciuta | Associate Professors: L. Krasne | Assistant Professors G. Bozutti, A. Despaigne, T. Dwork, A. Godoy, M. Golberg, M. Guerrero, C. J. Hsu, E. Lara, R. Lichtman, A. Notzer, M. Patten, C. Villanueva | Adjunct Faculty Members: R. Acosta-Ortiz, J. Banos, J. Gartner, N. Guzman, M. Hervas, G. Kolos, M. Malo, M. Mendelson, L. Mosquera, E. Neuwirth, M. Platt, M. Pomerantz, M. Radu, T. Rangarajan, S. Rauchwerger, S. Resnick, M. Richards, D. Rolfe, D. Roy, R. Sanchez, R. Selz, B. Sharp, B. Shipman, D. Skopp, S. Stempel, J. D. Wessel

CDM 2070/CDM 2080—Fixed Prosthodontics Lecture/Laboratory
These courses prepare students to appropriately use the terminology, instrumentation, and psychomotor skills associated with tooth preparation and provisionalization of single and multiple unit intra and extra coronal cast fixed prosthodontic restorations.

CDM 2095—Preclinical Removable Prosthodontics I Lecture
This course is designed to familiarize the student with all the aspects of the discipline of removable prosthodontics: theoretical, technical, and clinical, so he or she will be prepared 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 2096—Preclinical Removable Prosthodontics I 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. This course is designed to familiarize the student with all the aspects of the discipline of removable prosthodontics— theoretical, technical, and clinical—so he or she will be prepared to confidently and accurately provide removable prosthodontic treatment for the complete or partially edentulous patient in clinical practice.

CDM 2101—Dental Biomaterials Lecture II
At the end of this course, the students will be able to understand the optimum performance requirements, properties, and handling characteristics for specific dental materials, as well as understand the selection criteria based on clinical significance of the mechanical and physical properties of dental materials.

CDM 2197—Preclinical Removable Prosthodontics II Lecture
This lecture course presents theory and technique for using removable partial dentures and removable complete dentures to replace lost teeth and their associated structures. This course is designed to familiarize the student with all the aspects of this discipline of removable prosthodontics— theoretical, technical, and clinical—so he or she will be prepared 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 prosthodontics, 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 3060—TMD
This course is a series of lectures that present the clinical evaluation, diagnosis, and management of patients that present with pain and/or dysfunction in the masticatory system (temporomandibular disorders) and other related orofacial pain conditions.

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 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 junior 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 junior 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
After completion of this clinic-laboratory course, the dental student will be able to perform impressions, obtain face bow records, obtain occlusal records, properly mount the casts in the articulator and perform an occlusal analysis in the clinical setting, and use these records for diagnostic purposes.

CDM 3221—Advanced Clinical Occlusion
This course will provide dental students with a complete understanding of the normal function of the masticatory system and will be the introduction to the studies on occlusal analysis and occlusal diagnosis. Through lectures and preclinical and guided clinical procedures, the dental students will attain a comprehensive understanding on all the related areas of dental anatomy and occlusion.

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 4277—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), Procera Forte (Nobel BioCare), 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.

Department of Orthodontics and Dentofacial Orthopedics—Chair and Professor: A. Lifshitz | Director of Predoctoral Orthodontics and Dentofacial Orthopedics and Assistant Professor: C. Lin | Interim Director of Postgraduate Orthodontics and Dentofacial Orthopedics and Assistant Professor: R. Singer | Clinic Director and Associate Professor: S. Real | Associate Professor: S. Khatami | Assistant Professor: G. Contasti | Adjunct Faculty Members: M. Cooper, J. Coro, J. Ginzler, A. Kapit, B. Matza, M. Meister, J. Morrish, R. Shults

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 concepts used in treatment in orthodontics and dentofacial orthopedics. Laboratory skills are taught in orthodontic mechanotherapy, enabling students to participate in the clinical experience.

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 414H—Honors Program in Orthodontics and Facial 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 2081—Introduction to Pediatric Dentistry
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 2180—Pediatric Dentistry Lecture
Provides the student with an overview of “normalcy” as well as the most common disorders and conditions in children. Diagnosis and treatment planning of pediatric patients with primary, transitional, and permanent dentitions are emphasized. This includes behavior management techniques, the development and morphology of the dentition, oral surgery and oral pathology, restorative and preventive procedures and materials, pulpal and periodontal therapy, traumatic injuries, space management, and oral habits. This course prepares students for their clinical interactions with children.

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, 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 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 2140—Introduction to Oral Medicine
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 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/disorder 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—Radiology Clinic 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 4505—Clinical Emergency Rotation
The fourth-year student will develop a systematic approach to evaluating a patient who presents with severe pain or swelling in the orofacial region. The student will present an emergency treatment plan and provide the treatment as appropriate. Students on rotation will participate in a grand-rounds summary at the close of each session to review specific patients and techniques.

CDM 4404H—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 2050—Endodontics Lecture
This course is an introduction to the theory and practice of endodontics. It presents the fundamental principles of the treatment of pulpal and periapical disease. Along with CDM 2060, it prepares the student to provide clinical endodontic treatment.

CDM 2060—Endodontics Laboratory
This course is an introduction to the actual treatment procedures required to treat pulpal disease. By carrying out procedures on extracted teeth from each tooth group, this course, along with CDM 2050, prepares the student to provide clinical endodontic treatment.

CDM 2250—Endodontics Clinical Lecture
This course serves to enhance the knowledge and understanding beyond the basic concepts for predoctoral students. The students’ ability to apply these concepts to their own patients and to recognize situations that are beyond their skills, thus requiring referrals, are developed and emphasized.

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—Advanced Elective in Endodontics
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

CDM 2040—Pharmacology, Analgesia, and Local Anesthesia I
Didactic, lecture-oriented course that reviews the anatomy of the head and neck in relation to administration of local anesthesia. Topics covered include the pharmacology of local anesthetics and vasoconstrictors. Delivery and alternative anesthesia techniques are covered in this course.

CDM 2150—Oral and Maxillofacial Surgery I
A didactic, lecture-oriented course that is reinforced with hands-on practical sessions and demonstrations. Fundamentally, the predoctoral program is designed to prepare the student in oral and maxillofacial surgery as it relates to the practice of general dentistry. The major objective of this course is to provide introductory information on the full scope of oral and maxillofacial surgery.

CDM 2170—Pharmacology, Analgesia, and Local Anesthesia II
This is a didactic, lecture-oriented course that is reinforced with hands-on practical sessions and demonstrations, expanding on the background begun in CDM 2040. Topics include a review of local anesthesia techniques and basic information about alternative techniques of pain and anxiety control, such as oral sedation, nitrous oxide, IV sedation, and general anesthesia.
CDM 3040—Oral and Maxillofacial Surgery II
Didactic, lecture-oriented course expanding on the background presented in the second semester of the sophomore year. Formal presentations to review the techniques of tooth extraction will be incorporated logically in sequence, incorporating pertinent review of the basic sciences. Hands-on instruction will be provided chairside. Students will also be exposed to more complex and modern practices in oral and maxillofacial surgery. This includes orthognathic surgery, TMJ surgery, pathology, and reconstruction surgery.

CDM 3507—Clinical OMFS Rotation I
Third-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.

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
The goal of this course is to introduce the wide spectrum of pain and anxiety control available in dentistry. During this course, the student will establish a basic understanding of the additional techniques available to the dental practitioner to cope with the problems of anxiety and fear commonly found in dental patients. The advanced techniques learned are not only used for the purpose of aiding the fearful dental patient, but also in prevention of medical emergencies in the dental office by attenuating the potentially harmful effects associated with the stress response. Hands-on instruction will be provided.

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 Periodontology

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 acute, chronic, aggressive, and refractory periodontitis, as well as mild, moderate, and
severe 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 is 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 chronic, aggressive, and refractory periodontitis, as well as treatment of refractory 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 D3 year in periodontics 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 periodontics 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 periodontics 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.

Related Educational Programs
The College of Dental Medicine also offers the following programs:

D.O./D.M.D. Dual Degree Program
The D.O./D.M.D. Collaborative Degree Program is symbiotic with the missions of both NSU’s College of Osteopathic Medicine and College of Dental Medicine. Graduates of the dual program will prepare health care that will address preventive medicine, general dentistry, and access to care issues, while also meeting the needs of rural and underserved populations.

Applicants to either college may apply for participation in this collaborative program beginning as an entering D-1 student. The program requires six years of study, excluding medical residency or internship programs. Students successfully completing this program receive both a D.O. and a D.M.D. degree.

Policies related to student progress will follow the respective policies of the college within which the specific course is contained. Should there be conflicting policies or issues, the Student Progress Committee, composed of a joint cohort representing both programs, will convene and recommend a resolution. Students who decide to discontinue in the collaborative degree program may only continue in the program that they were originally admitted to. NSU is not responsible for delays in curriculum sequencing or advancement in the program should the student decide to discontinue in the collaborative degree program and continue in the program that he or she was originally admitted to.
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.

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 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.

Research
The College of Dental Medicine’s research vision is to develop, advance, and disseminate knowledge of oral health sciences and related fields to benefit society. The college’s research program strives to promote our academic growth and scientific reputation through interdisciplinary research and the integration of basic, clinical, translational, public health, and educational research. By collaborating and sharing information with other units within the university, as well as with other university, federal, and private organizations; enhancing our facilities; and recruiting distinguished faculty members, the college strives to be a global leader in research and education.

Our goal is to develop and sustain a research program of distinction by engaging our faculty members and students in research. Our 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 research.

The College of Dental Medicine has full-time research faculty members with degrees that include D.D.S./D.M.D. Ph.D.s and basic science Ph.D.s. The international experience of our faculty members and the opportunities for research exchange add strength and diversity to our research program.
Postdoctoral Programs

The College of Dental Medicine developed postdoctoral specialty training programs in several fields starting in the fall of 1997. There are training positions available in endodontics, orthodontics, pediatric dentistry, periodontology, prosthodontics, advanced education in general dentistry, and oral and maxillofacial surgery. 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 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 and Jurisprudence
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.

Additionally, postdoctoral students are required to take didactic and clinical courses within their respective area of specialization throughout their training.

Postdoctoral Specialties
Postdoctoral Endodontics
The postdoctoral program in endodontics is a 24-month certificate or 36-month master's degree program that balances clinical experience with didactic instruction in the relevant basic and clinical sciences.

The clinical portion of the program is microscopically oriented, providing the student with modern concepts of endodontic treatment including rotary NiTi instrumentation, electronic apex locators, guided tissue regeneration, ultrasonic instrumentation, use of digital radiography revascularization, and regeneration. Joint conferences with other disciplines—such as periodontics, prosthodontics, and pediatric dentistry—provide the student with a well-rounded basis to diagnose and treat conditions in the head and neck region.

The didactic portion of the program includes a core curriculum designed to provide all postdoctoral students with a basic interdisciplinary education and a detailed endodontic curriculum that concentrates heavily on
knowledge of the literature. The program is designed to fulfill the specialty certification of the American Board of Endodontics. The program also includes research, teaching, and instruction by several well-known visiting professors.

In addition to the postdoctoral core courses offered during the first year of the program, all postdoctoral endodontic students are required to take the following courses:

CDM 5611–5618—Current Literature Review
These monthly seminars are devoted to the review of current endodontic literature and research from evidence-based journals. Full journals, as well as selected articles, are carefully reviewed and critically analyzed. This will help to provide the resident with knowledge of biomedical science and to appraise current technological development and research, assessing their scientific and clinical merit so that he or she can bring forward his or her classic literature knowledge as it correlates to the theory and modern practice of endodontics.

CDM 5621–5624—Classic Literature Review
These continual weekly seminars are devoted to the review of endodontic literature, related literature, and discussion of research methods. Selected articles in a particular topic are carefully reviewed and analyzed. The residents learn to read and evaluate scientific evidence that supports endodontic principles and practices from the past to modern day. Topics chosen range from the biological and pharmacological to the technical principles of nonsurgical endodontics in conjunction with multidisciplinary approaches.

CDM 5625–5628—Classic Literature Review
These continual weekly seminars are devoted to the review of endodontic literature, related literature, and discussion of research methods. Selected articles in a particular topic are carefully reviewed and analyzed. The residents learn to read and evaluate scientific evidence that supports endodontic principles and practices from the past to modern day. Topics chosen range from the biological and pharmacological to the technical principles of surgical endodontics in conjunction with multidisciplinary approaches.

CDM 5631–5638—Endodontic Topic and Case Presentation
Residents are expected to prepare four 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 feeling competent upon entering the business world.

CDM 5651—Advanced Pulp Biology
This course will provide an advanced understanding of the physiology and cell biology of the dental pulp in a normal and diseased state, as well as in response to injury.

CDM 5652—Advanced Microbiology
This course will provide an advanced education of the microbiology of the oral tissues focusing on pulpitis, infection, disinfection, and asepsis in endodontics.

CDM 5653—Advanced Immunology
This course will provide an advanced understanding of the human innate and adaptive immune systems that are relevant to dentistry and endodontics.

CDM 5654—Understanding the Endodontic Disease
This course highlights the etiology and pathophysiology that gives rise to the clinical and radiographic expression of endodontic disease of infectious origin.

CDM 5661–5662—Mock Boards
These will empower the resident with the knowledge and skills to successfully complete the board certification process, preparing the resident with a mock oral board examination administered by diplomates. The residents will be prepared to critically evaluate the dental literature and understand the importance of becoming a Diplomate of the American Board of Endodontics.

CDM 5671–5674—Endodontic Surgery
These courses will provide the resident 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 though surgical experiences.
CDM 5681—Endodontic Externship
This externship serves to educate the graduating endodontist 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 the graduating endodontist 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 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- to 36-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 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.

CDM 7660—Operative Dentistry Clinic I
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 7703—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 workup 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—Classic Literature Review Seminar I
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 7650—Advanced Operative Dentistry 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.

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 through Florida International University College of Medicine. 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.

Six months of the second year are spent on the oral and maxillofacial surgery service encompassing the outpatient clinics and respective Broward Health and Memorial Hospital services. Residents will have increased responsibilities this year, including overseeing the first-year residents, IV sedation cases, and operating room responsibilities. The other six months are spent on trauma/general surgery and are divided equally between Broward General and Memorial Level I trauma centers.

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 30-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 requirements, they will be 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 requirements. Residents fulfilling the graduation requirements of the program will be prepared to present cases for the ABO phase III clinical exam. 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 dental facial anomalies and Grand Rounds take place on a regular basis with other postgraduate residents and their respective faculty members and facilitate the need for the treatment planning of complex cases. A diagnostic conference with all faculty members occurs daily. All residents 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–IX

CDM 5050 Clinical Orthodontics I
CDM 5150 Clinical Orthodontics II
CDM 5250 Clinical Orthodontics III
CDM 5070 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

Clinical Orthodontics I–IX

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 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-angled brackets and lingual orthodontics. Various types of treatment philosophies 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 rooted in, and built upon, the specialty's historic foundations. The structure of the orthodontic didactic component of the curriculum continually contributes to the residents' developing a knowledge base, including evidence-based science, of sufficient depth and breadth incumbent upon 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, 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 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, and Craniofacial Growth and Development. 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.

College of Dental Medicine—Postdoctoral Programs
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.

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.

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 in Dentistry 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, Internship, Advanced Education in General Dentistry, or other post-dental school professional activities are encouraged but not required.

The program consists of a didactic core curriculum in basic and behavioral sciences, a series of seminars in periodontology and implant dentistry, literature review seminars, periodontal prosthodontics, and intravenous moderate sedation. Residents will participate as clinical instructors in the predoctoral periodontology clinic and perform research related to periodontology.

