Doctor of Pharmacy (Pharm.D.)
Master of Science (M.S.) in Pharmaceutical Affairs
Master of Science (M.S.) in Pharmaceutical Sciences
Doctor of Philosophy (Ph.D.) in Pharmaceutical Sciences
NOVA SOUTHEASTERN UNIVERSITY—synonymous with dynamic innovation and intellectual challenge—is the second largest, private, nonprofit university in the Southeast and 1 out of only 361 colleges and universities nationally selected for the Carnegie Foundation’s Community Engagement Classification. Situated on a beautiful, 314-acre campus in Fort Lauderdale, Florida, the university is experiencing a sustained period of academic growth, fiscal strength, and commitment to the challenges of the 21st century.

In this environment of expansion and stability, the university is capitalizing on its strengths in such areas as academic innovation, comprehensive clinical training, and flexible educational delivery systems.

Founded in 1964 as Nova University, the institution merged with Southeastern University of the Health Sciences in 1994, creating Nova Southeastern University. To date, the institution has more than 177,000 alumni and current enrollment of more than 21,000 students. Fully accredited by the Commission on Colleges of the Southern Association of Colleges and Schools, the university awards bachelor’s, master’s, educational specialist, and doctoral degrees, as well as certificates in a wide range of fields including the health professions, law, business, marine sciences, psychology, social sciences, computer and information sciences, and education.

The university’s degree programs are administered through academic units that offer courses at the Fort Lauderdale/Davie Campus, as well as at NSU’s regional campuses, located in Fort Myers, Jacksonville, Miami, Miramar, Orlando, Palm Beach, and Tampa, Florida, and San Juan, Puerto Rico. NSU also has active distance education programs offered at instructional sites in 12 other U.S. States and 4 other countries.

This brochure is for information purposes only and does not represent a contract. Information contained herein is subject to change at any time by administrative decision on the direction of the board of trustees. Updated information can be found on our website (pharmacy.nova.edu).
VER THE PAST two decades, NSU’s Health Professions Division has evolved into a dynamic and innovative, interprofessional, academic health center that comprises seven colleges (the Colleges of Osteopathic Medicine, Pharmacy, Optometry, Medical Sciences, Dental Medicine, Health Care Sciences, and Nursing) and more than 60 degree and certificate programs.

Our colleges and programs are nationally and internationally recognized due to our esteemed faculty and staff members, who are dedicated to working closely with students, nurturing them along as they progress through the academic experience. When students truly know their professors are there for them on a daily basis, it makes a big difference in their educational experience.

Our educational paradigm is both academically and technologically robust. Because of this, we’re able to provide our students with the knowledge and skills they will need to become compassionate and dedicated health care professionals. Our current students are fully aware and appreciative of this fact. And as a new student, you will be as well.

Frederick Lippman, R.Ph., Ed.D.
Health Professions Division Chancellor
THE HEALTH PROFESSIONS DIVISION, with a student body of nearly 8,000, is home to seven colleges. Located on the Fort Lauderdale/Davie Campus, it occupies a $70-million complex, covering 21 acres. It includes eight buildings totaling more than 900,000 square feet of space for classrooms, laboratories, offices, the Health Professions Division Library, an outpatient health center, and a pharmaceutical care center. Several of the HPD programs are also located at our regional campuses in Fort Myers, Jacksonville, Miami, Miramar, Orlando, Palm Beach, and Tampa, Florida, as well as in San Juan, Puerto Rico. These campuses extend our programs and resources to various communities. They offer you the ability to complete a degree at a location that may be more convenient to your home.

College of Health Care Sciences
- Bachelor of Science in Athletic Training (B.S.)
- Bachelor of Science—Cardiovascular Sonography (B.S.)
- Bachelor of Science in Exercise and Sport Science (B.S.)
- Bachelor of Health Science (B.H.Sc.)
- Bachelor of Science—Medical Sonography (B.S.)
- Bachelor of Science in Respiratory Therapy (B.S.)
- Bachelor of Science in Speech-Language and Communication Disorders (B.S.)
- Master of Science in Anesthesia (M.S.)
- Master of Health Science (M.H.Sc.)
- Master of Medical Science in Physician Assistant (M.M.S.)
- Master of Occupational Therapy (M.O.T.)
- Master of Science in Speech-Language Pathology (M.S.)
- Doctor of Audiology (Au.D.)
- Doctor of Health Science (D.H.Sc.)
- Doctor of Philosophy in Health Science (Ph.D.)
- Entry-Level Doctor of Occupational Therapy (D.O.T.D.)
- Doctor of Occupational Therapy (Dr.O.T.)
- Doctor of Philosophy in Occupational Therapy (Ph.D.)
- Doctor of Physical Therapy (D.P.T.)
- Professional Doctor of Physical Therapy (D.P.T.)
- Professional Doctor of Physical Therapy: Hybrid (D.P.T.)
- Professional Doctor of Physical Therapy: Transition (D.P.T.)
- Doctor of Philosophy in Physical Therapy (Ph.D.)
- Doctor of Speech-Language Pathology (SLP.D.)
- Bachelor of Science in Public Health (B.S.) and Master of Health Science (M.H.Sc.)
- Bachelor of Science—Cardiovascular Sonography (B.S.) and Master of Health Science (M.H.Sc.)
- Bachelor of Science in Athletic Training (B.S.) and Master of Business Administration (M.B.A.)
- Bachelor of Science—Medical Sonography (B.S.) and Master of Health Science (M.H.Sc.)
- Bachelor of Science in Respiratory Therapy (B.S.) and Master of Health Science (M.H.Sc.)
- Bachelor of Science in Speech-Language and Communication Disorders (B.S.) and Master of Health Science (M.H.Sc.)
- Bachelor of Science in Athletic Training (B.S.) and Master of Public Health (M.P.H.)
- Bachelor of Science—Cardiovascular Sonography (B.S.) and Master of Public Health (M.P.H.)
- Bachelor of Science in Exercise and Sport Science (B.S.) and Master of Public Health (M.P.H.)
- Bachelor of Health Science (B.H.Sc.) and Master of Public Health (M.P.H.)
- Bachelor of Science—Medical Sonography (B.S.) and Master of Public Health (M.P.H.)
- Bachelor of Science in Speech-Language and Communication Disorders (B.S.) and Master of Public Health (M.P.H.)
- Bachelor of Science in Athletic Training (B.S.) and Master of Business Administration (M.B.A.)
- Bachelor of Science—Cardiovascular Sonography (B.S.) and Master of Business Administration (M.B.A.)
- Bachelor of Science in Exercise and Sport Science (B.S.) and Master of Business Administration (M.B.A.)
- Bachelor of Health Science (B.H.Sc.) and Master of Business Administration (M.B.A.)
- Bachelor of Science—Medical Sonography (B.S.) and Master of Business Administration (M.B.A.)
- Bachelor of Science in Speech-Language and Communication Disorders (B.S.) and Master of Business Administration (M.B.A.)