The program is designed so that, at the conclusion of the residents’ training, they can provide comprehensive periodontal and implant dentistry care using a variety of surgical and nonsurgical modalities that encompass the full spectrum of the current state-of-the-art procedures. Residents participate in a variety of educational activities that prepare them for careers in clinical practice, education, or research, giving them the skills and knowledge to successfully pursue certification by the American Board of Periodontology.
CDM 6030—Advanced Clinical Periodontology I
This course focuses on the clinical aspects of periodontal and dental implant-related treatment. Residents provide comprehensive therapy to patients beginning with the examination, diagnosis, treatment planning, and treatment of patients with various forms of periodontal disease including chronic periodontitis, aggressive periodontitis, periodontitis as a manifestation of systemic disease, abscesses, periodontitis associated with endodontic lesions, and developmental or acquired deformities and conditions. Residents will develop their skills in the surgical and nonsurgical management of the periodontal diseases. In addition, residents will begin to evaluate, diagnose, and create patient treatment plans for implant-related surgical and nonsurgical procedures.

CMD 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 nonsurgical 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 Periodontology IV
This course focuses on the clinical aspects of periodontal and dental implant-related treatment and builds on the skills and experiences of CDM 6230. Residents continue to provide comprehensive therapy to patients including examination, diagnosis, treatment planning, and treatment of patients with various forms of periodontal disease such as chronic periodontitis, aggressive periodontitis, periodontitis as a manifestation of systemic disease, abscesses, periodontitis associated with endodontic lesions, and developmental or acquired deformities and conditions. Residents continue to follow their previously treated patients in a patient-specific recall/maintenance program with support from registered dental hygienists. Residents will treat patients with various forms of periodontal disease while providing more surgical and nonsurgical care related to implant dentistry with increasing degrees of difficulty. They will also utilize various sedation techniques with their patients.
CDM 6070—Advanced Clinical Periodontology VII
This course continues with the third-year resident’s progression toward proficiency in all aspects of periodontal and implant therapy and builds on the knowledge, skills, and abilities gained in the first two years of postgraduate training. This clinical course allows the resident to provide treatment to patients with complex treatment needs, and oftentimes, with complex medical conditions. The resident will gain proficiency in a number of surgical and nonsurgical techniques encompassing the entire aspect of periodontal therapy and implant dentistry. The resident will utilize the experience gained over the previous two years to mentor a first-year resident during his or her time in the clinic.

CDM 6130—Advanced Clinical Periodontology II
This course focuses on the clinical aspects of periodontal and dental implant-related treatment and builds on the skills and experiences of CDM 6030. Residents continue to provide comprehensive therapy to patients including examination, diagnosis, treatment planning, and treatment of patients with various forms of periodontal disease such as chronic periodontitis, aggressive periodontitis, periodontitis as a manifestation of systemic disease, abscesses, periodontitis associated with endodontic lesions, and developmental or acquired deformities and conditions. Residents will follow their previously treated patients, designing and implementing a recall/maintenance program specific to each patient’s needs. Residents will develop their skills in more complex surgical cases and will gain increased speed and proficiency. In addition, the resident will develop clinical skills relating to implant dentistry including the placement and maintenance of dental implants and related surgical and nonsurgical procedures.

CDM 6150—Advanced Clinical Periodontology V
This course focuses on the clinical aspects of periodontal and dental implant-related treatment and builds on the skills and experiences of CDM 6050. Residents continue to provide comprehensive therapy to patients including examination, diagnosis, treatment planning, and treatment of patients with various forms of periodontal disease such as chronic periodontitis, aggressive periodontitis, periodontitis as a manifestation of systemic disease, abscesses, periodontitis associated with endodontic lesions, and developmental or acquired deformities and conditions. Residents continue to follow their previously treated patients in a patient-specific recall/maintenance program with support from registered dental hygienists. Residents will treat patients with advanced treatment needs and with multiple systemic factors contributing to the complexity of the case. More advanced surgical and nonsurgical treatment techniques will be required.

CDM 6170—Advanced Clinical Periodontology VIII
The culmination of this course will mark the resident’s completion of his or her clinical training in periodontology. During this course, residents will gain increased efficiency and proficiency in the provision of the multiple modalities of treatment related to periodontal diseases and implant dentistry. The patients treated have complex treatment needs, and oftentimes, complex medical conditions. Residents will gain proficiency in a number of surgical and nonsurgical techniques encompassing the entire aspect of periodontal therapy and implant dentistry. Residents will also provide support to the first- and second-year residents in the treatment of their patients.

CDM 6230—Advanced Clinical Periodontology III
This course focuses on the clinical aspects of periodontal and dental implant-related treatment and builds on the skills and experiences of CDM 6130. Residents continue to provide comprehensive therapy to patients including examination, diagnosis, treatment planning, and treatment of patients with various forms of periodontal disease such as chronic periodontitis, aggressive periodontitis, periodontitis as a manifestation of systemic disease, abscesses, periodontitis associated with endodontic lesions, and developmental or acquired deformities and conditions. Residents continue to follow their previously treated patients in a patient-specific recall/maintenance program with support from registered dental hygienists. Residents will treat patients with various forms of periodontal disease while providing more surgical and nonsurgical care related to implant dentistry with increasing degrees of difficulty. Residents will utilize various sedation techniques with their patients.

CDM 6250—Advanced Clinical Periodontology VI
This course marks the beginning of the resident’s final year of residency in periodontology. This clinical course allows the resident to provide treatment to patients with complex treatment needs and, oftentimes, with complex medical conditions. The resident will gain proficiency in a number of surgical and nonsurgical techniques encompassing the entire aspect of periodontal therapy and implant dentistry. Residents will utilize the experience gained over the previous two years to mentor first-year residents during their time in the clinic.

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 patient care and 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. In addition, residents will start developing clinical skills relating to implant dentistry, including the placement and maintenance of dental implants.

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 prosthetics. 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 7170—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.

Community Dentistry
The Department of Community and Public Health Sciences offers an accredited, one-year Advanced Education in General Dentistry (AEGD 1) residency program with an optional second year (AEGD 2). The AEGD 1 program is housed in an eight-chair clinic at the North Miami Beach (NMB) campus. The AEGD 2 program, also located in NMB, is housed in an eight-chair clinic designed primarily for the care of individuals with special needs. The didactic portion of the program includes a core science curriculum designed to provide all postdoctoral students with an advanced interdisciplinary education and a detailed general practice curriculum for the AEGD students. The AEGD 2 program includes a didactic curriculum for the care of individuals with disabilities. Off-site rotations may be included to expand the range of experiences available. The program offers no stipend, however, professional liability insurance is provided.

CDM 8162—Advanced General Dentistry Seminar Series
This course will provide residents with an understanding of the principles and techniques used to assess and treat oral disease in human populations. It will provide an overview of the diagnostic and treatment techniques of the various dental specialty disciplines at a level appropriate for a graduate dentist and in a manner for that dentist to integrate the principles into the practice of general dentistry.

CDM 8164—Literature Review Seminar
This is a continual seminar devoted to review of dentistry and related literature and discussion of research methods. Selected articles in a particular topic are carefully reviewed and analyzed. Residents learn to critically read and evaluate the scientific evidence that supports advanced dentistry principles and practice.
CDM 8050—AEGD Clinic I
Students will incorporate the knowledge gained from dental school training and didactic studies as they provide comprehensive, multidisciplinary, oral health care for patients using caries risk analysis, diagnosis, prevention, fluoride, sealants, oral hygiene instructions, amalgam, resin composites, ceramic, metals, glass ionomers, tooth whitening procedures, remineralization techniques, periodontal procedures, endodontic procedures, implant placements and restorations, surgical procedures, and replacement of teeth using fixed and removable prosthesis at a level of skill and complexity beyond that accomplished in predoctoral training.

CDM 8150 and CDM 8151 AEGD Clinic II
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 8163—Case Presentation and Treatment Planning Seminar
This case presentation and 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.

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. Applicants are required to complete an NSU College of Dental Medicine application for postdoctoral students for all specialties. Applicants should refer to www.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, Florida 33329-9905

The deadlines for applications vary by program and can be found on the admissions website (www.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, New York 10274-5087
  (212) 966-6311
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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, Florida 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.)

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 2015–2016 (subject to change by the board of trustees without notice) is $44,085. A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 is also required annually. A microscope/lab fee of $125 per year is required as well.

- Acceptance/Preregistration fee is $2,000. 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 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 in Dentistry**

The goal of the Master of Science in Dentistry Program is to provide advanced training in research and research methodology to students, primarily those enrolled in one of the College of Dental Medicine's postdoctoral programs. All master's degree candidates are required to complete a core curriculum of courses, emphasis track courses, and a research thesis. Research in this program includes various aspects of craniofacial/oral health and disease. Graduates of this master's degree program will be trained to think critically, enabling them to more readily pursue research activities and academic careers. For postdoctoral students enrolled in the master's degree program, requirements for both postdoctoral program certification and the Master of Science in Dentistry program will be fulfilled concomitantly. It is anticipated that students who are accepted into the master's degree program will complete the program requirements within two to three years. Final decisions regarding a student's participation in this master's degree program are at the dean's discretion.

**Admissions Requirements**

Those applying for entry into the Master of Science in Dentistry 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 letter of interest in this program articulating their career plan, capabilities, special achievements, etc., along with two letters of
reference from individuals familiar with the candidate's aptitude to perform adequately at a graduate level.

Applicants are expected to come primarily from the pool of approximately 60 graduate specialty certificate candidates (residents) enrolled each year in advanced education in general dentistry, periodontics, prosthodontics, endodontics, orthodontics, pediatric dentistry, or oral surgery.

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 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, Florida 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, New York 10274-5087 (212) 966-6311 www.wes.org
- Josef Silny & Associates, Inc. 7101 SW 102nd Avenue Miami, Florida 33173 (305) 273-1616 (305) 273-1338 fax www.jsilny.com
- Educational Credential Evaluators, Inc. P.O. Box 514070 Milwaukee, Wisconsin 53203-3470 (414) 289-3400 www.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, Florida 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, Illinois, 60611. Applicants who have not taken the National Boards must submit a letter of explanation.)
2. three 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 and the required credentials, the director of each 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.

Tuition and Fees
Tuition for 2015–2016 is $575 per credit hour. Tuition for 2016–2017 will subsequently be posted on our website (www.dental.nova.edu). A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 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

CDM 6200M—Effective Teaching, Learning, and Assessment Methodology

Faculty members in health care fields generally do not receive formal training to acquire teaching skills. This course will be beneficial for professional students who have the interest in perusing an academic/teaching career. This course focuses on teaching and facilitating skills, and teaching competencies to prepare participants to be effective teachers in the future. Participants will also learn various types of student learning and assessment methods. This course will also inform participants concerning ethics and diversity in higher education, which enables them to interact with and teach diverse students appropriately.
For the participants interested in perusing faculty appointments, this course will enable an appreciation that education is an imperative part of people's lives. In order for students to attain quality education and learn thoroughly, they must have effective teachers. This course will help prepare students to fulfill that role.

**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 JMP to perform statistical processing; therefore, students must have basic skills in the use of JMP.

**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 7900 Introduction to Biomedical Writing
This course will review the process of writing a research paper for a peer-reviewed scientific journal and provide practical experience in drafting, reviewing, and revising papers. The course will provide an overview of the content expected in each section of a biomedical paper, including writing skills and instructions for preparing a logical organization of relevant material written and presented in a clear, concise, and accurate manner. Students will prepare a first draft of a paper based on their own research, and receive feedback in the form of written comments from classmates and the instructor to help guide revisions. **Prerequisite:** Students are required to at least have preliminary results data to utilize in course assignments. For that reason, it is recommended that students defer enrollment in CVR 7900 until later semesters, once results are available. Please speak with instructor if there are extenuating circumstances.

CVR 8220—Epidemiology
This course provides a study of the basic principles of epidemiology with emphasis on the application of epidemiology to clinical practice.
College of Nursing
Mission Statement
The mission of the Nova Southeastern University College of Nursing is to provide quality, professional undergraduate and graduate nursing education. We will prepare culturally sensitive and competent nursing leaders who have knowledge and skills that are relevant, futuristic, and responsive to rapidly changing health care trends. Courses are provided in an environment that fosters scholarly inquiry, professional values, interdisciplinary collaboration, and community partnerships.

Accreditation
The Bachelor of Science in Nursing and Master of Science in Nursing programs at Nova Southeastern University are accredited by the Commission on Collegiate Nursing Education, One Dupont Circle, NW, Suite 530, Washington, DC 20036, 202-887-6791. The Doctor of Nursing Practice program’s initial accreditation visit with CCNE is planned for 2014.

Program Information
The College of Nursing offers Bachelor of Science in Nursing (B.S.N.) and Master of Science in Nursing (M.S.N.) degree programs, a Doctor of Nursing Practice (D.N.P.), and a Ph.D. in Nursing Education. The B.S.N. may be earned through an entry nursing program or an R.N. to B.S.N. or R.N. to M.S.N. completion program for registered nurses holding an associate’s degree or diploma in nursing. The M.S.N. program offers three concentrations—nursing education, nursing informatics, and health systems leadership. To obtain a clinical M.S.N. in an advanced practice registered nurse (A.P.R.N.) role, the college offers preparation for certification as a family nurse practitioner (FNP) and a geriatric adult acute care nurse practitioner (GAACNP). All programs focus on developing nursing professionals to assume leadership roles in the complex health care environment.

Undergraduate Courses of Study
Option 1: Entry Nursing Program
The entry nursing program is designed for students who are seeking initial licensure as a registered nurse. Upon completion of 121 credits, the student is awarded a Bachelor of Science in Nursing (B.S.N.) degree and is eligible to apply to sit for the national licensure examination for registered nurses (NCLEX-RN). The entry nursing curriculum is completed following a minimum of 39 semester hours (or equivalent quarter hours) of specific undergraduate coursework. This coursework may be completed at a community college or another university. Upon completion of the 39 semester hours, the student may apply to the nursing program.
The remainder of the 82 semester hours may be completed within seven terms (three terms per year) in the nursing program. Each term is a combination of didactic and clinical courses. The department requires matriculants to complete the entire program. Individual requests for advanced placement, transfer of credit, or credit for experiential learning will be reviewed in line with college requirements.

Option 2: R.N. to B.S.N. Program
This option is designed for the registered nurse holding an associate’s degree or diploma from a hospital-based nursing school licensed in the United States who now wants to obtain a B.S.N. If the applicant does not hold this license, the license must be approved by the program director and dean of the College of Nursing. Failure to comply will result in the accepted student’s inability to continue with his or her coursework. Students may complete the general education requirements in conjunction with the R.N. to B.S.N. program. Students are awarded 61 semester hours of prior learning credits. Individual requests for advanced placement, transfer of credit, or credit for experiential learning will be reviewed in line with college requirements. Although the program may be completed in as little as four semesters, some students elect to spread the coursework out over a longer period of time.

Entry Nursing Program

Program Goals
The goal of the Nova Southeastern University Bachelor of Science in Nursing degree program is to graduate nurses prepared to
- integrate knowledge, theory, and evidence-based research into current nursing practice
- assume a leadership role as the registered professional nurse in health care systems and diverse community settings
- engage in activities for continued professional growth

Admissions Requirements for Fall 2015 and Winter 2016 Entering Classes
Applicants must have completed a minimum of 39 semester hours (or equivalent quarter hours) of specific undergraduate coursework from a regionally accredited college or university prior to matriculation into the nursing program.

Undergraduate Course Prerequisites
- Written communication (6 semester hours)
- Social and behavioral sciences (6 semester hours)—One PSYC and Human Growth and Development
- Arts and humanities (6 semester hours)—Any ARTS, HIST, HUMN, LITR, PHIL, THEA, FILM, MUSC, DANC, WRIT, or foreign language
- Mathematics (6 semester hours)—MATH 1040 or above and Statistics
- Natural/physical sciences (12 semester hours)—Anatomy and physiology, at least 6 semester hours with lab (5 semester hours of anatomy and physiology with 3 semester hours of biology may be substituted); chemistry, at least 3 semester hours; microbiology, at least 3 semester hours
- Nutrition (3 semester hours)

Option 3: R.N. to M.S.N. Program
This option is designed to meet the educational needs of the registered nurse who wants to accelerate the process in obtaining a B.S.N. and an M.S.N. Registered nurses may complete the first three terms through our online option or through the combination on-site and online option offered at the main campus in Fort Lauderdale or the regional campuses in Fort Myers and Orlando. Registered nurses receive 61 prior learning credits for their licensure. Upon evaluation of transcripts, additional transfer credits for general education courses completed at a college or university may be awarded. Completion of all general education courses is a requirement prior to beginning the M.S.N. courses. A letter from the R.N. to M.S.N. program director or adviser attesting that the student is in good standing and has good writing and communication skills that have been consistent throughout the program is required. Students will transition to the M.S.N. courses after meeting the requirements for the M.S.N. program.
Other Requirements

- completion of each prerequisite course with a grade of C or higher
- overall cumulative GPA of 3.0 and science GPA of 2.75 or higher, both on a 4.0 scale
- no C-s, Ds, Fs, or Ws in required natural/physical science courses
- attendance at a personal interview conducted by nursing faculty members

Applicants selected for an interview will be required to complete a standardized entrance examination administered by the College of Nursing.

Applicants who have a pattern of Ws on their transcripts may not be considered for admission.

If, at any time, you wish to withdraw your application from consideration, please do so in writing. Direct this correspondence to

Nova Southeastern University
College of Nursing, Office of Admissions
3200 South University Drive
Fort Lauderdale, Florida 33328-2018

NOTE: An overall GPA of 3.0 or higher and a science GPA of 2.75 or higher will be required for the fall 2015 and winter 2016 entering classes.

Application Procedures for Fall 2015

- All applicants must submit an online application to Nova Southeastern University, along with a $50, nonrefundable application fee.
- Submit your completed application online at www.nova.edu/nursing.
- Your completed application must be received no later than May 1 in order to be considered for admission for the August entering class and November 1 to be considered for the January class.
- If, at any time, you wish to withdraw your application from consideration, please do so in writing. Direct this correspondence to

Nova Southeastern University
College of Nursing, Office of Admissions
3200 South University Drive
Fort Lauderdale, Florida 33328-2018

- One official copy of your academic transcript must be sent directly from each college, university, or professional school that you have attended to the NSU EPS.

Nova Southeastern University
Enrollment Processing Services
College of Nursing
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905

Transcripts must be official. The school seal must be imprinted or embossed on the transcript, which should be forwarded in a sealed envelope directly from the institution in order to be considered an official transcript. Photocopies and facsimiles will not be accepted. A transcript is required for each college, university, or professional school attended, even though transfer credit from one college may appear on another college’s transcript.

- 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, New York 10274-5087
    (212) 966-6311
    www.wes.org

  - Josef Silny & Associates, Inc.
    7101 SW 102nd Avenue
    Miami, Florida 33173
    (305) 273-1616
    (305) 273-1338 fax
    www.jsilny.com

  - Educational Credential Evaluators, Inc.
    P.O. Box 514070
    Milwaukee, Wisconsin 53203-3470
    (414) 289-3400
    www.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 Nursing, Office of Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

- Applicants meeting minimum admissions criteria will be scheduled for a required on-campus interview.
Application Procedures for Winter 2016

Beginning July 1, 2015, the Bachelor of Science in Nursing Entry Nursing program will be participating in the centralized application service NursingCAS. NursingCAS application information may be obtained

- online at www.nursingcas.org
- by calling NursingCAS at (617) 612-2880

The deadline to complete and submit the NursingCAS application will be June 1 for fall admission and November 1 for winter admission.

Send all supporting documents to NursingCAS. All official college transcripts from undergraduate, graduate, and professional institutions attended must be sent to NursingCAS directly from the institutions attended.

Send all transcripts to

NursingCAS
P.O. Box 9201
Watertown, Massachusetts 02471

Tuition and Fees

- Tuition for the 2015–2016 academic year: $26,260 for Florida residents and $27,185 for out-of-state students. Tuition for the 2016–2017 academic year will subsequently be posted on our website (www.nova.edu/nursing/entrylevel).
- A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 is also required annually.
- Acceptance fee is $200. 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 by registration day, but is not refundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance.
- Lab fee is $150. This is due on or before registration.
- Students may incur additional costs in the program, including testing fees, uniforms, lab coat, transportation, and FSNA dues.

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, 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 avail themselves of the hospitalization insurance plan obtainable through the university.

Students are responsible for their own transportation to clinical agencies and other program-related off-campus locations.

The Office of Student Financial Assistance and the Nursing Department are eager to assist you in exploring all the grants and loans currently available for nursing students. Do not hesitate to ask for this help.

Curriculum Outline

Undergraduate Course Prerequisites

<table>
<thead>
<tr>
<th>General Education</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written composition—Any college-level written composition course</td>
<td>6</td>
</tr>
<tr>
<td>Social and behavioral sciences—One PSYC and Life Span Human Growth and Development</td>
<td>6</td>
</tr>
<tr>
<td>Arts and humanities—Any ARTS, HIST, HUMN, LITR, PHIL, THEA, FILM, MUSC, DANC, WRIT, or foreign language</td>
<td>6</td>
</tr>
<tr>
<td>Natural/physical sciences—Anatomy and physiology, at least 6 semester hours with lab (5 semester hours of anatomy and physiology with 3 semester hours of biology may be substituted); chemistry, at least 3 semester hours; microbiology, at least 3 semester hours</td>
<td>12</td>
</tr>
</tbody>
</table>
Nutrition—2000 level or higher  
Mathematics—MATH 1040 or above and Statistics  

**Total General Education Credits**  39

General education courses may be completed at any accredited community college or university. Dual enrollment students should follow the Office of Undergraduate Admissions Curriculum Plan for Nursing Dual Enrollment Students.

<table>
<thead>
<tr>
<th>Nursing Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHS 4904</td>
<td>Advanced Anatomy and Physiology for Health Professions</td>
</tr>
<tr>
<td>BHS 3110</td>
<td>Health Care Ethics</td>
</tr>
<tr>
<td>NUR 3002</td>
<td>Introduction to Baccalaureate Nursing Education</td>
</tr>
<tr>
<td>NUR 3029</td>
<td>Introduction Foundations of Health Assessment</td>
</tr>
<tr>
<td>NUR 3032</td>
<td>Foundations of Pathophysiology</td>
</tr>
<tr>
<td>NUR 3050</td>
<td>Research Methodologies and Evidence-Based Practice</td>
</tr>
<tr>
<td>NUR 3130</td>
<td>Foundations of Professional Nursing Practice</td>
</tr>
<tr>
<td>NUR 3160</td>
<td>Introduction to Professional Nursing</td>
</tr>
<tr>
<td>NUR 4172</td>
<td>Nursing in Today’s Health Care Environment</td>
</tr>
<tr>
<td>NUR 3005</td>
<td>Mathematical Applications for Nursing Practice</td>
</tr>
<tr>
<td>NUR 3131</td>
<td>Problem-Solving Strategies for Nursing Practice</td>
</tr>
<tr>
<td>NUR 3180</td>
<td>Primary Concepts of Adult Nursing I</td>
</tr>
<tr>
<td>NUR 3191</td>
<td>Pharmacological Basis for Nursing Interventions I</td>
</tr>
<tr>
<td>NUR 3192</td>
<td>Pharmacological Basis for Nursing Interventions II</td>
</tr>
<tr>
<td>NUR 4250</td>
<td>Concepts of Psychiatric-Mental Health Nursing</td>
</tr>
<tr>
<td>NUR 4020</td>
<td>The Nurse as a Leader and Manager</td>
</tr>
<tr>
<td>NUR 4030</td>
<td>The Business of Health Care</td>
</tr>
<tr>
<td>NUR 4110</td>
<td>Primary Concepts of Adult Health Nursing II</td>
</tr>
<tr>
<td>NUR 4120</td>
<td>Advanced Concepts of Adult Nursing</td>
</tr>
<tr>
<td>NUR 4130</td>
<td>Concepts of Maternal-Child Nursing and Families</td>
</tr>
<tr>
<td>NUR 4150</td>
<td>Population Nursing Practice</td>
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<tr>
<td>NUR 4160</td>
<td>Genetics for Nursing Practice</td>
</tr>
<tr>
<td>NUR 4180</td>
<td>Nursing Practicum</td>
</tr>
</tbody>
</table>

**Total Nursing Credits**  82

**Total Degree Requirements**  121
Course Descriptions

NUR 1999—Prior Learning in Nursing
This course number and prefix indicate award of lower-level undergraduate prior learning in nursing. This course is repeatable for up to 12 credits. (1–12 credits)

NUR 2000—Basic Concepts of Baccalaureate Nursing Education
This course is designed to help acclimate the first-semester nursing student to college life and the Nova Southeastern University core values while introducing the student to the discipline of nursing at the baccalaureate level. During the course, students will be familiarized with the university resources available to facilitate the success of a collegiate nursing student. Students will have an opportunity to self-reflect, identifying their learning styles, personal values, and self-management skills, all necessary to succeed in a professional career. Students will be introduced to the knowledge and skills essential for understanding the role of the baccalaureate nurse. Opportunities for scholarly writing and conducting library searches focused on using evidence to support nursing practice will be provided. Use of technology as a tool for learning and time management are additional skills that will be emphasized. The class will involve an introduction to service learning, as well as active learning in both individual and team activities. (3 credits)

NUR 3002—Introduction to Baccalaureate Nursing Education
This course is designed to introduce the novice nursing student to the discipline of nursing at the baccalaureate level. During the course, students will be introduced to the knowledge and skills essential for understanding the role of the baccalaureate nurse. Opportunities for scholarly writing and conducting library searches focused on using evidence to support nursing practice will be provided. Use of technology as a tool for learning and time management are additional skills that will be emphasized. The class will involve active learning in both individual and team activities. Corequisites: NUR 3005, NUR 3160, PHS 4904 (3 credits: 3 didactic/0 clinical)

NUR 3005—Mathematical Applications for Nursing Practice
This course builds upon previously learned mathematical skills needed to calculate pharmacological dosages for safe medication administration in the clinical setting. Students are taught dimensional analysis as the appropriate clinical/critical reasoning method to ensure safety and quality when determining medication dosages for patients. Students are also taught how to calculate enteral and parenteral dosages. Corequisites: NUR 3002 (or NUR 2000), NUR 3160 (or NUR 2500), PHS 4904 (2 credits: 2 didactic/0 clinical)

NUR 3029—Introduction to Foundations of Health Assessment
This course introduces the entry-level student to foundational health assessment skills, emphasizing data collection. Students will be expected to use principles based on the biological sciences to perform a holistic health assessment. Students will interpret pertinent data to make sound clinical judgments needed to deliver safe, quality, and effective nursing care. Students will demonstrate competency in communicating and documenting assessment findings. Integrity, compassion, and stewardship will be discussed as they relate to cultural awareness and legal and ethical issues that pertain to health assessment. Prerequisites: NUR 3160 (or NUR 2500), PHS 4904; Corequisites: NUR 3032, NUR 3130 (3 credits: 3 didactic/0 lab)

NUR 3032—Foundations of Pathophysiology
This course introduces the entry-level student to concepts of pathophysiology based on principles from the biological sciences. Students will examine the phenomena that cause changes in physiological functioning. Specific system disorders will be investigated using current, evidence-based literature as a basis for health promotion. Students will utilize pathophysiological concepts as a basis for making sound clinical judgments needed to deliver safe, quality, and effective care. Ethnic, cultural, and other influences on health will be discussed. Prerequisites: NUR 3002 (or NUR 2000), NUR 3005, NUR 3160 (or NUR 2500), PHS 4904; Corequisites: NUR 3029, NUR 3130 (3 credits: 3 didactic/0 clinical)

NUR 3050—Research Methodologies and Evidence-Based Practice
This course prepares baccalaureate nursing students to become consumers of research. Students will be introduced to the research processes essential to providing evidence-based nursing care. Research designs will be discussed as a basis for critiquing the efficacy of selected research studies. Students will be introduced to the legal and ethical principles that guide the integrity of nursing research. The nurse’s role in retrieval, appraisal, and synthesis of evidence in collaboration with members of the interprofessional team to improve patient outcomes will be addressed. Corequisite: NUR 4110 (3 credits: 3 didactic/0 clinical)

NUR 3130—Foundations of Professional Nursing
This course introduces entry-level students to the discipline of nursing in which they will provide holistic and compassionate care for diverse populations. Students will begin to develop the knowledge, skills, and attitudes needed to provide safe, quality, and effective nursing care. Students will start to use clinical/critical reasoning,
communication, and assessment skills to care for patients across the health illness continuum, understanding the need for stewardship and integrity in this changing health care environment. The roles of provider of care, coordinator of care, advocate, researcher, leader, and member of the profession. The history of nursing and how society views the nursing profession are discussed. The student is introduced to theories and quality measures that influence nursing practice and patient-centered care. Ethical and legal principles, sociocultural concepts, and political principles guiding the profession will also be addressed. 

**Corequisites:** NUR 3002 (or NUR 2000), PHS 4904 (3 credits: 3 didactic/0 clinical)

**NUR 3160—Introduction to Professional Nursing**

This course introduces the student to the roles of the professional nurse including provider of care, coordinator of care, advocate, researcher, leader, and member of the profession. The history of nursing and how society views the nursing profession are discussed. The student is introduced to theories and quality measures that influence nursing practice and patient-centered care. Ethical and legal principles, sociocultural concepts, and political principles guiding the profession will also be addressed. 

**Corequisites:** NUR 3002 (or NUR 2000), PHS 4904 (3 credits: 3 didactic/0 clinical)

**NUR 3172—Nursing in Today's Health Care Environment**

This course integrates contemporary trends in the present complex health care delivery system with professional nursing practice. Students will synthesize knowledge from previous courses to further investigate health care system quality, safety, evidenced-based practice, technology, and the professional nurse's role. The importance of collaborative relationships among interprofessional team members and their impact on quality and value-based care and patient safety will be analyzed. Students will further develop skills to address relevant legal, ethical, and regulatory issues. 

**Prerequisites:** NUR 4250, NUR 4020, NUR 4030, NUR 4120, NUR 4150; Corequisite: NUR 4180 (3 credits: 3 didactic/0 clinical)

**NUR 3180—Primary Concepts of Adult Nursing I**

This course introduces the entry-level student to the application of nursing concepts in order to provide holistic and compassionate care for patients who have specific disorders. Students will apply knowledge, skills, and attitudes needed to provide safe, quality, and effective nursing care. Students will continue to develop clinical/critical reasoning, communication, and assessment skills to care for patients across the health illness continuum, understanding the need for stewardship and integrity in this changing health care environment. Topics covered include gastrointestinal, endocrine, genitourinary, immunological, hematological, and oncological disorders.

**Prerequisites:** NUR 3029, NUR 3032, NUR 3130, NUR 3131; Corequisite: NUR 3191 (6 credits: 3 didactic/3 clinical)

**NUR 3191—Pharmacological Basis for Nursing Interventions I**

This course introduces the entry-level student to pharmacologic concepts in order to provide safe and effective care for patients who have specific disorders. The concepts of drug efficacy, pharmacokinetics, mechanism of action, and medication interactions will be introduced as a basis for providing safe, quality, and effective nursing care. Students will apply dimensional analysis to calculate safe medication dosages. Students will begin to develop clinical/critical reasoning as related to the nurse's role in pharmacotherapy. Topics covered include medications used in the treatment of gastrointestinal, endocrine, immune, and oncological disorders and those used in the treatment of pain, anxiety, and depression. 