College of Optometry
- Doctor of Optometry (O.D.)
- Master of Science in Clinical Vision Research (M.S.)
- Graduate Certificate in Clinical Vision Research

College of Pharmacy
- Master of Science in Pharmaceutical Affairs (M.S.)
- Master of Science in Pharmaceutical Sciences (M.S.)
  - Concentration in Drug Development (Pharmaceuticals)
  - Concentration in Molecular Medicine and Pharmacogenomics
  - Concentration in Social and Administrative Pharmacy
- Doctor of Pharmacy (Pharm.D.)
- Doctor of Philosophy in Pharmaceutical Sciences (Ph.D.)
  - Concentration in Drug Development (Pharmaceuticals)
  - Concentration in Molecular Medicine and Pharmacogenomics
  - Concentration in Social and Administrative Pharmacy

College of Optometry
- Doctor of Optometry (O.D.)
- Master of Science in Clinical Vision Research (M.S.)
- Graduate Certificate in Clinical Vision Research

College of Osteopathic Medicine
- Doctor of Osteopathic Medicine (D.O.)
- Master of Public Health (M.P.H.)
- Master of Science in Biomedical Informatics (M.S.)
- Master of Science in Disaster and Emergency Management (M.S.)
- Master of Science in Medical Education (M.S.)
- Master of Science in Nutrition (M.S.)
- Bachelor of Science in Public Health (B.S.)
- Graduate Certificate in Functional Nutrition and Herbal Therapy
- Graduate Certificate in Health Education
- Graduate Certificate in Medical Informatics
- Graduate Certificate in Public Health
- Graduate Certificate in Public Health Informatics
- Graduate Certificate in Social Medicine

College of Medical Sciences
- Master of Biomedical Sciences (M.B.S.)

College of Dental Medicine
- Doctor of Dental Medicine (D.M.D.)
- Master of Science in Dental Medicine (M.S.)
- Postgraduate Certificate in Advanced Education in General Dentistry
- Postgraduate Certificate in Endodontics
- Postgraduate Certificate in Operative Dentistry
- Postgraduate Certificate in Oral and Maxillofacial Surgery
- Postgraduate Certificate in Orthodontics
- Postgraduate Certificate in Pediatric Dentistry
- Postgraduate Certificate in Periodontics
- Postgraduate Certificate in Prosthodontics
- Postgraduate Certificate in Special Needs Dentistry

College of Nursing
- Bachelor of Science in Nursing (B.S.N.)
  - Entry Nursing
  - R.N. to B.S.N.
  - R.N. to M.S.N.
- Master of Science in Nursing (M.S.N.)
  - R.N. to M.S.N.
  - M.S.N. Clinical Concentrations
  - Advanced Practice Registered Nurse, Family Nurse Practitioner
  - Advanced Practice Registered Nurse, Gero-Adult Acute Care Nurse Practitioner
  - M.S.N. Nonclinical Concentrations
  - Health Systems Leadership
  - Nursing Education
  - Nursing Informatics
- Doctor of Nursing Practice (D.N.P.)
- Doctor of Philosophy in Nursing (Ph.D.)

Dual Degrees
- Bachelor of Science—Cardiovascular Sonography (B.S.) and Master of Health Science (M.H.Sc.)
- Bachelor of Science—Medical Sonography (B.S.) and Master of Health Science (M.H.Sc.)
- Master of Health Science (M.H.Sc.)/Doctor of Health Science (D.H.Sc.)
- Bachelor of Science in Public Health (B.S.)/Doctor of Osteopathic Medicine (D.O)
- Doctor of Osteopathic Medicine (D.O.)/Doctor of Dental Medicine (D.M.D.)

Concurrent Degrees
- Doctor of Osteopathic Medicine (D.O.)/Master of Medical Education (M.S.)
- Doctor of Osteopathic Medicine (D.O.)/Master of Public Health (M.P.H.)
- Doctor of Osteopathic Medicine (D.O.)/Master of Science in Biomedical Informatics (M.S.)
- Doctor of Osteopathic Medicine (D.O.)/Master of Science in Disaster and Emergency Management (M.S.)
- Doctor of Osteopathic Medicine (D.O.)/Master of Science in Nutrition (M.S.)
- Doctor of Pharmacy (Pharm.D.)/Master of Business Administration (M.B.A.)
- Doctor of Pharmacy (Pharm.D.)/Master of Public Health (M.P.H.)
- Doctor of Pharmacy (Pharm.D.)/Master of Science in Biomedical Informatics (M.S.)
- Doctor of Optometry (O.D.)/Master of Public Health (M.P.H.)
- Doctor of Audiology (Au.D.)/Master of Business Administration (M.B.A.)
- Master of Medical Science (M.M.S.)/Master of Public Health (M.P.H.)
- Doctor of Dental Medicine (D.M.D.)/Master of Public Health (M.P.H.)
- Doctor of Dental Medicine (D.M.D.)/Master of Business Administration (M.B.A.)
**Letter from the Dean**

NSU COLLEGE OF PHARMACY (COP) attracts high-achieving candidates and provides state-of-the-art education to students seeking to become pharmacists; researchers; and those seeking positions in academia, the pharmaceutical industry, governmental and nongovernmental agencies, or other health care systems, and who are leaders and catalysts for change. Pharmacy is a rewarding, dynamic profession, one that beckons outstanding students to explore its many opportunities in the changing health care environment. The diverse educational experience NSU COP graduates receive gives them the ability to thrive in all areas of the profession, now and in the future.

At the heart of our college are our exceptional students who are mentored by committed and talented faculty members in a rich learning environment. Our faculty members are recognized as experts in their field and are dedicated to providing quality professional and graduate education focusing on academic excellence. Students have ample opportunities to develop leadership skills, participate in community health-related activities, and engage in research and scholarship. These activities promote active engagement early in the profession within a diverse community of students and faculty and staff members.

NSU COP is a member of the Health Professions Division, providing students with the opportunity to be part of an interprofessional, collaborative team, a necessary component of progressive health care. The college provides quality education, using live videoconferencing to different locations: Fort Lauderdale, Miami, and Palm Beach, Florida, and San Juan, Puerto Rico. These locations provide each student with ongoing exposure to diverse learning experiences and high-quality interactive education.