**Prerequisites:** NUR 3029, NUR 3130, NUR 3131, NUR 3032; Corequisite: NUR 3180 (2 credits: 2 didactic/0 clinical)

**NUR 3192—Pharmacological Basis for Nursing Interventions II**

This course provides opportunities for the entry-level student to integrate pharmacologic concepts in order to provide safe and effective care for patients who have specific disorders. Students will apply dimensional analysis to calculate safe medication dosages. The concepts of drug efficacy, pharmacokinetics, mechanism of action, and medication interactions will be examined as a basis for safe, quality, and effective nursing care. Students will continue to improve clinical/critical reasoning as related to the nurse's role in pharmacotherapy. Topics covered include medications used in the treatment of cardiovascular, peripheral vascular, respiratory, neurologological, musculoskeletal, and sensory disorders.

**Prerequisites:** NUR 3180, NUR 3191; Corequisite: NUR 4110 (2 credits: 2 didactic/0 clinical)

**NUR 4250—Concepts of Psychiatric-Mental Health Nursing**

This course applies theories and concepts from liberal education and evidence-based practice to provide nursing care for diverse populations who have specific psychiatric disorders. The focus is on developing communication skills that facilitate a therapeutic nurse-patient relationship based on trust and integrity. Students will use the nursing process to create strategies that reduce
This course provides opportunities for the entry-level interprofessional teams, quality, and evidence-based safety, information technology, patient-centered care, will assess how financial management integrates with health policy and professional nursing practice. Students will analyze economic forces that influence the development of systems. Emphasis will be placed on the political and functions, and reports commonly utilized in health care human resource management, financial processes and of cost and revenue, accounting vocabulary, budgeting, course will assist the student in differentiating the concepts health care reform related to current nursing practice. This reimbursement, regulatory processes, health care policy, and stewardship, integrity, and competence. Students will examine the basic concepts of an organizational structure, mission, vision, philosophy, and core values as they relate to individual ethics and values. Students will investigate power, accountability, conflict management, and team-building within an interprofessional team. Legal, ethical, and political issues that impact quality and safety in the delivery of compassionate and competent patient care will be analyzed. Prerequisite: NUR 3180; Corequisite: NUR 4110 (3 credits: 3 didactic/0 clinical)

NUR 4020—The Nurse as Leader and Manager
This course is designed to assist the baccalaureate nursing student in applying leadership and management theories, concepts, and skills. Principles of stewardship, prioritization, delegation, quality improvement, patient safety, and evidence-based practice will be discussed. Students will examine the basic concepts of an organizational structure, mission, vision, philosophy, and core values as they relate to individual ethics and values. Students will investigate power, accountability, conflict management, and team-building within an interprofessional team. Legal, ethical, and political issues that impact quality and safety in the delivery of compassionate and competent patient care will be analyzed. Prerequisite: NUR 3180; Corequisite: NUR 4110 (3 credits: 3 didactic/0 clinical)

NUR 4030—The Business of Health Care
This course focuses on the financial environments of health care systems and how they relate to today’s professional nursing roles in leadership, management, and patient-centered care, incorporating the values of stewardship, integrity, and competence. Students will analyze the principles of financial management, health care reimbursement, regulatory processes, health care policy, and health care reform related to current nursing practice. This course will assist the student in differentiating the concepts of cost and revenue, accounting vocabulary, budgeting, human resource management, financial processes and functions, and reports commonly utilized in health care systems. Emphasis will be placed on the political and economic forces that influence the development of health policy and professional nursing practice. Students will assess how financial management integrates with safety, information technology, patient-centered care, interprofessional teams, quality, and evidence-based practice. Prerequisite: NUR 3180, NUR 4010 (3 credits: 3 didactic/0 clinical)

NUR 4110—Primary Concepts of Adult Nursing II
This course provides opportunities for the entry-level student to integrate nursing concepts in order to provide holistic and compassionate care for patients who have specific disorders. Students will integrate knowledge, skills, and attitudes needed to provide safe, quality, and effective nursing care. Students will continue to improve clinical/critical reasoning, communication, and assessment skills to care for patients across the health illness continuum understanding the need for stewardship and integrity in this changing health care environment. Legal and ethical issues pertaining to patients who have complex, multisystem health care needs will be analyzed. Prerequisites: NUR 3180, NUR 3191; Corequisite: NUR 3192 (6 credits: 3 didactic/3 clinical)

NUR 4120—Advanced Concepts of Adult Nursing
This course provides opportunities for the entry-level student to synthesize nursing concepts in order to create and manage holistic and compassionate care for patients who have complex needs. Students will incorporate knowledge, skills, and attitudes needed to provide safe, quality, and effective nursing care to patients who have multiple system disorders. Students will apply clinical/critical reasoning, communication, and assessment skills to care for patients across the health illness continuum, understanding the need for stewardship and integrity in this changing health care environment. Legal and ethical issues pertaining to patients who have complex, multisystem health care needs will be analyzed. Prerequisites: NUR 4250, NUR 4030, NUR 4110, NUR 4150 (5 credits: 3 didactic/2 clinical)

NUR 4130—Concepts of Maternal-Child Nursing and Families
This course integrates developmental theories, theories from the biological and social sciences, family nursing theory, and evidence-based practice in order to provide holistic and compassionate care for childbearing and child-rearing families. Health promotion and risk reduction, contemporary trends, social justice issues, and legal and ethical issues will be addressed. Students will apply knowledge, skills, and attitudes needed to provide safe, quality, and effective nursing care. Students will apply clinical/critical reasoning, communication, and assessment skills to care for patients across the health illness continuum and will examine the need for stewardship and integrity in this changing health care environment. Topics covered include care of the members of childbearing and child-rearing families and specific disorders in these populations. Prerequisites: NUR 3192, NUR 4110; Corequisite: NUR 4160 (5 credits: 3 didactic/2 clinical)

NUR 4150—Population Nursing Practice
This course provides the foundation for population-oriented nursing practice and focuses on the process of conceptualizing individuals, aggregates, and communities as a single entity. Students are introduced to epidemiological theories and concepts that are relevant in planning and implementing primary, secondary, and tertiary levels of prevention for populations within their
own environments. Students will provide stewardship to populations of diverse cultures through community empowerment, so that they can access health care and promote healthy behaviors. Communication, negotiation, and clinical/critical reasoning skills will be practiced when collaborating with the targeted population, the interprofessional health care team, and the community stakeholders. Principles of evidence-based practice will be utilized when implementing the nursing process within the population. Students will examine the legislative and regulatory processes relevant to the provision of safe, quality health care. **Prerequisites:** NUR 3050, NUR 4110, NUR 4130; **Corequisite:** NUR 4250 (4 credits: 3 didactic/1 practicum)

**NUR 4160—Genetics for Nursing Practice**
This course will focus on providing students with a fundamental understanding of human genetics and its role in diagnosis, disease management, risk reduction, and health promotion. Students will learn ways to assess protective and predictive genetic factors, which influence the health of individuals, families, groups, communities, and populations, in order to develop a basis for competent nursing care. Students will apply knowledge of inheritance and immunogenetics in predicting the possible effect of genetics on disease development. This course will also address the ethical, social, political, and economic impact of selected genetic diseases, DNA-based genetic diagnoses, and gene therapy. **Prerequisites:** NUR 3192, NUR 4110, PHS 4904; **Corequisite:** NUR 4130 (2 credits: 2 didactic/0 clinical)

**NUR 4180—Nursing Practicum**
This seminar/practicum course synthesizes all previous knowledge as a foundation for implementing holistic, patient-centered care that reflects an understanding of human growth and development, pathophysiology, pharmacology, medical care, and nursing management. Students will provide competent, compassionate care to diverse patient and family populations across the health illness continuum, across the life span, and in a variety of health care settings. Students will incorporate current evidence-based research in delivering safe, quality patient care. The student will work with a registered nurse preceptor and apply leadership skills in delegating, supervising, and collaborating with other members of the interprofessional health care team. Students will demonstrate stewardship and integrity when providing patient care in this dynamic health care environment. **Prerequisite:** Completion of all prior clinical and didactic courses; **Corequisite:** NUR 4172 (6 credits: 2 didactic/4 clinical)

**NPHS 4904—Advanced Anatomy and Physiology for Health Professions**
This course is a survey course of human physiology and functional anatomy. The physiology portion of the course is intended to provide nursing students with an understanding of the basic physio-chemical concepts and physiological principles underlying the development, maintenance, and propagation of life. Topics covered include basic examinations of cellular processes; membrane mechanisms; and a system-based approach to physiological concepts specific to the nervous, muscular, respiratory, endocrine, gastrointestinal, cardiovascular, immune, renal, and reproductive systems. **Corequisites:** NUR 3002, NUR 3005 (4 credits: 3 didactic/1 lab)

**Nursing Elective**
Undergraduate nursing electives may be offered at the discretion of the department.
R.N. to B.S.N. Program

Admissions Requirements for Fall 2015 and Winter 2016

- Graduation from a regionally accredited college or university and a nursing program accredited by the Accreditation Commission for Education in Nursing (formerly National League for Nursing Accrediting Commission, NLNAC) or the Commission on Collegiate Nursing Education (CCNE)

Applicants who graduated from a diploma program will be reviewed on an individual basis.

- Proof of current, active, unencumbered United States R.N. license (Students residing in the state of Florida must hold an active, unencumbered Florida nursing license.)

Licensure must remain current throughout the program. Students who do not hold a United States (U.S.) nursing license must receive prior approval from the program director and College of Nursing dean for admission into the program.

- 36 semester hours of undergraduate general education courses (as listed on the following page) passed with a grade of C (2.0) or higher (Please note that courses beginning with 00 are not considered college level.)

Application Procedures for Fall 2015

- Applicants must submit a completed application form to Nova Southeastern University, along with a $50, nonrefundable application fee. Send your completed application to

Nova Southeastern University
Enrollment Processing Services
College of Nursing
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905.

- The College of Nursing has rolling admissions for the R.N. to B.S.N. program. Candidates must submit all applications and transcripts by July 16 for priority consideration for the August entering class and by December 10 for priority consideration for the January entering class. Applications are accepted year round for R.N. to B.S.N. entering classes.

- If, at any time, you wish to withdraw your application from consideration, please do so in writing.

Direct this correspondence to

Nova Southeastern University
College of Nursing
Office of Admissions
3200 South University Drive
Fort Lauderdale, Florida 33328-2018

- Proof of current registered nurse (R.N.) licensure is required. Licensure must remain current throughout the program.

- One official copy of your academic transcript must be sent directly from each college, university, or professional school that you have attended to NSU’s EPS. Transcripts must be official. The school seal must be imprinted or embossed on the transcript, which should be forwarded in a sealed envelope, directly from the institution, in order to be considered an official transcript. Photocopies and facsimiles will not be accepted. A transcript is required for each college, university, or professional school attended, even though transfer credit from one college may appear on another college’s transcript.

- 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
    www.wes.org

  - Josef Silny & Associates, Inc.
    7101 SW 102nd Avenue
    Miami, Florida 33173
    (305) 273-1616
    (305) 273-1338 fax
    www.jsilny.com

  - Educational Credential Evaluators, Inc.
    P.O. Box 514070
    Milwaukee, Wisconsin 53203-3470
    (414) 289-3400
    www.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 Nursing Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.
Application Procedures for Winter 2016
Beginning July 1, 2015, the R.N. to B.S.N. program will be participating in the centralized application service NursingCAS. NursingCAS application information may be obtained

- online at www.nursingcas.org
- by calling NursingCAS at (617) 612-2880

The deadline to complete and submit the NursingCAS application will be June 1 for fall admission and November 1 for winter admission.

Send all supporting documents to NursingCAS. All official college transcripts from undergraduate, graduate, and professional institutions attended must be sent to NursingCAS directly from the institutions attended.

Send all transcripts to
NursingCAS
P.O. Box 9201
Watertown, Massachusetts 02471

Tuition and Fees
Tuition for the R.N. to B.S.N. program for academic year 2015–2016 is $395 per credit hour. Tuition for 2016–2017 will subsequently be posted on our website (www.nova.edu/nursing/rntobsn). All tuition and fee amounts are subject to change by the board of trustees without notice. A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 is also required annually.

There are a number of national, Florida, and hospital grants available for the R.N. student. Additionally, student loan interest for nursing students is lower than for students seeking other degrees. The financial aid office and the College of Nursing are eager to assist you in exploring all possible financial aid options. Please do not hesitate to ask for this help.

Curriculum Outline

Undergraduate Course Requirements

General Education

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written composition—Any college-level written composition course</td>
<td>6</td>
</tr>
<tr>
<td>Social and behavioral sciences—One PSYC and Life Span Human Growth and Development</td>
<td>6</td>
</tr>
<tr>
<td>Arts and humanities—Any ARTS, HIST, HUMN, LITR, PHIL, THEA, FILM, MUSC, DANC, WRIT, or foreign language</td>
<td>6</td>
</tr>
<tr>
<td>Natural/physical sciences—Credit with R.N. license</td>
<td>12</td>
</tr>
<tr>
<td>Mathematics—MATH 1040 or above and Statistics</td>
<td>6</td>
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Total General Education Credits 36

Cognate Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
<th>Semester Hours</th>
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<tr>
<td>PHS 4904</td>
<td>Advanced Anatomy and Physiology for Health Professions</td>
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</tr>
<tr>
<td>NUT 3000</td>
<td>Nutrition for the Health Professional</td>
<td>3*</td>
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<tr>
<td>BHS 3110</td>
<td>Health Care Ethics</td>
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Total Cognate Credits 10
### Nursing Courses

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
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<tbody>
<tr>
<td>NUR 3000</td>
<td>Transition to Baccalaureate Nursing Education for Registered Nurses</td>
<td>3</td>
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<tr>
<td>NUR 3013</td>
<td>Transition to Professional Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NUR 3031</td>
<td>Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>NUR 3030</td>
<td>Health Assessment</td>
<td>3</td>
</tr>
<tr>
<td>NUR 3020</td>
<td>Theoretical Foundations of Professional Nursing Practice</td>
<td>3</td>
</tr>
<tr>
<td>NUR 3051</td>
<td>Introduction to Nursing Research</td>
<td>3</td>
</tr>
<tr>
<td>NUR 4021</td>
<td>Transformational Nursing Leadership</td>
<td>3</td>
</tr>
<tr>
<td>NUR 4031</td>
<td>The Business of Health Care in Complex Systems</td>
<td>3</td>
</tr>
<tr>
<td>NUR 4151</td>
<td>Population Health: Promotion, Prevention, and Disease Management</td>
<td>4</td>
</tr>
<tr>
<td>NUR 4161</td>
<td>Genetic Concepts</td>
<td>2</td>
</tr>
<tr>
<td>NUR 4171</td>
<td>Nursing and Health Care Trends</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Nursing Credits Completed at NSU: 33
Prior Learning Nursing Credits: 42*
Total Degree Requirements: 121

General education courses may be completed at any accredited community college or university prior to admission to NSU. Once admitted, general education courses can be CLEPed within the first three semesters or taken as online courses at NSU. Advisers will work with students on completing a course sequence plan and CLEPing. General education CLEPs not completed within the first three semesters must be taken at NSU.

Cognate and nursing courses must be completed at NSU.