We boast outstanding alumni who have been successful in their chosen career environments and who selflessly provide ongoing education and mentoring to our students. Our experiential education preceptors provide additional opportunities for student growth in the profession.

We are proud of our faculty, students, and alumni and look forward to receiving your application. I encourage you to make NSU COP your destination for pharmacy and graduate education.

Lisa Deziel, Pharm.D., Ph.D.
Dean

**NSU 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.
Overview of Programs

Students can prepare for a career in pharmacy, research, industry, academia, and other pharmacy-related areas through the professional Pharm.D. program, the M.S. in Pharmaceutical Affairs program, the M.S. in Pharmaceutical Sciences program, or the Ph.D. program.

The patient care pharmacist, often referred to as a clinical pharmacist, is highly educated in disease process, pharmacotherapy, and patient monitoring. Pharmacists review patient history and disease manifestations to guide the selection of cost-effective therapy. To optimize the outcome of medication use, the pharmacist remains in communication with patients, maximizing adherence to prescribed medication and patient response to therapeutic agents. Pharmacists work closely with interprofessional teams, including physicians, nurses, and other members of the health care team, to review and modify patient-care plans to improve patient outcomes, as required. Pharmacists emphasize disease prevention by providing immunizations, smoking cessation programs, and education about prominent chronic disease states.

Ph.D. graduates focus on expanding the science of drug knowledge by creating and testing new drug molecules or using technology to develop new dosage forms. This field responds to needs identified by practicing pharmacists, who identify limitations in caring for patients. The pharmaceutical scientist is very knowledgeable in pharmacology, pharmaceutics, pharmacokinetics, and administration.

The M.S. in Pharmaceutical Sciences offers three unique sequences: (1) Molecular Medicine and Pharmacogenomics, (2) Drug Development (Pharmaceutics), and (3) Social and Administrative Pharmacy. The Master of Science (M.S.) in Pharmaceutical Affairs prepares students to critically analyze issues related to the production and use of pharmaceuticals and act as leaders in the field. Both master’s degree programs prepare graduates for managerial or sales positions in the pharmaceutical industry or positions in academia, governmental and nongovernmental agencies, and other health care systems. Graduates are prepared to work with professionals in all areas of health care. To prepare for a diverse work environment, the NSU College of Pharmacy prepares students through interprofessional education opportunities with other colleges within the Health Professions Division.

History of the College of Pharmacy

Nova Southeastern University’s College of Pharmacy (NSU COP) admitted its first class of students in 1987, becoming the first college of pharmacy in South Florida. In fall 2000, responding to a growing pharmacist shortage, the college extended its programming to Palm Beach, Florida, and Ponce, Puerto Rico, in 2001 (since relocating to San Juan, Puerto Rico). In 2002, the Pharm.D. program again expanded to accept international pharmacy graduates. The three-year Advanced Standing accelerated curriculum allows pharmacists educated outside the United States to earn a Pharm.D. degree.

Today, the college boasts four campuses: Fort Lauderdale, Miami, and Palm Beach, Florida, and San Juan, Puerto Rico. Each campus has separate administration, faculty, and staff. All students are taught by a diverse faculty who engage students synchronously using state-of-the-art videoconferencing technology. Each year, the college graduates more than 220 students who enter a variety of pharmacy career pathways, including residencies and fellowships. These graduates join the more than 4,500 NSU COP alumni who are leaders in the profession, paving the way for future pharmacists.

The Doctor of Philosophy (Ph.D.) and the Master of Science (M.S.) in Pharmaceutical Sciences programs allow students to choose from one of three sequences: (1) Social and Administrative Pharmacy; (2) Molecular Medicine and Pharmacogenomics; and (3) Drug Development (Pharmaceutics).

The M.S. in Pharmaceutical Affairs is located at the NSU Miami Campus. This degree prepares graduates to work in a variety of areas in the pharmaceutical industry. It will also act as a bridge for students interested in additional preparation prior to pursuing a Pharm.D. or Ph.D. degree.

We look forward to you joining this elite group of pharmacists, professionals, and researchers.
Pharmacy Information Highlights

Since its inception and admission of the charter class in 1987, NSU COP has been a leader in pharmacy education and research throughout the United States. The college

• is first in doctoral-professional degrees in pharmacy to Hispanic or Latino students (2014–2015 IPEDS*)
• is 14th in doctoral-professional degrees in pharmacy to black or African American students (2014–2015 IPEDS*)
• has graduated more than 4,500 pharmacists
• developed pharmacy residency programs in general pharmacy practice, ambulatory care, community pharmacy, drug information, HIV/infectious disease, psychiatry, and transitions of care
• developed fellowship programs in consumer health informatics, neurocognitive pharmacy, and pediatric pharmacotherapy, accountable care, and community pharmacy
• developed two ambulatory care pharmacies for innovative teaching and developing the pharmacists’ expanding roles
• developed a Drug Information Center in Puerto Rico
• inaugurated the country’s first Center for Consumer Health Informatics Research (designated as the world’s first World Health Organization’s Collaborating Center in Consumer Health Informatics)
• developed collaborative agreements with international colleges of pharmacy
• implemented a pathway for international pharmacy graduates to obtain a Pharm.D. degree
• implemented concurrent degree programs in Doctor of Pharmacy and Master of Business Administration (Pharm.D./M.B.A.), Doctor of Pharmacy and Master of Public Health (Pharm.D./M.P.H.), and Doctor of Pharmacy and Master of Science in Biomedical Informatics (Pharm.D./M.S.B.I.)
• implemented a Master of Science in Pharmaceutical Affairs
• created the concept for a health fair to be conducted in conjunction with Florida Pharmacists Legislative Days in Tallahassee, Florida
• implemented a Doctor of Philosophy (Ph.D.) in Pharmaceutical Sciences degree with sequences and research in drug development (pharmaceutics), molecular medicine and pharmacogenomics, and social and administrative pharmacy
• provided unique, themed, continuing education pharmacy programs
• initiated a postgraduate certificate in education
• implemented travel study programs to Argentina, China, Japan, Puerto Rico, Slovakia, Spain, and the United Kingdom
• participated in interprofessional medical missions to Jamaica and Guatemala
• created a healing and medicinal garden with tropical plants from around the world
• built the first foot reflexology pathway on the U.S. east coast

* National Center for Education Statistics—Integrated Post-secondary Education Data System [IPEDS]

College of Pharmacy
Mission, Vision, Values

Mission
To educate and develop practitioners and researchers who, through their leadership and entrepreneurship, will transform the profession of pharmacy to improve global health

Vision
To be recognized as an innovative and entrepreneurial college of pharmacy providing opportunities that encourage innovation in education, practice, and research

Values
- Entrepreneurship
- Excellence
- Innovation
- Integrity
- Professionalism
- Respect for Diversity
- Service
- Teamwork

Health Professions Division | 7
WE ARE VERY PROUD of the accomplishments of our students and encourage their participation in activities that support the mission, vision, and values of the Nova Southeastern University College of Pharmacy. Below is a list of honor and leadership societies, professional organizations, and fraternities in which students can participate.