*Credit with R.N. license

### Course Descriptions

**NUR 3000—Transition to Baccalaureate Nursing Education for Registered Nurses**
This course is designed to assist the registered nurse as an adult learner to make the transition to the university setting and the role of the nursing student. Students will be introduced to computer skills that will facilitate success in achieving their educational goals at NSU and will receive explanations of how the application of these skills can be used in nursing practice. These computer skills will include foundational concepts of information technology, Microsoft Office, and how to access the NSU online library databases and resources to support evidence-based practice. In addition, students will be introduced to the concepts of the American Psychological Association (APA) and scholarly writing. Emphasis is placed on the development of the knowledge and competencies in computer technology that are necessary for registered nurses in education and health care. The class will involve active participation in cooperative group activities as well as individualized activities. (3 credits)

**NUR 3013—Transition to Professional Nursing**
This course focuses on the role transition to professional nurse as provider of care, manager of care, and member of the profession. Students will explore the history of nursing and how society views the nursing profession. Ethical and legal principles guiding the nursing profession are introduced. (3 credits)
NUR 3030—Health Assessment
This course emphasizes the knowledge, skills, and competencies necessary to complete a health assessment for clients across the life span. It analyzes the concepts of health assessment methodology, which include interviewing, history taking, and physical assessment. Students will be expected to utilize assessment skills in identifying pertinent data as it relates to evidence-based health promotion and health education strategies. (3 credits)

NUR 3020—Theoretical Foundations of Professional Nursing Practice
This course focuses on the practicing nurse’s acquisition, evaluation, utilization, and interpretation of nursing theories as a foundation for patient-centered care. In addition, nursing practice knowledge will be derived from the interpretation and application of selected theories from other disciplines. (3 credits)

NUR 3031—Pathophysiology
This course focuses on the pathogenesis of selected diseases leading to alterations of body structure and functions across the life span. This is emphasized through case study review that includes discussing and applying cell structure, function, and genetic control and its impact on the disease process. The student will integrate and apply pathophysiological concepts to client care in the development of primary, secondary, and tertiary interventions to attain, maintain, and retain the health state. Contemporary treatment, legal and ethical issues, and health promotion concepts pertaining to pathophysiological disorders will be explored. (3 credits)

NUR 3051—Introduction to Nursing Research
This course introduces essential concepts of nursing research and evidence-based practice. Students will review the scientific merit of research methods with an emphasis on implication and application for evidence-based nursing practice. Practicing registered nurses will build upon existing knowledge and skills related to research to improve patient outcomes, nursing practice, and interprofessional collaboration. Students will also examine the contemporary trends and legal and ethical issues related to the research process. (3 credits)

NUR 4171—Nursing and Health Care Trends
This course explores contemporary trends in health care delivery systems and professional nursing practice. Students will integrate knowledge from previous courses, further exploring health care system quality and safety, evidenced-based practice, technology, informatics, and the nurse’s role in today’s health care delivery system. This course examines the relationships between quality of care, cost of care, and safety, as well as the regulatory effects on patient care and cost. Students will develop skills to address relevant issues within today’s health care delivery system. Trends in health care informatics are explored and the effects of nursing informatics on communication and safety will be analyzed. (3 credits)

NUR 4021—Transformational Nursing Leadership
This course focuses on evidence-based leadership and management skills and competencies needed by professional nurses to be full partners and work productively in interprofessional teams, facilitating the transformation of complex health care systems. Students will analyze current best practices related to leadership roles; organizational communications; team dynamics in learning organizations; quality improvement; safe, patient-centered care; and the role of nursing leadership and how it relates to information systems. The course will assist students in differentiation of the concepts of contemporary trends in leadership and management theories, development of self, and communication skills necessary to influence behaviors. Emphasis will be placed on organizational systems structure and culture, change management, human resource management, and performance improvement in care delivery systems. Legal and ethical issues related to leadership and management will be analyzed. (3 credits)

NUR 4031—The Business of Health Care in Complex Systems
This course focuses on the financial environments of health care systems and how they relate to today’s professional nursing roles in leadership, management, and patient-centered care. Students will analyze the principles of financial management, health care reimbursement, regulatory processes, health care policy, and health care reform related to current nursing practice. This course will assist the student in differentiating the concepts of cost and revenue; accounting vocabulary; budgeting; human resource management; and financial processes, functions, and reports commonly utilized in health care systems. Emphasis will be placed on the political and economic forces that influence the development of health policy and professional nursing practice. Students will assess how financial management integrates with safety, information technology, patient-centered care, interprofessional teams, quality, and evidence-based practice. (3 credits)
NUR 4151—Population Health: Promotion, Prevention, and Disease Management
This course is designed to prepare the practicing registered nurse to utilize evidenced-based health promotion, health prevention, and disease management as they apply to diverse individuals, families, groups, communities, and populations. Essential concepts of epidemiology, community-based assessment and evaluation, equity, vulnerable populations, and community resources are introduced. This course leads to an increased understanding of the relationships related to sociocultural contexts, ethics, and health/illness beliefs and practices. Students will demonstrate an ability to facilitate health care delivery to populations of diverse cultures using effective communication skills that include negotiation, problem-solving skills, and collaboration with various interprofessional health care teams. (4 credits)

NUR 4161—Genetic Concepts
This course will focus on building upon the previous experience and knowledge of the practicing registered nurse to develop a further understanding of genetics and its role in pathophysiology and the diagnosis and management of disease. Students will be introduced to basic concepts in human genetics that contribute to an understanding of nursing or related health care problems and will apply knowledge of inheritance and immunogenetics in predicting the possible effect of genetics on disease processes. This course will analyze the ethical, social, political, and economic impact of selected genetic diseases, DNA-based genetic diagnoses, and gene therapy. (2 credits)

Nursing Elective
Undergraduate nursing electives may be offered at the discretion of the department.

R.N. to M.S.N. Program

Admissions Requirements for Fall 2015 and Winter 2016 Entering Classes
Students would declare the major R.N. to M.S.N. upon application to the program. Initial admission criteria would be the current admissions requirements for the R.N. to B.S.N. degree.

- Applicants must have graduated from a regionally accredited college or university and a nursing program accredited by the Accreditation Commission for Education in Nursing (formerly National League for Nursing Accrediting Commission, NLNAC) or the Commission on Collegiate Nursing Education (CCNE).
- Applicants must have an overall GPA of 2.6 or higher on a 4.0 scale.
- Students must complete all prerequisite general education courses prior to application to the R.N. to M.S.N. program.
- Applicants must have proof of a current, active, unencumbered United States R.N. license (Students residing in the state of Florida must hold an active, unencumbered Florida nursing license.)
- The student will complete three terms of B.S.N. coursework. At the end of three terms, the student must meet the 3.0 or higher GPA admissions requirement for the M.S.N. The 3.0 GPA will be calculated from the B.S.N. courses completed at NSU. Any student enrolled in the R.N. to M.S.N. program who does not meet the 3.0 GPA requirements in the third term will be moved to the R.N. to B.S.N. program to complete the two additional terms for the B.S.N. The program directors for the R.N. to B.S.N. and the graduate program director will review applicants at the completion of term III. A letter from the R.N. to M.S.N. program director or adviser attesting that the student is in good standing and has good writing and communication skills that have been consistent throughout the program is required. Written notification to the student regarding their progression into the M.S.N. program will be done by the nursing department.

The M.S.N. program at NSU offers additional education for B.S.N.-prepared nurses working or interested in the areas of nursing education, health systems leadership, nursing informatics, or advanced practice. The College of Nursing offers two M.S.N. degrees—a nonclinical/traditional program and a clinical/A.P.R.N. program. There are three distinct concentrations in the nonclinical/traditional M.S.N. program: education, nursing informatics, and health systems leadership. Each one offers an in-depth education by faculty experts in these fields.

- The nursing education concentration is for nurses wishing to enhance their ability to transition to an academic or staff development position.
The nursing informatics concentration is for nurses interested in the field of nursing computer technology and information science.

The health systems leadership concentration is for nurses who desire a position of leadership within the unique organizational environment of health care.

The clinical/A.P.R.N. program prepares students to be family nurse practitioners (FNPs) or geriatric adult acute care nurse practitioners (GAACNPs). There are specific requirements for R.N. to M.S.N. students to move to this program. Students must have

- an undergraduate GPA of 3.0. (The associate’s degree in nursing GPA and the GPA received from coursework in the NSU program will be calculated as an overall GPA.)
- transcripts from all universities attended (repeated courses in the three Ps—pathophysiology, pharmacology, and physical assessment—will be reviewed, as will a history of multiple withdrawals and changes in universities)
- completed a college-level statistics course (from a mathematics department) with a grade of C or better
- a grade of B in each of the three Ps is required (If there is no pharmacology course on a transcript at the associate’s or B.S.N. level, this may negatively impact the student’s possibility of admission to the A.P.R.N. program.)
- three years active, current, R.N. clinical experience (direct patient care)
- two letters of recommendation (one from a faculty member who can attest to the potential success of the student in the A.P.R.N. program and one from the student’s current employer)
- a CV/resume
- a current Florida R.N. license
- a letter from the R.N. to M.S.N. program director or adviser attesting that the student is in good standing and has good writing and communication skills that have been consistent throughout the program

**Application Procedures for Fall 2015**

- Applicants must submit completed application forms and a $50, nonrefundable application fee and all admission forms to

Nova Southeastern University
Enrollment Processing Services
College of Nursing
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905

- The office of admissions works on a rolling basis. R.N. to M.S.N. candidates must submit all applications and transcripts by July 21 for consideration for the August entering class and by December 1 for consideration for the January entering class. Applications are accepted year round for the R.N. to M.S.N. entering classes.

- If, at any time, you wish to withdraw your application from consideration, please do so in writing. Direct this correspondence to

Nova Southeastern University
College of Nursing
Office of Admissions
3200 South University Drive
Fort Lauderdale, Florida 33328-2018

- All applicants who are accepted must submit official transcripts of all completed coursework to the NSU EPS, College of Nursing Admissions. It is the responsibility of the applicant to ensure that arrangements are made for these transcripts to be sent.

- 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
    [www.wes.org](http://www.wes.org)

  - Josef Silny & Associates, Inc.
    7101 SW 102nd Avenue
    Miami, Florida 33173
    (305) 273-1616
    (305) 273-1338 fax
    [www.jsilny.com](http://www.jsilny.com)

  - Educational Credential Evaluators, Inc.
    P.O. Box 514070
    Milwaukee, Wisconsin 53203-3470
    (414) 289-3400
    [www.ece.org](http://www.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 Nursing, Office of Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.
### Application Procedures for Winter 2016

Beginning July 1, 2015, the R.N. to M.S.N. program will be participating in the centralized application service NursingCAS. NursingCAS application information may be obtained:
- online at [www.nursingcas.org](http://www.nursingcas.org)
- by calling NursingCAS at (617) 612-2880

The deadline to complete and submit the NursingCAS application will be June 1 for fall admission and November 1 for winter admission.

Send all supporting documents to NursingCAS. All official college transcripts from undergraduate, graduate, and professional institutions attended must be sent to NursingCAS directly from the institutions attended.

Send all transcripts to

NursingCAS  
P.O. Box 9201  
Watertown, Massachusetts 02471

### Curriculum Outline

#### General Education  

<table>
<thead>
<tr>
<th></th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written composition—Any college-level written composition course</td>
<td>6</td>
</tr>
<tr>
<td>Social and behavioral sciences—One PSYC and Life Span Human Growth and Development</td>
<td>6</td>
</tr>
<tr>
<td>Arts and humanities—Any ARTS, HIST, HUMN, LITR, PHIL, THEA, FILM, MUSC, DANC, WRIT, or foreign language</td>
<td>6</td>
</tr>
<tr>
<td>Natural/physical sciences—Credit with R.N. license</td>
<td>12*</td>
</tr>
<tr>
<td>Mathematics—MATH 1040 or above and Statistics</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total General Education Credits** 36

#### Cognate Courses  

<table>
<thead>
<tr>
<th>College Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHS</td>
<td>Advanced Anatomy and Physiology for Health Professions</td>
<td>4*</td>
</tr>
<tr>
<td>NUT</td>
<td>Nutrition for the Health Professional</td>
<td>3*</td>
</tr>
</tbody>
</table>

**Total Cognate Credits** 7

#### Nursing Courses  

<table>
<thead>
<tr>
<th>College Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR</td>
<td>Transition to Baccalaureate Nursing Education for Registered Nurses</td>
<td>3</td>
</tr>
<tr>
<td>NUR</td>
<td>Transition to Professional Nursing</td>
<td>3</td>
</tr>
</tbody>
</table>

### Tuition and Fees

Tuition for the R.N. to M.S.N. program academic year 2015–2016 is $395 per credit hour for courses at the baccalaureate degree (B.S.N.) level and $660 per credit hour for courses at the master's degree (M.S.N.) level. Tuition for 2016–2017 will subsequently be posted on our website ([www.nova.edu/nursing/rntomsn](http://www.nova.edu/nursing/rntomsn)). A Health Professions Division general access fee of $145 is required each year. An NSU student services fee of $1,050 is also required annually.

All tuition and fees are subject to change by the board of trustees without notice.
NUR 3030 Health Assessment 3
NUR 3031 Pathophysiology 3
NUR 4151 Population Health: Promotion, Prevention, and Disease Management 4
NUR 4161 Genetic Concepts 2
NUR 4171 Nursing and Health Care Trends 3
NUR 4175 Transition to Graduate Studies 9
NSG 5000 Advance Nurse Role 3
NSG 5101 Advanced Theory and Research 3

Total Nursing Credits Completed at NSU 36

Term V Semester Hours
NSG 5111 Evidence and Practice 3
NSG 5270 Informatics and Data Analysis 3

Term VI Semester Hours
NSG 5130 Health Care Policy 3
Specialty Course 1 3

Term VII Semester Hours
Specialty Course 2 3
Specialty Course 3 3

Term VIII Semester Hours
Specialty Course 4 3
Specialty Course 5 3

Term IX Semester Hours
Specialty Course 6 6
Specialty Practicum 3

Total B.S.N. Degree Requirements 121
Total M.S.N. Degree Requirements 30**
Total R.N. to M.S.N. Degree Requirements 151

General education courses may be completed at any accredited community college or university. Cognate and nursing courses must be completed at NSU.

*Credit with R.N. license
**See M.S.N. web page for course requirements.
Course Descriptions

NUR 3000—Transition to Baccalaureate Nursing Education for Registered Nurses
This course is designed to assist the registered nurse as an adult learner to make the transition to the university setting and the role of the nursing student. Students will be introduced to computer skills that will facilitate success in achieving their educational goals at NSU and will receive explanations of how the application of these skills can be used in nursing practice. These computer skills will include foundational concepts of information technology, Microsoft Office, and how to access the NSU online library databases and resources to support evidence-based practice. In addition, students will be introduced to the concepts of the American Psychological Association (APA) and scholarly writing. Emphasis is placed on the development of the knowledge and competencies in computer technology that are necessary for registered nurses in education and health care. The class will involve active participation in cooperative group activities as well as individualized activities. (3 credits)

NUR 3013—Transition to Professional Nursing
This course focuses on the role transition to professional nurse as provider of care, manager of care, and member of the profession. Students will explore the history of nursing and how society views the nursing profession. Ethical and legal principles guiding the nursing profession are introduced. (3 credits)

NUR 3030—Health Assessment
This course emphasizes the knowledge, skills, and competencies necessary to complete a health assessment for clients across the life span. It analyzes the concepts of health assessment methodology, which include interviewing, history taking, and physical assessment. Students will be expected to utilize assessment skills in identifying pertinent data as it relates to evidence-based health promotion and health education strategies. (3 credits)

NUR 3031—Pathophysiology
This course focuses on the pathogenesis of selected diseases leading to alterations of body structure and functions across the life span. This is emphasized through case study review that includes discussing and applying cell structure, function, and genetic control and its impact on the disease process. The student will integrate and apply pathophysiological concepts to client care in the development of primary, secondary, and tertiary interventions to attain, maintain, and retain the health state. Contemporary treatment, legal and ethical issues, and health promotion concepts pertaining to pathophysiological disorders will be explored. (3 credits)

NUR 4171—Nursing and Health Care Trends
This course explores contemporary trends in health care delivery systems and professional nursing practice. Students will integrate knowledge from previous courses, further exploring health care system quality and safety, evidence-based practice, technology, informatics, and the nurse's role in today's health care delivery system. This course examines the relationships between quality of care, cost of care, and safety, as well as the regulatory effects on patient care and cost. Students will develop skills to address relevant issues within today's health care delivery system. Trends in health care informatics are explored and the effects of nursing informatics on communication and safety will be analyzed. (3 credits)

NUR 4151—Population Health: Promotion, Prevention, and Disease Management
This course is designed to prepare the practicing registered nurse to utilize evidenced-based health promotion, health prevention, and disease management as they apply to diverse individuals, families, groups, communities, and populations. Essential concepts of epidemiology, community-based assessment and evaluation, equity, vulnerable populations, and community resources are introduced. This course leads to an increased understanding of the relationships related to sociocultural contexts, ethics, and health/illness beliefs and practices. Students will demonstrate an ability to facilitate health care delivery to populations of diverse cultures using effective communication skills that include negotiation, problem-solving skills, and collaboration with various interprofessional health care teams. (4 credits)

NUR 4161—Genetic Concepts
This course will focus on building upon the previous experience and knowledge of the practicing registered nurse to develop a further understanding of genetics and its role in pathophysiology and the diagnosis and management of disease. Students will be introduced to basic concepts in human genetics that contribute to an understanding of nursing or related health care problems and will apply knowledge of inheritance and immunogenetics in predicting the possible effect of genetics on disease processes. This course will analyze the ethical, social, political, and economic impact of selected genetic diseases, DNA-based genetic diagnoses, and gene therapy. (2 credits)
NUR 4175—Transition to Graduate Studies
This course prepares the student for the transition into graduate nursing studies. It incorporates evidence-based research and various theories that may be utilized to enhance nursing practice. Students will be introduced to concepts and theories of leadership and business, relating these to nursing practice. Ethical and legal issues pertinent to graduate nurse practice environments will be explored. This course will provide an overview of the skills required to be successful as a leader in today's health care environment. (9 credits)

NSG 5000—Advanced Nurse Role
This course introduces the R.N. to the advanced nurse role as leader, collaborator, change agent, advocate for population health, and scholar. Theories of leadership, change, and decision making are explored and applied to health care delivery situations. Issues affecting population health, including communication, collaboration, information management, diversity, and ethics are examined. Students are introduced to the importance of scholarship in the advanced roles of nursing. (3 credits)

NSG 5101—Theory and Research
This course examines the relationship of theory to research and practice and the use of data as a basis for decision making. Various approaches to the research process are explored. Ethical considerations in research are presented. (3 credits)

Graduate Nursing Program
Master of Science in Nursing (M.S.N.)—Nonclinical

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 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 4900 (Bridge Course in Nursing Concepts) 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: education, health systems leadership, and nursing informatics.