**College of Pharmacy Student Government Association (COP-SGA)**

The COP-SGA is the official voice for all pharmacy students. The organization is open to all students and welcomes proposals and participation from the entire student body. The responsibilities of the COP-SGA include collecting and expressing student opinion, dispensing funds for student activities, acting as a liaison for the student body, promoting pharmacy, supporting club and class activities, and working to improve the quality of life for all students at the College of Pharmacy.

**Honor Society**

Rho Chi

**Leadership Society**

Phi Lambda Sigma

**Professional Organizations**

Academy of Managed Care Pharmacy (AMCP)
American Pharmacists Association Academy of Student Pharmacists (APhA-ASP)
American Society of Consultant Pharmacists (ASCP)
Christian Pharmacist Fellowship International (CPFi)
College of Psychiatric and Neurologic Pharmacists (CPNP)
Student Society of Health System Pharmacists (SSHP)
International Pharmaceutical Students Federation (IPSF)
International Society of Pharmacoeconomics and Outcomes Research (ISPOR)
Jewish Pharmacy Student Organization (JPSO)
National Community Pharmacists Association (NCPA)
Ph.D. Graduate Pharmacy Association (PGPA)
Student College of Clinical Pharmacy (SCCP)
Student National Pharmaceutical Association (SNPhA)
Student Society of Health Systems Pharmacists (SSHP)

**Fraternities**

Alpha Zeta Omega
Kappa Psi
Phi Delta Chi
Doctor of Pharmacy (Pharm. D.) Program Description

The Doctor of Pharmacy (Pharm. D.) degree is awarded after successful completion of the professional curriculum in the College of Pharmacy. The curriculum uses state-of-the-art interactive teaching, delivery, and assessment methods and is designed so courses integrate information and build on one another, providing students with the knowledge and skills necessary to be successful pharmacists in a dynamic and ever-changing environment.

Students may enter either the four-year, entry-level program or the three-year advanced standing program for international pharmacy graduates (see Admissions Requirements for each program for more information).

**Entry-Level Program**

The didactic component of the curriculum develops students into lifelong learners, building a foundation in the medical and pharmaceutical sciences, principles of drug therapy, pharmacodynamics, and the social and administrative aspects of pharmacy. Students are actively involved in advocacy for the profession, are patient-centered, and develop team-based relationships with other health care professionals.

On-going opportunities are provided for students to experience pharmacy practice first hand. First-year students gain knowledge of the profession from pharmacy leaders through lectures, town halls, alumni forums, laboratories, student organizations, and much more. The Pharmaceutics Compounding lab provides hands-on training for first-year students in basic pharmaceutical formulations that can be prepared and dispensed in a pharmacy setting. Second- and third-year students participate in the Patient Care Management labs, which focus on using subjective and objective patient data to problem solve and create an appropriate, patient-centered plan. In addition, second-year students spend four hours each week in a community pharmacy setting and third-year students devote eight hours each week in hospital and pharmacy service preclinical settings. These opportunities allow students to apply knowledge gained from all courses in the curriculum through simulated and real-life practice settings.

Fourth-year students 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 diverse health care environments and systems. During the fourth year, the Curricular Review series provides online reviews and updates of didactic coursework, including calculations and case-based drug therapy evaluations. During the fourth professional year, all students are required to return to their respective campuses for up to one week of live instruction and board exam preparation.

The entry-level curriculum outline provided is representative of students entering the Pharm. D. degree program. The entry-level program must be completed within six academic years of the date of matriculation.

**Advanced Standing Program (for International Pharmacy Graduates)**

The Advanced Standing Program educates students to achieve the same outcomes as the entry-level Pharm. D. degree program, but in an accelerated format. Courses are taken with the entry-level students in an integrated classroom.

Advanced standing students complete a curriculum focusing on clinical courses, as well as additional coursework to prepare them for advanced pharmacy practice. Outside of the United States, pharmacy programs typically focus on pharmaceutics or dosage forms. The growth of patient care responsibilities has created the need for pharmacists to study disease process, acquire pharmacotherapeutic knowledge, and improve patient monitoring skills. Courses integrate information and build upon one another to provide students with the knowledge and skills necessary to be successful in the profession. Students admitted with advanced standing may have individualized coursework, depending on their previous pharmacy coursework. The advanced standing curriculum outline provided is representative of the typical international pharmacy graduate entering the Pharm. D. degree program.

The advanced standing program must be completed within five academic years of the date of matriculation.
Pharm.D. Program Description (Continued)

All Students

Coursework in both the entry-level and the advanced standing program prepare students to take the North American Pharmacist Licensing Examination (NAPLEX) and the Multistate Pharmacy Jurisprudence Examination (MPJE).

All students require a valid U.S. Social Security number in order to obtain a Florida intern license, which is a program requirement. Students are responsible for having reliable transportation to attend assigned experiential sites, which may be several miles from their homes or campuses. APPEs are full-time commitments for students, requiring a minimum of 40 hours per week. Students may also be required to secure accommodation at APPE sites away from their home location. APPEs may be taken in any sequence; however, students may not begin APPEs until all didactic courses—electives, IPPEs, and all assessments [including the Pharmacy Curriculum Outcomes Assessment (PCOA)]—are successfully completed.

STUDENTS ARE provisionally 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. 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 late fee.
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 evaluation.

1. Prior to matriculation, all NSU College of Pharmacy applicants must complete a minimum of 64 semester hours of coursework at a regionally accredited college or university, including the following required courses, with a grade of 2.0 or higher on a 4.0 scale.