The M.S.N. education concentration prepares nurses for career paths in staff development, vocational-technical, or community college education. This degree serves as a foundation for doctoral study for those interested in teaching in B.S.N. or higher programs. All students in M.S.N. concentrations take 15 semester hours of core foundational nursing courses online. An additional 21 semester hours of coursework in health systems leadership are taught by nursing department faculty members with advanced preparation and extensive experience in education. Thus, a total of 36 semester hours are required to complete the M.S.N. education concentration; however, additional elective courses may be taken by students with special interests.

The M.S.N. health systems leadership concentration is designed for the future working nurse executive. This concentration allows the student to meet professional aspirations and organizational commitments to accreditation, magnet status, and personal goals. All students in M.S.N. concentrations take 15 semester hours of core foundational nursing courses online. An additional 21 semester hours of coursework in health systems leadership are taught by nursing department faculty members with advanced preparation and extensive experience in health systems and systems thinking. Thus, a total of 36 semester hours are required to complete the M.S.N. health systems leadership concentration.

The M.S.N. nursing informatics concentration is designed for those nurses interested in the field of nursing computer technology and information science. This concentration allows the student to examine the role of nursing informatics competencies and the professional standards on nursing practice. All students in M.S.N. concentrations take 15 semester hours of core foundational nursing courses online. An additional 21 semester hours of coursework in nursing informatics are taught by faculty members with advanced preparation and extensive experience in management and health and nursing informatics. Thus, a total of 36 semester hours are required to complete the M.S.N. nursing informatics concentration.
Admissions Requirements for Fall 2015
Prospective students for the nonclinical Master of Science in Nursing are selected for admission based on application content, academic record, professional nursing licensure, and evaluation forms.

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 and a nursing degree that is accredited by the Accreditation Commission for Education in Nursing (ACEN) [formerly National League for Nursing Accrediting Commission (NLNAC)] or the Commission on Collegiate Nursing Education (CCNE)
• a B.S./B.A. GPA of 3.0 on a 4.0 scale
• current, active, unencumbered U.S. nursing licensure (If applicant does not hold this license, the applicant’s license must be approved by the nursing department chair and the dean of the College of Nursing.)
• completion of a college-level statistics course (from a mathematics department) with a grade of C or better

Students who enter the M.S.N. program without a B.S.N. will be required to enroll in NSG 4900 (Bridge Course in Nursing Concepts) in the first semester of admission to the M.S.N. program. This course is only offered in the fall term.

Application Procedures for Fall 2015 and Winter 2016
Submit all applications and transcripts by August 1 for consideration for the August entering class and by December 1 for consideration for the January entering class.

1. send signed application form, a writing sample, two evaluation (reference) forms, and a nonrefundable application fee of $50 to
   Nova Southeastern University
   Enrollment Processing Services
   College of Nursing, Office of Admissions
   3301 College Avenue, P.O. Box 299000
   Fort Lauderdale, Florida 33329-9905

2. have official transcripts from each college and university attended sent directly to the EPS from the school attended

3. submit proof of current, active, Florida professional nursing (R.N.) licensure from the jurisdiction of the practicum (Licensure must remain current throughout the program.)

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
   www.wes.org

• Josef Silny & Associates, Inc.
   7101 SW 102nd Avenue
   Miami, Florida 33173
   (305) 273-1616
   (305) 273-1338 fax
   www.jsilny.com

• Educational Credential Evaluators, Inc.
   P.O. Box 514070
   Milwaukee, Wisconsin 53203-3470
   (414) 289-3400
   www.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 Nursing Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

Application Procedures for Winter 2016
Beginning July 1, 2015, the Nonclinical M.S.N. program will be participating in the centralized application service NursingCAS. NursingCAS application information may be obtained

• online at www.nursingcas.org

• by calling NursingCAS at (617) 612-2880

The deadline to complete and submit the NursingCAS application will be June 1 for fall admission and November 1 for winter admission.

Send all supporting documents to NursingCAS. All official college transcripts from undergraduate, graduate, and professional institutions attended must be sent to NursingCAS directly from the institutions attended.

Send all transcripts to

NursingCAS
P.O. Box 9201
Watertown, Massachusetts 02471
Tuition and Fees
Tuition for academic year 2015–2016 is $660 per credit hour. Tuition for 2016–2017 will subsequently be posted on our website (www.nova.edu/nursing/msn). An NSU student services fee of $1,050 is required annually. A Health Professions Division general access fee of $145 is also required each year. All tuition charges and fees are subject to change by the board of trustees without notice.

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 on registration day, but is nonrefundable in the event of a withdrawal. It is payable within two weeks of an applicant’s acceptance.

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 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 must complete all core M.S.N. nursing courses prior to enrolling in specialty nursing courses.

Curriculum Outline

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 5000 Advanced Nurse Role</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5101 Theory and Research</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5111 Evidence and Practice</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5270 Information Management and Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5130 Health Care Policy</td>
<td>3</td>
</tr>
<tr>
<td>Total Core Credits</td>
<td>15</td>
</tr>
</tbody>
</table>
In addition to the core M.S.N. courses, the following courses are required to complete the M.S.N. Education concentration:

<table>
<thead>
<tr>
<th>M.S.N. Education Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 5300 Nursing Curriculum Development</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5370 Introduction to Educational Concepts</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5380 Educational Concepts 1: Principles of Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5390 Educational Concepts 2: Technology</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5345 Foundations for Clinical Decision Making</td>
<td>6</td>
</tr>
<tr>
<td>NSG 5360 Nurse Educator Practicum</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Education Credits</strong></td>
<td><strong>21</strong></td>
</tr>
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</table>

In addition to the core M.S.N. courses, the following courses are required to complete the M.S.N. Health Systems Leadership concentration:

<table>
<thead>
<tr>
<th>M.S.N. Health Systems Leadership Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 5230 Nursing Decision Making in Complex Health Systems</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5240 Nursing Governance and Resource Management in Complex Health Systems</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5340 Nursing Leadership Roles in Complex Health Systems</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5250 Fiscal Management in Complex Health Systems</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5460 Quality Initiatives: Transforming Care</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5471 Business and Economics of Health Care</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5490 Health Systems Leadership Nursing Practicum I</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Health Systems Leadership Credits</strong></td>
<td><strong>21</strong></td>
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</tbody>
</table>

In addition to the core M.S.N. courses, the following courses are required to complete the M.S.N. 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 5180 Human-Computer Interaction in Health Care Settings</td>
<td>3</td>
</tr>
<tr>
<td>MI 5121 Information Systems Leadership Project Management in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MI 6410 Consumer Health Informatics</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>
<tr>
<td><strong>Total Nursing Informatics Credits</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>
Master of Science in Nursing—Advanced Practice Registered Nurse, Family Nurse Practitioner and Gero-Adult Acute Care Nurse Practitioner Programs

The Master of Science in Nursing (M.S.N.)—Advanced Practice Registered Nurse (A.P.R.N.) program, preparing students to apply for certification as a Family Nurse Practitioner (FNP) or a Gero-Adult Acute Care Nurse Practitioner (GAACNP), is a face-to-face/hybrid degree program for graduates of Bachelor of Science programs with majors in nursing or other fields. Students who hold Registered Nurse (R.N.) licensure who enter the M.S.N. program without a B.S.N. degree will be required to enroll in NSG 4900 (Bridge Course in Nursing Concepts) in their first semester of admission to the M.S.N. program. This course is only offered in the fall term.

The M.S.N.—A.P.R.N., Family Nurse Practitioner program prepares nurses for careers as family nurse practitioners. The 15 credits for the M.S.N. core courses will be offered online. The FNP courses (37 credits) will be offered at NSU’s Palm Beach Campus in a face-to-face/hybrid format.

The M.S.N.—A.P.R.N., Gero-Adult Acute Care Nurse Practitioner program prepares nurses for careers as gero-adult acute care nurse practitioners. The 15 credits for the M.S.N. core courses will be offered online. The GAACNP courses (36 credits) will be offered at NSU’s Palm Beach Campus in a face-to-face, executive model format (one weekend per month).

Admissions Requirements for Fall 2015 and Winter 2016 Entering Classes

Prospective Master of Science in Nursing students are selected for admission based on application content, academic record, professional nursing licensure, active clinical experience, and references.

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 and a nursing degree that is accredited by the Accreditation Commission for Education in Nursing (ACEN) [formerly National League for Nursing Accrediting Commission (NLNAC)] or the Commission on Collegiate Nursing Education (CCNE)

• a B.S./B.A. GPA of 3.0 on a 4.0 scale* (If the applicant has an associate’s degree and a B.S.N. degree, the GPA of the two degrees will be averaged.)

• completion of a college-level statistics course (from a mathematics department) with a grade of C or better

• current, active state of Florida nursing licensure (This license must remain active, without discipline, throughout the program.)

• three years active, current R.N. clinical experience (direct patient care)

• a CV/resume

*Students who are accepted to the M.S.N. program without a B.S.N. will be required to enroll in NSG 4900 (Bridge Course in Nursing Concepts) in the first semester of admission to the M.S.N. program. This course is only offered in the fall term.

Application Procedures for Fall 2015

1. Complete an online application at www.nova.edu/nursing. The application will include a nonrefundable, $50 application fee.

2. Submit all applications and transcripts by July 1 for consideration for the August entering class and by November 1 for consideration for the January entering class.

3. Submit official college or diploma-based transcripts of all completed coursework and all recommendation forms to the NSU Enrollment Processing Services. It is the responsibility of the applicant to ensure that arrangements are made for these transcripts to be sent to the address following. Applications will not be reviewed until official transcripts are received.

Nova Southeastern University
Enrollment Processing Services
College of Nursing
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905

4. submit proof of current, active, Florida professional nursing (R.N.) licensure from the jurisdiction of the practicum (Licensure must remain current throughout the program.)

5. 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
  www.wes.org

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com
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 Nursing, Office of Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

6. Two recommendation forms must be completed by individuals other than relatives. (It is suggested that one letter be from a faculty member who can attest to the potential success of the student in the A.P.R.N. program and one be from the current employer.) Have accurate contact information for these individuals ready to be entered online during the application process.

Application Procedures for Winter 2016
Beginning July 1, 2015, the M.S.N.—A.P.R.N. program will be participating in the centralized application service NursingCAS. NursingCAS application information may be obtained

- online at www.nursingcas.org
- by calling NursingCAS at (617) 612-2880

The deadline to complete and submit the NursingCAS application will be June 1 for fall admission and November 1 for winter admission.

Send all supporting documents to NursingCAS. All official college transcripts from undergraduate, graduate, and professional institutions attended must be sent to NursingCAS directly from the institutions attended.

Send all transcripts to
- NursingCAS
- P.O. Box 9201
- Watertown, Massachusetts 02471

Tuition and Fees
Tuition for academic year 2015–2016 is $665 per credit hour. Tuition for 2016–2017 will subsequently be posted on our website (www.nova.edu/nursing/msn). An NSU student services fee of $1,050 is required annually. A Health Professions Division general access fee of $145 is also required each year. All tuition charges and fees are subject to change by the board of trustees without notice.

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 on registration day, but is nonrefundable in the event of a withdrawal. It is payable within two weeks of an applicant's acceptance.

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 must complete all core M.S.N. nursing courses prior to enrolling in specialty nursing courses.

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. degree, all students must fulfill the following requirements:

- successfully complete a minimum of 36 semester hours of coursework (for the M.S.N. specialty concentrations of nursing education, health systems leadership, and nursing informatics) or 52 semester hours (for the family nurse practitioner or gero-adult acute care nurse practitioner programs)
- 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 Role</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 5270</td>
<td>Information Management and Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>NSG 5130</td>
<td>Health Care Policy</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Core Credits 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/Differential Diagnosis</td>
<td>4 (3 theory/1 practicum)</td>
</tr>
<tr>
<td>NSG 5501‡</td>
<td>Suture Workshop</td>
<td>1</td>
</tr>
<tr>
<td>NSG 5510‡</td>
<td>Advanced Pharmacology</td>
<td>4</td>
</tr>
<tr>
<td>NSG 5522‡</td>
<td>Family Nursing: Theory, Research, and Practice</td>
<td>2</td>
</tr>
<tr>
<td>NSG 5531</td>
<td>Advanced Pathophysiology</td>
<td>4</td>
</tr>
<tr>
<td>NSG 5542*‡</td>
<td>Primary Care: Adult I</td>
<td>5 (3 theory/2 practicum)</td>
</tr>
<tr>
<td>NSG 5550*‡</td>
<td>Primary Care: Adult II</td>
<td>5 (3 theory/2 practicum)</td>
</tr>
<tr>
<td>NSG 5560*‡</td>
<td>Primary Care: Women</td>
<td>3 (2 theory/1 practicum)</td>
</tr>
<tr>
<td>NSG 5570‡</td>
<td>Mental Health Across the Life Span</td>
<td>2</td>
</tr>
<tr>
<td>NSG 5580*‡</td>
<td>Primary Care: Pediatrics/Family</td>
<td>3 (2 theory/1 practicum)</td>
</tr>
<tr>
<td>NSG 5590*‡</td>
<td>Family Nurse Practitioner Preceptorship</td>
<td>4 (2 theory/2 practicum)</td>
</tr>
</tbody>
</table>

**Total Advanced Practice Registered Nurse Credits 37**

In addition to the core M.S.N. courses, the following courses are required to complete the M.S.N.—Advanced Practice Registered Nurse, Gero-Adult Acute Care Nurse Practitioner program:

#### M.S.N.—Advanced Practice Registered Nurse, GAACNP

<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 I</td>
<td>4</td>
</tr>
<tr>
<td>NSG 5510</td>
<td>Advanced Pharmacology I</td>
<td>4</td>
</tr>
<tr>
<td>NSG 5502</td>
<td>Advanced Health Assessment/Differential Diagnosis (60 hrs.)</td>
<td>4</td>
</tr>
<tr>
<td>NSG 5570</td>
<td>Mental Health Across the Life Span</td>
<td>2</td>
</tr>
<tr>
<td>NSG 5620</td>
<td>Gero-Adult Acute Care I (120 hrs.)</td>
<td>5</td>
</tr>
</tbody>
</table>
NSG 5630  Gero-Adult Acute Care Procedural I  2
NSG 5640  Gero-Adult Acute Care II (120 hrs.)  5
NSG 5650  Gero-Adult Acute Care III (120 hrs.)  5
NSG 5660  Gero-Adult Acute Care Integration Practicum (120 hrs.)  5

Total GAACNP Education Credits  36

*60 practicum hours earned for each practicum semester hour taken
‡This course has prerequisites.