<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</td>
<td>6</td>
</tr>
<tr>
<td>(with or without laboratory)</td>
<td></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</td>
<td>3</td>
</tr>
<tr>
<td>(in English)</td>
<td></td>
</tr>
<tr>
<td>Advanced Sciences (choose two of the following courses: genetics, cellular biology, molecular biology, microbiology, or biochemistry)</td>
<td>6 *</td>
</tr>
<tr>
<td>Humanities/Social/Behavioral Sciences</td>
<td></td>
</tr>
<tr>
<td>Social/Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Electives in either discipline</td>
<td>9 **</td>
</tr>
<tr>
<td><strong>No two classes taken should be from the same discipline.</strong></td>
<td></td>
</tr>
</tbody>
</table>

Total: .............................................................................................................. 64

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

3. Applicants must 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 February prior to the expected date of matriculation. Candidates may register online at [pcatweb.info](http://pcatweb.info) or call 800-622-3231 with any questions.

4. Three letters of reference from 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.

**Ethics, micro or macroeconomics, and general/life sciences statistics are highly recommended and may substitute for up to 9 humanities and social/behavioral science elective credits.**
Application Procedures • Pharm.D. Entry-Level Program

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 a PharmCAS application electronically. An interactive web-based application can be accessed through PharmCAS.org.
   • The deadline for submitting a PharmCAS application for Early Decision is September 5.
   • The deadline for submitting a PharmCAS application for regular admission is February 1.
   • The PharmCAS application process takes four to six weeks.

2. Applicants must submit the following materials to PharmCAS:
   • official transcripts from all college and universities attended (must be submitted directly to PharmCAS by the college or university)*
   • three letters of reference
   • PCAT scores

Secondary Application Process
In addition to completing the PharmCAS application, NSU requires the completion of a supplemental application. Upon receipt of the PharmCAS application, NSU will email a link to access our supplemental application.

Applicants must submit the following materials electronically to NSU:

1. a completed supplemental application
   • due October 10 for applicants requesting Early Decision
   • due March 15 for applicants applying for regular admission

2. a nonrefundable application fee of $50 (U.S.)

Interview Process
For information on the interview process, please see page 34.

* For information on foreign coursework, please see page 33.

Early Decision
The Early Decision Program is a binding option for applicants who decide that a particular Pharm.D. program is their first choice, and they will enroll if accepted. As an Early Decision applicant, you can apply to only one Pharm.D. program. If you are offered admission as an Early Decision applicant, you are obligated to accept the offer, and you will not be permitted to apply to other PharmCAS Pharm.D. programs during the current admissions cycle. However, if you are denied admission as an Early Decision applicant, you may apply to other Pharm.D. programs. Visit the PharmCAS website at PharmCAS.org for more information.
The curriculum is currently under review and will be revised as needed to meet the demands of the profession. These courses are representative of the overall requirements of the program at the time of publication and are subject to change. Updates to the curriculum will be posted on the college web page [pharmacy.nova.edu](http://pharmacy.nova.edu).

**Entry-Level Pharm.D.**

**First Year**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Care Basics</td>
<td>2</td>
</tr>
<tr>
<td>Foundational Science</td>
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<tr>
<td>Drug Delivery Systems</td>
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<tr>
<td>Essentials of Practice and Care I</td>
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<tr>
<td>Delivering Patient Care I</td>
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<tr>
<td>Evidence-Based Practice I</td>
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<tr>
<td>Leadership and Professional Development I</td>
<td>1</td>
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<tr>
<td>Pharmacy Applications I</td>
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<tr>
<td>Nonprescription Drugs—Self Care</td>
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<tr>
<td>Individualized Drug Therapy</td>
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<td>Integrated Disease Management I</td>
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<tr>
<td>Essentials of Practice and Care II</td>
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<tr>
<td>Delivering Patient Care II</td>
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<td>Evidence-Based Practice II</td>
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<tr>
<td>Leadership and Professional Development II</td>
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<tr>
<td>Pharmacy Skills Development II</td>
<td>1</td>
</tr>
<tr>
<td>Pharmacy Applications II</td>
<td>1</td>
</tr>
<tr>
<td>IPPE: Community Practice</td>
<td>2.5</td>
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</tbody>
</table>

**Second Year**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Assessment</td>
<td>2</td>
</tr>
<tr>
<td>Integrated Disease Management II</td>
<td>5</td>
</tr>
<tr>
<td>Integrated Disease Management III</td>
<td>3</td>
</tr>
<tr>
<td>Essentials of Practice and Care III</td>
<td>4</td>
</tr>
<tr>
<td>Delivering Patient Care III</td>
<td></td>
</tr>
<tr>
<td>Evidence-Based Practice III</td>
<td></td>
</tr>
<tr>
<td>Leadership and Professional Development III</td>
<td>1</td>
</tr>
<tr>
<td>Pharmacy Skills Development III</td>
<td>1</td>
</tr>
<tr>
<td>Interprofessional Education I</td>
<td>1</td>
</tr>
<tr>
<td>Pharmacy Applications III</td>
<td>1</td>
</tr>
<tr>
<td>Immunology and Clinical Microbiology</td>
<td>2.5</td>
</tr>
<tr>
<td>Integrated Disease Management IV</td>
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<tr>
<td>Integrated Disease Management V</td>
<td>1</td>
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<tr>
<td>Integrated Disease Management VI</td>
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**Third Year**

<table>
<thead>
<tr>
<th>Course Title</th>
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<tbody>
<tr>
<td>Sterile Products Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>Integrated Disease Management VII</td>
<td>1.5</td>
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<tr>
<td>Integrated Disease Management VIII</td>
<td>3</td>
</tr>
<tr>
<td>Integrated Disease Management IX</td>
<td>2</td>
</tr>
<tr>
<td>Essentials of Practice and Care V</td>
<td>3.5</td>
</tr>
<tr>
<td>Delivering Patient Care V</td>
<td></td>
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<tr>
<td>Evidence-Based Practice V</td>
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<tr>
<td>Leadership and Professional Development V</td>
<td>1</td>
</tr>
<tr>
<td>Pharmacy Skills Development V</td>
<td>1</td>
</tr>
<tr>
<td>Interprofessional Education III</td>
<td>1</td>
</tr>
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<td>Pharmacy Applications V</td>
<td>1</td>
</tr>
<tr>
<td>Elective 3</td>
<td>2</td>
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<td>Elective 4 (Optional)</td>
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<td>APPE: Selective</td>
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<tr>
<td>Pharmacy Law</td>
<td>2</td>
</tr>
<tr>
<td>Leadership and Professional Development VI</td>
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</tr>
<tr>
<td>APPE: Internal Medicine</td>
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</tr>
</tbody>
</table>

**Fourth Year**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPE: Internal Medicine</td>
<td>6</td>
</tr>
<tr>
<td>APPE: Ambulatory Care</td>
<td>6</td>
</tr>
<tr>
<td>APPE: Advanced Community Practice</td>
<td>6</td>
</tr>
<tr>
<td>APPE: Advanced Health System Practice</td>
<td>6</td>
</tr>
<tr>
<td>APPE: Selective I</td>
<td>6</td>
</tr>
<tr>
<td>APPE: Selective II</td>
<td>6</td>
</tr>
<tr>
<td>APPE: Selective III</td>
<td>6</td>
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<tr>
<td>Leadership and Professional Development VII</td>
<td>3</td>
</tr>
<tr>
<td>Curricular Reflection</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 151 (minimum)

IPPE = Introductory Pharmacy Practice Experience
APPE = Advanced Pharmacy Practice Experience
Admissions Requirements • Advanced Standing
(International Pharmacy Graduates)

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, College of Pharmacy applicants must complete and receive a 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>Pharmacology</td>
<td>6</td>
</tr>
<tr>
<td>Pharmaceutics</td>
<td>6</td>
</tr>
<tr>
<td>Pharmacokinetics</td>
<td>4</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 is required (see Application Procedures for further details).