Course Descriptions

NUR 4900—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 Role
This course introduces the R.N. to the advanced nurse role as leader, collaborator, change agent, advocate for population health, and scholar. Theories of leadership, change, and decision making are explored and applied to health care delivery situations. Issues affecting population health—including communication, collaboration, information management, diversity, and ethics—are examined. Students are introduced to the importance of scholarship in the advanced roles of nursing. (3 semester hours)

NSG 5101—Theory and Research
This course examines the relationship of theory to research and practice and the use of data as a basis for decision making. Various approaches to the research process and the use of evidence in nursing practice are explored. Ethical considerations in research are presented. (3 semester hours)

NSG 5111—Evidence and Practice
This course focuses on the development, acquisition, evaluation, and use of interdisciplinary evidence in nursing practice, while incorporating strategies for protection of human subjects. Methods of disseminating evidence to improve practice outcomes are explored. (3 semester hours)

NSG 5130—Health Care Policy
This course focuses on providing present and future nurse leaders with an understanding of health policy, finance, and legislation on health care. Political advocacy and the health policy change process will be explored. (3 semester hours)

NSG 5230—Nursing Decision Making in Complex Health Care Systems
This course provides the student with an opportunity to utilize models, processes, and theoretical frameworks of decision making as a foundation for leadership activities in complex health care systems. Internal and external factors impacting decision making will be explored and analyzed. The influence of systems thinking, trend analysis, data, evidence quality, and interpersonal collaboration is examined. Ethical considerations of decision making are evaluated. (3 semester hours)

NSG 5240—Nursing Governance and Resource Management in Complex Health Systems
This course focuses on the perspective of nursing governance from a global to a unit level. Governance models, human resource management, work environments, and best practices related to health systems leadership are explored. Self-governance models and human resource strategies in the practice environments are designed and applied. Ethical and legal issues related to governance and resource management are included. (3 semester hours)

NSG 5250—Fiscal Management in Complex Health Systems
This course focuses on fiscal management impacting nursing practice and health care delivery. Students will develop foundational knowledge applicable to fiscal management and develop strategies to improve decision
making. Students will apply fiscal management principles to a current issue. The relationship between fiscal and ethical responsibility is examined. (3 semester hours)

**NSG 5270—Information Management and Data Analysis**
This course provides the student with an opportunity to examine various health care informatics theories and policies related to the entire implementation process of information systems in a complex health care system. During the course, students will apply concepts learned to the ethical use of data, information, and knowledge in clinical practice and research. Students will also analyze the critical elements in the life cycle of information and patient-care technology systems. (3 semester hours)

**NSG 5300—Nursing Curriculum Development**
This course focuses on the process of curriculum development. Accreditation standards, trends in professional nursing practice, and economic and policy issues are analyzed within the context of curriculum development and program evaluation. Selected nursing and educational theories, educational research, principles, and techniques of curriculum development are 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 5345—Foundations for Clinical Decision Making**
This course builds on basic concepts of health assessment, pathophysiology, and pharmacotherapeutics. Physiologic changes, clinical manifestations, and drug therapy are integrated. Emphasis is on critical analysis of collected assessment data to support clinical decision making. This course provides the educator with the knowledge used when teaching learners clinical decision making. (6 semester hours)

**NSG 5360—Nurse Educator Practicum**
This course provides an opportunity for students to analyze, synthesize, and utilize all prior courses in an educational environment. Students are mentored by preceptors who are experienced in educational roles in various settings. (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. Ethical considerations of instruction are included. (3 semester hours)

**NSG 5380—Educational Concepts I: Principals of Evaluation**
This course builds on the educational concepts introduced in NSG 5370. Students apply principles of evaluation to the learning outcomes developed in that course. Methods to assess and evaluate learning outcomes in various educational environments are explored. Evidence-based educational research that supports evaluation is explored. Legal and ethical concepts impacting evaluation are discussed. (3 semester hours)

**NSG 5390—Educational Concepts II: Technology**
This course assists students in synthesizing the educational concepts in the design and evaluation of courses and curricula. Instructional strategies related to the clinical setting are explored. Methods of evaluation of learning outcomes are developed. (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 trending 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 5490—Health Systems Leadership Practicum**
This course provides an opportunity for the student to analyze, synthesize, and utilize all content from prior courses in a nursing leadership environment. Students are mentored by preceptors who are experienced in leadership roles in complex health systems. (3 semester hours)

**NSG 5502—Advanced Health Assessment/Differential Diagnosis**
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 prevention and population health are incorporated into the assessment process. Assessment
NSG 5501—Suture Workshop
This course covers principles and techniques related to the management of lacerations and bites wounds. Topics include wound assessment, mechanism of injury, normal wound healing, cleansing and irrigation, instruments and suture materials, special anatomic sites, alternative closures, tetanus and antibiotic prophylaxis, and suture removal. There is an on-site practice lab for suturing. **Prerequisite:** NSG 5510 (1 semester hour)

NSG 5510—Advanced Pharmacology I
This course focuses on the use of pharmacotherapeutics across the life span. Medications used to treat and manage common illnesses and conditions are emphasized. Content includes indication, selection, adverse effects, and alternatives to medication therapy with the goal of the safe and effective prescription of pharmaceutical and alternative therapeutic agents for health maintenance, disease prevention, and management for individuals. The current health status, ethnic/racial origins, socioeconomic status, cultural/spiritual implications, gender, and changes that occur across the life span are addressed. Clinical decision-making, client education, and review of laws governing prescriptive authority for the advanced practice nurse are also emphasized. **Prerequisite:** NSG 5531 (4 semester hours)

NSG 5522—Family Nursing: Theory, Research, and Practice
This course examines the family structure, function, and process. Various theoretical frameworks and models are explored. Psychosocial, cultural, economic, gender, and spiritual variables and their impact on family life are analyzed. The domains and core competencies of nurse practitioner practice are introduced. **(2 semester hours)**

NSG 5531—Advanced Pathophysiology I
This course focuses on the pathophysiological concepts that serve as a primary component 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. **(4 semester hours)**

NSG 5542—Primary Care: Adult I
This course focuses on the development of the domains and competencies of the FNP providing evidence-based health care for culturally/spiritually diverse adults and their families in the primary care setting. Concepts of advanced health assessment, pharmacology, and pathophysiology are incorporated in the multidisciplinary management of routine, chronic, and acute health problems in this population. **Prerequisite:** NSG 5502 **(5 semester hours: 3 theory, 2 practicum)**

NSG 5550—Primary Care: Adult II
This course focuses on the development of the domains and competencies of the FNP, providing evidence-based health care for culturally/spiritually diverse older adults 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 5542 **(5 semester hours: 2 theory, 1 practicum)**

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: 2 theory, 1 practicum)**

NSG 5570—Mental Health Across the Life Span
This course focuses on common mental health issues and counseling strategies relevant in the primary care setting. 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. **Prerequisite:** NSG 5502 **(2 semester hours)**

NSG 5580—Primary Care of Infants, Children, and Adolescents
This course focuses on the development of the domains and competencies of the FNP, providing evidence-based health care for culturally/spiritually diverse infants, children, and adolescents 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: 2 theory, 1 practicum)**

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. **(4 semester hours: 2 theory, 2 practicum)**

NSG 5600—Nursing Informatics Practicum
This course provides students with the opportunity to perform the role and function of a 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 provides students with the opportunity to
complete an additional 50 hours of supervised practicum
experience in order to be eligible to sit for the ANCC
informatics certification examination. (2 semester hours)

NSG 5620—Gero-Adult Acute Care I
This course focuses on the development of the domains
and competencies of the gero-adult acute care nurse
practitioner in providing evidence-based health care for
culturally/spiritually diverse adults in acute or specialty
care settings. Concepts of advanced pathophysiology,
advanced pharmacology, and advanced health assessment
are incorporated in the multidisciplinary management
of unstable acute and chronic health problems in this
population. Content of the course will address health
problems including infections; fever; fluid, electrolyte,
and acid-base imbalances; and management of rapidly
changing situations such as shock and drug toxicities, as
well as altered mental states, wound management, and
palliative care. (5 semester hours)

NSG 5630—Gero-Adult Acute Care Procedural I
This course focuses on developing novice clinical
competency in the performance and evaluation of selected
skills and procedures most frequently encountered by an
acute care nurse practitioner in caring for an acutely ill,
unstable, adult patient. (2 semester hours)

NSG 5640—Gero-Adult Acute Care II
This course focuses on the development of the domains
and competencies of the gero-adult acute care nurse
practitioner in providing evidence-based health care for
culturally/spiritually diverse adults in acute or specialty
care settings. Concepts of advanced pathophysiology,
advanced pharmacology, and advanced health assessment
are incorporated in the multidisciplinary management
of unstable acute and chronic health problems in this
population. Content of the course will address health
problems including pulmonary, cardiovascular,
endocrine, musculoskeletal, and autoimmune diseases and
immunosuppression. (5 semester hours)

NSG 5650—Gero-Adult Acute Care III
This course focuses on the development of the domains
and competencies of the gero-adult acute care nurse
practitioner in providing evidence-based health care for
culturally/spiritually diverse adults in acute or specialty

College of Nursing—Master of Science in Nursing 501
utilized in many areas of clinical medicine, nursing, pharmacy, health care administration, and research. This course introduces students to statistical and theoretical concepts underlying modern medical decision making, including Bayesian analysis. It then reviews the multiple methods for knowledge generation for CDSS systems. The course provides hands-on experience to students in performing Bayesian analysis of clinical problems and building and annotating computer-interpretable guidelines (CIGs). Current implementations of stand-alone and integrated CDSS will be evaluated. Techniques for planning and evaluation of CDSS implementation will be reviewed. Human factors, including work-flow integration and the ethical, legal, and regulatory aspects of CDSS use will be explored. (3 semester hours)

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 semester hours)

MI 6410—Consumer Health Informatics
This course provides an introduction to consumer health informatics and web 2.0 applications used in health care. It explores the development of consumers as ePatients and tools such as patient-controlled electronic health records, as well as the fluid nature of web 2.0 in medicine. Students will learn from a combination of lectures and a hands-on approach of interacting directly with the tools and technologies discussed. (3 semester hours)

Doctor of Nursing Practice (D.N.P.)

The Doctor of Nursing Practice (D.N.P.) program at Nova Southeastern University (NSU) courses are offered entirely online. The curriculum builds on the foundation established in a master's degree program 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. The program utilizes a scholarly approach to nursing science and is considered a terminal degree for the discipline. Students engage in class work and practicum experiences that culminate in the D.N.P. capstone project. Faculty members work directly with students to achieve their individual professional nursing goals. Graduates are prepared to lead and engage in practical, clinically focused scholarship and evidence-based practice research utilization.

Admissions Requirements
Admission to the D.N.P. requires

• a master's degree in nursing or a related field from a regionally accredited or internationally accredited school (The M.S.N. degree nursing program must be accredited by the National League of Nursing Accrediting Commission [NLNAC] or the Commission on Collegiate Nursing Education [CCNE].)
• a minimum master's degree GPA of 3.0 on a 4.0 scale
• current U.S. registered nurse licensure with no restrictions
• two reference forms from individuals (other than relatives) such as academic advisers, professors, clinical or nonclinical supervisors, or community associates
• a writing sample (instructions on following page)
• a CV/resume

Transfer Credits
No more than 6 graduate credits may be transferred into the D.N.P. program from other Ph.D. in nursing or D.N.P. programs. Courses will be evaluated by the program director and the associate dean on an individual basis for credit toward the D.N.P. 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 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.
Application Procedures for Fall 2015 and Winter 2016 Entering Classes

Beginning October 15, 2014, the D.N.P. program will be participating in the centralized application service NursingCAS.

1. The NursingCAS application information may be obtained
   • online at www.nursingcas.org
   • by calling NursingCAS at (617) 612-2880

The deadline to complete and submit the NursingCAS application will be July 15 for fall admission and December 1 for winter admission.

2. Send supporting documents to NursingCAS.
   a. All official college transcripts from undergraduate, graduate, and professional institutions attended must be sent to NursingCAS directly from the institutions attended.
   Send all transcripts to
   NursingCAS
   P.O. Box 9201
   Watertown, Massachusetts 02471
   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, New York 10274-5087
     (212) 966-6311
     www.wes.org
   • Josef Silny & Associates, Inc.
     7101 SW 102nd Avenue
     Miami, Florida 33173
     (305) 273-1616 • (305) 273-1338 fax
     www.jsilny.com
   • Educational Credential Evaluators, Inc.
     P.O. Box 514070
     Milwaukee, Wisconsin 53203-3470
     (414) 289-3400
     www.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. Two evaluations/references must be completed by individuals other than relatives (suggested sources are professors, academic advisers, clinical or nonclinical supervisors, or community associates) and sent directly to NursingCAS.
   d. Submit a writing sample (use APA 6th edition formatting, including headings for each section) directly to NursingCAS. Include the following information in your statement:
     Doctor of Nursing Practice
     Discuss a problem or issue you see in your professional practice today that needs to be addressed from a D.N.P. perspective. (250 words—using APA 6th ed.)
     Goals
     Discuss your personal and professional goals related to the D.N.P.
   e. Submit a current curriculum vitae/resume.

3. Once the NursingCAS application is completed, applicant will need to complete an NSU supplemental application, which is available online. The deadline to complete and submit the supplemental application will be August 1 for fall admission and December 10 for winter admission. The Office of Admissions works on a rolling basis. Applications are accepted year-round.

4. Submit official documentation of all supervised, postbaccalaureate practice hours from a regionally accredited or internationally accredited school to

   Nova Southeastern University
   D.N.P. Program Director
   11501 North Military Trail
   Palm Beach Gardens, Florida 33410-6507

   Documentation must be from the program director of the previous postbaccalaureate program and include the following information on university letterhead:
   • date
   • applicant’s full name
   • university name and department
   • contact information for follow up, if necessary
   • program director’s signature
   • date and title of degree earned
   • specialization earned and total number of preceptor-verified clinical experience hours

Tuition and Fees
Tuition for academic year 2015–2016 is $865 per semester hour. The NSU service fee of $1,050 per year applies and is pro-rated for part-time students. A Health Professions Division general access fee of $145 is also required each year. Tuition for 2016–2017 will subsequently be posted on our website (www.nova.edu/nursing/dnp).

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.

All tuition charges and fees are subject to change by the board of trustees without notice.

### 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

### Curriculum Outline

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 7120 Health Care Policy</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7131 Epidemiology and Population Health</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7135 Health Care Information Systems and Outcomes Management</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7300 Roles, Collaboration, and Communication</td>
<td>3</td>
</tr>
<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>
<td>3</td>
</tr>
<tr>
<td>NSG 7430 Capstone I: Mentored Scholarship*</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7440 Capstone II: Project Plan*</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7441 Capstone III: Implementation*</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7450 Capstone IV: Evaluation*</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7500 Translating Evidence for Clinical Practice</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7300 Biostatistics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Minimum Total Credits** 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-emersion courses that help students become experts in a practice field while the capstone project is carried out. They require a minimum of 125 hours of practice emersion.