4. Proof of English proficiency is required of all applicants. The following standardized test currently satisfy NSU College of Pharmacy English requirements for nonnative English speakers:

- Test of English as a Foreign Language (TOEFL)*—score of 213 on a computer-based test; 80 or higher on the Internet-based test toefl.org
- International English Language Testing System (IELTS)*—score of 6.0 or higher on the test module ielts.org
- TOEFL and IELTS scores may be no more than two years old at the time of 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 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.

It is strongly recommended that applicants submit official scores from the Graduate Record Examination (GRE) and/or the Pharmacy College Admission Test (PCAT).

Accreditations
Nova Southeastern University College of Pharmacy’s Doctor of Pharmacy Program is accredited by the Accreditation Council for Pharmacy Education, 135 S. LaSalle Street, Suite 4100, Chicago, IL 60603-4810, [312] 664-3575, 800-533-3606; FAX [312] 664-4652, website www.acpe-accredit.org. The College of Pharmacy is a member of the American Association of Colleges of Pharmacy.

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.

Nondiscrimination
Consistent with all federal and state laws, rules, regulations, and/or local ordinances (e.g., Title VII, Title VI, Title II, 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.

This nondiscrimination policy applies to admissions; enrollment; scholarships; loan programs; athletics; employment; and access to, participation in, and treatment in all university centers, programs, and activities. 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.
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 a PharmCAS application electronically. An interactive, web-based application can be accessed through PharmCAS.org.
   - The deadline for submitting a PharmCAS application for Early Decision is September 5.
   - The deadline for submitting a PharmCAS application for admission is February 1.
   - The PharmCAS application process takes four to six weeks.

2. Applicants must submit the following materials to PharmCAS:
   - official transcripts from all colleges and universities attended [must be submitted directly to PharmCAS by the college or university]*
   - three letters of reference
   - PCAT or GRE scores
*For information on foreign coursework, please see page 33.

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.

Applicants must submit the following materials electronically to NSU:

1. a completed supplemental application due
   - October 10 for applicants applying for Early Decision
   - March 15 for applicants applying for regular admission

2. a nonrefundable application fee of $50 (U.S.)
Advanced Standing (International Pharmacy Graduates)

Early Decision
The Early Decision Program is a binding option for applicants who decide that a particular Pharm.D. program is their first choice, and they will enroll if accepted. As an Early Decision applicant, you can apply to only one Pharm.D. program. If you are offered admission as an Early Decision applicant, you are obligated to accept the offer, and you will not be permitted to apply to other PharmCAS Pharm.D. programs during the current admissions cycle. However, if you are denied admission as an Early Decision applicant, you may apply to other Pharm.D. programs. Visit the PharmCAS website at PharmCAS.org for more information.

Interview Process
For information on the interview process, please see page 34.
The curriculum is currently under review and will be revised as needed to meet the demands of the profession. These courses are representative of the overall requirements of the program at the time of publication and are subject to change. Updates to the curriculum will be posted on the college web page [pharmacy.nova.edu].

### First Year

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHRC 4000</td>
<td>Medical Terminology</td>
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<tr>
<td>PHRC 4200</td>
<td>Pharmacy Calculations</td>
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<tr>
<td>PHRC 4300</td>
<td>Pharmacy and the U.S. Health Care System</td>
<td>2</td>
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<tr>
<td>PHRC 4550</td>
<td>Introduction to Drug Information</td>
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<td></td>
<td>Resources and Health Informatics</td>
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<tr>
<td>PHRC 4580</td>
<td>Introduction to Professionalism and Leadership I</td>
<td>1</td>
</tr>
<tr>
<td>PHRC 4680</td>
<td>Introduction to Professionalism and Leadership II</td>
<td>1</td>
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<td>PHRC 5150</td>
<td>Nonprescription Therapies</td>
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<td>PHRC 5300</td>
<td>Social and Behavioral Pharmacy</td>
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<td>PHRC 5330</td>
<td>Communication in Patient Care</td>
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<tr>
<td>PHRC 5350</td>
<td>Research Design and Statistics</td>
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<td>PHRC 5380</td>
<td>Pharmacy Law</td>
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<tr>
<td>PHRC 5410</td>
<td>Pharmacotherapy I</td>
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<td>PHRC 5420</td>
<td>Pharmacotherapy II</td>
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<tr>
<td>PHRC 5570</td>
<td>Biomedical Literature Evaluation</td>
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<td>PHRC 5580</td>
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<tr>
<td>PHRC 5680</td>
<td>IPPE: Community II</td>
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<td>PHRC 6260</td>
<td>Clinical Pharmacology</td>
<td>4</td>
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<tr>
<td>PHRL 5710</td>
<td>Patient Care Management Lab I</td>
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### Second Year

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<tr>
<td>PHRC 5000</td>
<td>Physical Assessment</td>
<td>2</td>
</tr>
<tr>
<td>PHRC 6250</td>
<td>Pharmacodynamics V</td>
<td>3</td>
</tr>
<tr>
<td>PHRC 6350</td>
<td>Pharmacy Management</td>
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</tr>
<tr>
<td>PHRC 6370</td>
<td>Pharmacoeconomics and Outcome Research</td>
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<tr>
<td>PHRC 6380</td>
<td>Public Health and Pharmacy Practice</td>
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<tr>
<td>PHRC 6430</td>
<td>Pharmacotherapy III</td>
<td>6</td>
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<td>PHRC 6440</td>
<td>Pharmacotherapy IV</td>
<td>6</td>
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<td>PHRC 6540</td>
<td>Pharmacy Practice Seminar</td>
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<td>PHRC 6580</td>
<td>IPPE: Health System</td>
<td>2</td>
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<td>PHRC 6680</td>
<td>IPPE: Pharmacy Service</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</td>
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### Third Year

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<tr>
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<tr>
<td>PHRC xxxx</td>
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<tr>
<td>PHRC xxxx</td>
<td>APPE: Ambulatory Care</td>
<td>6</td>
</tr>
<tr>
<td>PHRC xxxx</td>
<td>APPE: Advanced Community Practice</td>
<td>6</td>
</tr>
<tr>
<td>PHRC xxxx</td>
<td>APPE: Advanced Health System Practice</td>
<td>6</td>
</tr>
<tr>
<td>PHRC xxxx</td>
<td>APPE: Selective I</td>
<td>6</td>
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<tr>
<td>PHRC xxxx</td>
<td>APPE: Selective II</td>
<td>6</td>
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<tr>
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<td>APPE: Selective III</td>
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<tr>
<td>PHRC 7801</td>
<td>Curricular Review I</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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</tbody>
</table>

**Total Credit Hours** ............................................................... 114

IPPE = Introductory Pharmacy Practice Experience
APPE = Advanced Pharmacy Practice Experience
Eligible Pharm.D. students can apply to do a concurrent degree after successful completion of first-year pharmacy coursework.

**Master of Business Administration (Pharm.D./M.B.A.)**

Combining a Pharm.D. degree with an M.B.A. lays the foundation for combining business management with pharmacy practice. Students prepare for highly competitive management and administrative positions in business and pharmacy and improve skills in problem solving, leadership, communication, and writing. Dual-degree students report increased job opportunities and job satisfaction.

**Master of Public Health (Pharm.D./M.P.H.)**

Experts in public health study disease trends and help combat outbreaks of disease. With a concurrent degree in pharmacy, graduates are well prepared to study disease prominence, susceptible populations, and effects of treatment. The shrinking health care dollar, selection of appropriate patients for care, and the growing resistance of bacteria are examples where guidance by pharmacy specialists has become critical. Pharm.D./M.P.H. graduates possess skills to influence social and health policies at the federal, state, and local levels, or to guide policies of schools, hospitals, clinics, or the pharmaceutical industry.

**Master of Science in Biomedical Informatics (Pharm.D./M.S.)**

Experts in medical informatics are critical for planning and establishing electronic patient records, communication of health care information, and analysis of results for improving patient outcome and economic viability of health care providers. With a concurrent degree in pharmacy, graduates are well prepared to lead institutional efforts to provide an extensive electronic environment where medication use is optimized, tracked, and assessed for safe, evidence-based practice. Pharm.D./M.S. graduates have the skills and experience needed to lead efforts in health care, whether those efforts are in public organizations, health care systems, industry, or government agencies.
Master of Science in Pharmaceutical Affairs Program Description

The Master of Science (M.S.) in Pharmaceutical Affairs is a two-year graduate program designed for people interested in the acquisition of knowledge and skills associated with pharmaceutical agents. The degree will prepare students for managerial or sales positions in the pharmaceutical industry, or positions in academia, contract research organizations, managed care organizations, health care systems, and governmental and nongovernmental agencies. Graduates will be able to critically analyze issues related to the production and use of pharmaceuticals and act as leaders in the field. The M.S. in Pharmaceutical Affairs will also act as a bridge for students interested in additional preparation prior to pursuing a Pharm.D. or Ph.D. degree.

This master’s degree program is located at the NSU Miami Campus near the Florida Turnpike and Kendall Drive. Off-campus housing is available in the area.
Admissions Requirements
M.S. in Pharmaceutical Affairs Program

The Master of Science in Pharmaceutical Affairs program bases its selection of candidates on academic performance, Pharmacy College Admission Test (PCAT) or Graduate Record Exam (GRE) scores, personal interviews, written applications, and letters of reference.

1. Prior to matriculation, applicants must have received a baccalaureate degree from a regionally accredited college or university. A baccalaureate degree in any field of study is acceptable, as long as all prerequisites are met.

2. Applicants must complete the following prerequisite coursework at a regionally accredited college or university with a grade of 2.0 or higher on a 4.0 scale.

<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 of the following courses: genetics, cellular biology, molecular biology, microbiology, or biochemistry)</td>
<td>6 *</td>
</tr>
<tr>
<td>Humanities/Social/Behavioral Sciences</td>
<td></td>
</tr>
<tr>
<td>Social/Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Electives in either discipline</td>
<td>9 **</td>
</tr>
<tr>
<td>** No two classes should be from the same discipline. **</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
</tr>
</tbody>
</table>

3. Applicants must have a minimum cumulative GPA of 2.5 or higher on a 4.0 scale.

4. Applicants must submit official scores from the PCAT or GRE.
   a. PCAT scores must be no more than three years old at the time of application. Applicants should take the PCAT no later than January prior to the expected date of matriculation. You may register online at [pcatweb.info](http://pcatweb.info) or call 800-622-3231 if you have any questions.
   b. GRE Scores must be no more than three years old at the time of application. Applicants should take the GRE no later than April prior to the expected date of matriculation. You may register online at [gre.org](http://gre.org) or call (609) 921-9000 if you have any questions.

5. Two letters of reference from a pre-professional committee—or, if such a committee does not exist, letters of reference from one science professor and one liberal arts professor—are necessary.

Foreign Pharmacy Graduates

Foreign pharmacy graduates may be eligible for admission with
1. a Bachelor of Pharmacy degree or a Bachelor of Science degree in Pharmacy from an accredited institution
2. completion of the coursework below with a grade of 2.0 or higher on a 4.0 scale

<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>Pharmacology</td>
<td>6</td>
</tr>
<tr>
<td>Pharmaceutics</td>
<td>6</td>
</tr>
<tr>
<td>Pharmacokinetics</td>
<td>4</td>
</tr>
<tr>
<td>** Total</td>
<td>29</td>
</tr>
</tbody>
</table>

Foreign pharmacy graduates must also complete numbers 3, 4, and 5 on this page.

* Ethics, micro or macroeconomics, and general/life science statistics are highly recommended and may substitute for up to 9 humanities and social/behavioral science elective credits.
Application Procedures
M.S. in Pharmaceutical Affairs Program

Candidates for admission must submit the following by June 15:

1. a completed electronic application with a nonrefundable application fee of $50 (U.S.)
2. official transcripts from all colleges and universities attended*
3. official PCAT or GRE scores, not more than three years old at the time of interview
4. two letters of reference

Proof of English proficiency, if applicable, is required of applicants.