D.N.P. graduates are required to complete 1,000 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 capstone hours in order to meet the 1,000-hour requirement. Students may enroll in NSG 7442: Capstone Continuing Matriculation until required hours are completed. All but 125 of the required 1,000 clinical hours must be completed prior to starting NSG 7450.

If an applicant is an R.N. or B.S.N. with a master's degree in another health-related field, he or she may enroll in a transitional course, NSG 7299, 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.
Course Descriptions

NSG 7120—Health Care Policy
This course provides students with an understanding of health policy as it relates to health care delivery and nursing practice. Students will analyze public and health policy environments and processes at the local, state, national, and international levels. Students will explore the role of educational, political, and organizational health care leaders in the change process and in the formation of health care policy decisions. (3 semester hours)

NSG 7131—Epidemiology and Population Health
This course provides the student with a foundation in clinical prevention and population health. Students will be introduced to culturally proficient care in response to societal needs for improved health outcomes of individuals and populations. This course integrates clinical prevention, screening, behavior change, self-care, disease management, genetics, geriatrics, 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 evaluation and use of information systems technology in health care organizations. Students will explore processes used for collection, analysis, and tracking of quality and safety data. Students will learn information technology and research methods that collect appropriate and accurate data to generate evidence for practice. They will learn to inform and guide the design of databases to generate meaningful evidence for nursing practice. (3 semester hours)

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 master's degree in a field other than nursing 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. Students will complete 150 practicum hours. (6 semester hours)

NSG 7300—Roles, Collaboration, and Communication
This course focuses on key concepts related to the role of the Doctor of Nursing Practice in clinical and health care system settings. The nature and practice of biomedical, administrative, and population ethics, with an emphasis on the application of ethical and social justice frameworks for analysis and decision making for patients, systems, and populations experiencing ethical conundrums, is also discussed. Students identify topics for capstone projects. (3 semester hours)

NSG 7350—Leading in Complex Health Care Systems
This course focuses on principles of business, finance, economics, and leadership within health care systems. Students will investigate and analyze theories related to organizational behavior. They will also evaluate and integrate evidence-based practice to effect improvements in the dynamics of systems to better the delivery of health care. Emphasis is placed on using research to analyze the environment and to improve systems at the micro-, meso-, and macro-systems levels. The three major constructs of transformational leadership (self transformation, patient-centered transformation, and health systems transformation) will be explored related to health 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 Doctor of Nursing Practice. 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 also develop search strategies to answer questions related to a selected topic of interest. (3 semester hours)

NSG 7430—Capstone I: Mentored Scholarship
The cornerstone course will provide students with the tools and the support they require to conduct a scholarly literature review and to develop a clear statement of the problem. This course requires a minimum of 125 hours spent in clinical emersion. Clinical emersion objectives and activities are mutually developed by the student and faculty members and based on the standards and objectives provided by a professional nursing organization and certification exam, if available. Prerequisites: NSG 7300 and 500 documented clinical hours (3 semester hours)
NSG 7440—Capstone 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 the sponsoring facility. It requires a minimum of 125 hours spent in clinical emersion. Clinical emersion objectives and activities are mutually developed by the student and faculty members and based on the standards and objectives provided by a professional nursing organization and certification exam, if available. Prerequisite: NSG 7430 (3 semester hours)

NSG 7441—Capstone III: Implementation
This capstone 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 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. A minimum of 125 hours spent in clinical emersion is required. Clinical emersion objectives and activities are mutually developed by the student and faculty members and based on the standards and objectives provided by a professional nursing organization and certification exam, if available. Prerequisite: NSG 7440 (3 semester hours)

NSG 7442—Capstone Continuing Matriculation
This course may be repeated up to four times, based on the number of hours needed to complete the required 1,000 hours. Clinical emersion objectives and activities are mutually developed by the student and faculty members and based on the standards and objectives provided by a professional nursing organization and certification exam, if available. (3 semester hours)

NSG 7450—Capstone IV: Evaluation
This is the final component of the capstone experience. All but 125 of the required 1,000 clinical hours must be completed prior to starting NSG 7450. The course content, as in the other capstone experiences, 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 a mentor and faculty members, to complete the clinical project and analyze the scholarly written and oral report to 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. A minimum of 125 hours spent in clinical emersion is required. Clinical emersion objectives and activities are mutually developed by the student and faculty members and based on the standards and objectives provided by a professional nursing organization and certification exam, if available. Prerequisite: NSG 7441 (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 understand the tools to develop, implement, and evaluate evidence-based clinical and administrative programs in nursing and health care delivery systems. The course will culminate in a systematic review of a body of research relevant to a selected topic of interest. (3 semester hours)

HPH 7300—Biostatistics
This course focuses on inferential statistics for students interested in understanding quantitative research in the health sciences. It is designed to enable students to apply experimental-design models toward solving practical problems and improving the efficiency of formulating and providing health care services. This course will teach students to generate, interpret, and evaluate clinical, biomedical, and health care-services research. (3 semester hours)
Doctor of Philosophy in Nursing (Ph.D.)

The Doctor of Philosophy (Ph.D.) in Nursing is an online degree program for graduates of accredited Master of Science programs who have a major in nursing and who hold 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 semester hours of core courses. Courses within the nursing department 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. The Health Professions Division of NSU provides seven courses that are offered in an interprofessional format with the College of Nursing and the departments of Occupational Therapy, Physical Therapy, and Health Science.

For further information, call the College of Nursing at (954) 262-1983 or 800-356-0026, ext. 21983.

Admissions Requirements for Fall 2015

Entering Class
Prospective Ph.D. in Nursing students are selected for admission based on application content, academic record, professional nursing licensure, and evaluation forms.

Admission to the Ph.D. program requires

• current, active, unencumbered United States R.N. license (If applicant does not hold this license, the applicant’s license must be approved by the department chair and the dean of the College of Nursing.)

• completion of an M.S. or M.A. program with a major in nursing or an M.S.N. degree from a regionally accredited college or university with a National League of Nursing Accrediting Commission (NLNAC) or Commission on Collegiate Nursing Education (CCNE) program of nursing

• overall GPA of 3.5 in the candidate’s master’s or post-master’s degree program in nursing

Attendance is required at a mandatory, one-week summer institute that includes an orientation session. This summer institute is usually held the first week in June for all accepted students and students completing their first year.

Transfer Credits
No more than 6 graduate credits may be transferred into the Ph.D. program from other Ph.D. in Nursing or D.N.P. 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.

Application Procedures for Fall 2015

Entering Class

All applicants must

1. Complete an online application at www.nova.edu/nursing. The application will include a nonrefundable, $50 application fee.

2. Submit all documentation and fees by March 1 to be considered for admission.

3. Submit official college or diploma-based transcripts of all completed coursework and all recommendation forms to the NSU Enrollment Processing Services. It is the responsibility of the applicant to ensure that arrangements are made for these transcripts to be sent to the address below. Applications will not be reviewed until official transcripts are received.

   Nova Southeastern University
   Enrollment Processing Services
   College of Nursing
   3301 College Avenue, P.O. Box 299000
   Fort Lauderdale, Florida 33329-9905
4. Have two recommendation forms completed by individuals other than relatives (suggested sources are professors and academic advisers). Have accurate contact information for these individuals ready to be entered online during the application process.

5. 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 those here.

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

- Josef Silny & Associates, Inc.
  7101 SW 102nd Avenue
  Miami, Florida 33173
  (305) 273-1616
  (305) 273-1338 fax
  www.jsilny.com

- Educational Credential Evaluators, Inc.
  P.O. Box 514070
  Milwaukee, Wisconsin 53203-3470
  (414) 289-3400
  www.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 NSU's Enrollment Processing Services.

**Tuition and Fees**

Tuition for academic year 2015–2016 is $865 per credit hour. An NSU service fee of $1,050 is required annually. A Health Professions Division general access fee of $145 is also required each year. Tuition for 2016–2017 will subsequently be posted on our website (www.nova.edu/nursing/phd). All tuition charges 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 Ph.D. in Nursing Education 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.

Deposit Fee is $500. This is due July 1 for August admission and is nonrefundable in the event of a withdrawal.

**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

**Curriculum Outline**

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPH 7200 Bioethics and Ethical Issues in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7300 Biostatistics I</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7310 Biostatistics II</td>
<td>3</td>
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</tbody>
</table>

**Total Core Credits** 9
<table>
<thead>
<tr>
<th>Nursing Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 7000 Theory Development</td>
<td>3</td>
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<tr>
<td>HPH 7500 Philosophy of Science</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7120 Health Care Policy</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7230 Health Care Leadership</td>
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</table>

**Total Nursing Credits 12**

<table>
<thead>
<tr>
<th>Research Nursing Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPH 7400 Quantitative Research Design</td>
<td>3</td>
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<tr>
<td>HPH 7410 Qualitative Research</td>
<td>3</td>
</tr>
<tr>
<td>HPH 7600 Grant Writing and Publication</td>
<td>3</td>
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<tr>
<td>NSG 7210 Evidence-Based Evaluation</td>
<td>3</td>
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<tr>
<td>NSG 7310 Doctoral Seminar I</td>
<td>1</td>
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<tr>
<td>NSG 7320 Doctoral Seminar II</td>
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<tr>
<td>NSG 7330 Doctoral Seminar III</td>
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</table>

**Total Research Nursing Credits 15**

<table>
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<tr>
<th>Cognates</th>
<th>Semester Hours</th>
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<tbody>
<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>NSG 7220 Higher Education Leadership</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7240 Tests and Measurements</td>
<td>3</td>
</tr>
<tr>
<td>NSG 7250 Scholarship and Applied Research</td>
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</tbody>
</table>

**Total Cognate Credits 15**

<table>
<thead>
<tr>
<th>Dissertation</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSG 7340 Dissertation</td>
<td>9 (minimum)</td>
</tr>
</tbody>
</table>

**Total Credits 60 (minimum)**

There is an annual, on-campus, one-week residency requirement.
Course Descriptions

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 linkages among theory, research, and practice in the development of nursing knowledge are explored. This course prepares students to select a theoretical framework for testing in their dissertation. (3 semester hours)

NSG 7120—Health Care Policy
This online course provides present and future nurse leaders with an understanding of health policy as it relates to health care delivery and nursing practice. This course will analyze health policy environments and the rules, structure, and settings where policy is developed, as well as the political, economic, technological, national, and global environments within which each setting operates. The students will analyze the interaction of the primary health policy individuals or groups including the health care purchasers, health care providers, third-party payers, consumers, special interest groups, and professional organizations. Students will assess the atmosphere in which policy is created and how compromise and bargaining shape policy decisions. Throughout the course, current policy initiatives involving health care delivery and nursing will be analyzed. The role of educational, political, and organizational health care leaders in the change process and in the formation of health care policy decisions will be a theme throughout this course. (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 will be explored. Curricula will be analyzed within the context of accreditation standards and program evaluation process. 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 environments 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 online 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/professional nursing leadership development plan. (3 semester hours)

NSG 7240—Tests and Measurements
This course is designed to enhance the student's knowledge and application of sound measurement principles and practices for assessing learning outcomes and evaluating and conducting research in nursing education. Students will analyze the relationship between research, practice, and psychometric issues. The course will provide a theoretical and practical foundation for choosing tests and measurements data available to applied researchers. (3 semester hours)
NSG 7250—Scholarship and Applied Research
This course is designed to develop a professional trajectory for scholarship as a member of the nursing discipline. Fundamental to this scholarship is Boyer's Model of Scholarship and a plan for research in the specialty of nursing education. Course requirements will include assessments of self and organizational scholarship in order to develop a plan for future contributions to the discipline. (3 semester hours)

NSG 7310—Doctoral Seminar I
This course provides the student with an opportunity to examine the dissertation process. The course focuses on structure and design of a concept for Ph.D. dissertation research that includes peer/collegial review and scholarly discourse leading to a draft of chapter one of the proposal development. (1 semester hour)

NSG 7320—Doctoral Seminar II
This course provides the student with a continuation of the dissertation process. The course focuses on structure and design of Ph.D. dissertation research that includes chairperson review and scholarly discourse leading to proposal development. (1 semester hour)

NSG 7330—Doctoral Seminar III
This course provides an online comprehensive exams format and a continuation of the dissertation process. The course focuses on comprehensive exams and structure and design of Ph.D. dissertation research that includes chairperson review and scholarly discourse leading to proposal development. (1 semester hour)

NSG 7340—Dissertation
This course provides the student with the dissertation process. The course focuses on structure and design of Ph.D. dissertation research that includes dissertation chairperson and committee review from proposal development until the final defended dissertation. (minimum 9 semester hours)

NSG 7600—Grant Writing 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 4080—Basic Biostatistics
This course is a primer for basic statistical methods that students may need before taking the degree program course HPH 7300 Biostatistics I. It is also recommended for Ph.D. students who find that they are not adequately prepared for Biostatistics I. The course focuses on the fundamentals of the use, interpretation, and presentation of numerical information. Statistical topics include the use of frequency distributions, measures of central tendency and variability, statistical graphs and charts, correlation and regression, hypothesis testing, t-tests, ANOVA, and conclusions that can be drawn from each type of analysis. (3 semester hours)

HPH 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 to promote ethical awareness and enable students to derive better health care decisions, reducing the 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 semester hours)

HPH 7300—Biostatistics
First of a two-course sequence focusing on inferential statistics for students interested in understanding quantitative research in the health sciences. It is designed to enable students to apply experimental-design models toward solving practical problems and improving the efficiency of formulating and providing health care services. The prerequisite is an introductory-level statistics course taken recently. After successful completion, students will be able to match empirical research questions to statistical methods; apply hypothesis-testing models to experimental and quasi-experimental research questions; use appropriate probability distributions, including z, t, and F; estimate parameters with adequate confidence intervals; test hypotheses using a wide variety of statistical models; and use different versions of analysis of variance as applied to the health sciences. (3 semester hours)
HPH 7310—Biostatistics II
This is the second of a two-course sequence focusing on inferential statistics for students interested in conducting quantitative research in the health professions. It is designed to enable students to gather data and apply experimental-design models toward solving practical problems and improving the efficiency of formulating and providing health care services. The focus in this second course is to train students to generate; interpret; and evaluate clinical, biomedical, and health care services regression models. Prerequisite is successful completion of Biostatistics I (HPH 7300). After successful completion of this course, students will be able to conduct empirical research using statistical methods; apply bivariate and multivariate regression hypothesis-testing models to experimental and quasi-experimental research questions; evaluate the impact of regressors in functional relationships; estimate parameters with adequate confidence intervals; transform variables in ordinary least squares from linear to quadratic, cubic, logarithmic, and other expressions; and measure the effect of nonquantitative variables. (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 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 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 semester hours)

HPH 7410—Qualitative Research
This course will focus primarily on the knowledge and skill competencies you will need to conduct nursing education qualitative research successfully. In this pursuit, students will be immersed in the epistemological, theoretical, ethical, methodological, and procedural understanding of qualitative research, apply this knowledge to the conceptualization and conduct of nursing education 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 the student will have demonstrated that he or she has mastered the basic competencies needed to create, plan, and complete a nursing education qualitative research dissertation. (3 semester hours)

HPH 7500—Philosophy of Science
This online course covers schools of thought in philosophy of science. To address the need of laying the foundation for the generation and expansion of new professional knowledge that will guide evidence-based practice for the health professions, this course also covers topics on the acceptance of theories in the scientific community and epistemology of applied scientific inquiry. This course is designed to allow Ph.D. students in the health professions to gain appreciation for the philosophical underpinnings of unity in science, to be able to apply philosophical frameworks and epistemological paradigms in their future research, and to, eventually, become creative researchers in their areas of practice. (3 semester hours)
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