The following standardized tests currently satisfy NSU COP English requirements for nonnative English speakers:

1. Test of English as a Foreign Language (TOEFL)**
   a. 213 or above on a computer-based test, 80 or above on the Internet-based test
   b. toefl.org

2. International English Language Testing System (IELTS)**
   a. 6.0 or above on the test module
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Fort Lauderdale, Florida 33329-9905

Transcripts can be sent electronically from the originating college/university to the following address:
electronictranscripts@nova.edu

Interview Process
For information on the interview process, please see page 34.

*For information on foreign coursework, please see page 33.

**TOEFL and IELTS scores may be no more than two years old at the time of the interview.
Curriculum Outline
M.S. in Pharmaceutical Affairs Program

The curriculum is currently under review and will be revised as needed. These courses are representative of the overall requirements of the program at the time of publication and are subject to change. Updates to the curriculum will be posted on the college web page [pharmacy.nova.edu].

### First Year

<table>
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<td>PHRM 5410</td>
<td>Physiology and Pathophysiology I</td>
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OR

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<tr>
<td>PHRE 5642</td>
<td>Analytic Systematic Review Project</td>
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Master of Science (M.S.) in Pharmaceutical Sciences Program Description

The Master of Science (M.S.) in Pharmaceutical Sciences is a two-year, graduate program with one of three unique areas of emphasis: (1) Molecular Medicine and Pharmacogenomics—centering on drug discovery principles, (2) Drug Development (Pharmaceutics)—focusing on drug delivery to the desired target, or (3) Social and Administrative Pharmacy—concerned with the interface between pharmacy and society (pharmacy outcomes).

This M.S. will prepare students for positions in academia or technological or managerial positions in the pharmaceutical industry, contract research organizations, managed care organizations, health care systems, and government agencies. Upon successful completion of the degree, students are prepared for further study in a doctoral program, medicine, or a health-related discipline.
Admissions Requirements
M.S. in Pharmaceutical Sciences Program

Candidates who have an earned degree in a field related to the sciences will be considered for the M.S. in Pharmaceutical Sciences Program. The college takes a holistic approach in the evaluation of applications, looking beyond grades and test scores, but also focusing on work, extracurricular activities, and life experiences.

Those students applying to the Drug Development (Pharmaceuticals) or the Molecular Medicine and Pharmacogenomics sequences are required to have earned a Bachelor of Science degree in pharmacy, chemistry, biology, or a related scientific area. Students applying to the Social and Administrative Pharmacy sequence are required to have earned a Bachelor of Science degree in pharmacy, economics, statistics, public health, health services research, or other related fields.

1. Applicants must have earned a baccalaureate degree from a regionally accredited institution of higher education.
2. Applicants must have earned a cumulative GPA equal to 3.0 or better on a 4.0 scale.
3. Applicants must submit official scores from the Graduate Record Examination (GRE) general test (verbal reasoning, quantitative reasoning, and analytical writing).
   - Scores must be less than five years old at the time of application.
   - The NSU GRE code is 5522 for all submissions.
   - For more information, please visit gre.org.
4. Three letters of reference from professors or supervisors in the applicant’s field of study must be submitted.
Candidates for admission must submit the following by March 1:

1. A completed electronic application with a nonrefundable application fee of $50 (U.S.)
2. Official transcripts from all colleges and universities attended*
3. A personal essay (may be submitted online with application)
4. Official GRE scores
5. Three letters of reference

Proof of English proficiency, if applicable, is required of applicants. The following standardized tests currently satisfy NSU College of Pharmacy English requirements for non-native English speakers:

1. Test of English as a Foreign Language (TOEFL)**
   a. 213 or above on a computer-based test, 80 or above on the Internet-based test
   b. toefl.org
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Fort Lauderdale, Florida 33329-9905

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Interview Process

For information on the interview process, please see page 34.

*For information on foreign coursework, please see page 33.

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The curriculum is currently under review and will be revised as needed. These courses are representative of the overall requirements of the program at the time of publication and are subject to change. Updates to the curriculum will be posted on the college web page [pharmacy.nova.edu](http://pharmacy.nova.edu/).

### Molecular Medicine and Pharmacogenomics

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<tr>
<td>Biostatistics I*</td>
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<tr>
<td>Clinical Drug Development: Advanced Pharmacokinetics and Biopharmaceutics</td>
<td>3</td>
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<tr>
<td>Graduate Seminar I</td>
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</tr>
<tr>
<td>Graduate Seminar II</td>
<td>1</td>
</tr>
<tr>
<td>Molecular and Cellular Pharmacodynamics</td>
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<tr>
<td>Pharmaceutical Sciences Research Design</td>
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<tr>
<td>Research Techniques and Instrumentation</td>
<td>3</td>
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<tr>
<td>Scientific Writing*</td>
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<tr>
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<tr>
<td>Advanced Pharmacogenomics and Molecular Medicine</td>
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</tr>
<tr>
<td>Bioethics: Principles of Life Science Research</td>
<td>3</td>
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<tr>
<td>Graduate Seminar III</td>
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<td>Graduate Seminar IV</td>
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<td>Product Development and Industrial Pharmacy</td>
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<td>Research Project</td>
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<td>Electives</td>
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**Total Credits** ............................................................... **36**

### Drug Development (Pharmaceutics)

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<tr>
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<td>Graduate Seminar I</td>
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<td>Molecular and Cellular Pharmacodynamics</td>
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<td>Research Techniques and Instrumentation</td>
<td>3</td>
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<td>Scientific Writing*</td>
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<tr>
<td>Bioethics: Principles of Life Science Research</td>
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<td>Graduate Seminar III</td>
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<td>Graduate Seminar IV</td>
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<td>Research Project</td>
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<tr>
<td>Electives</td>
<td>5–6</td>
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**Total Credits** ............................................................... **36**

### Social and Administrative Pharmacy

<table>
<thead>
<tr>
<th>First Year</th>
<th>Credits</th>
</tr>
</thead>
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<td>Bioethics: Principles of Life Science Research</td>
<td>3</td>
</tr>
<tr>
<td>Biostatistics I*</td>
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<tr>
<td>Graduate Seminar I</td>
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<tr>
<td>Graduate Seminar II</td>
<td>1</td>
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<tr>
<td>Pharmacy Management and Finance</td>
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<td>Population Health and Public Policy</td>
<td>3</td>
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<tr>
<td>Scientific Writing*</td>
<td>1</td>
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<tr>
<td>Social Measurement and Techniques</td>
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<table>
<thead>
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<th>Second Year</th>
<th>Credits</th>
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<tr>
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</tr>
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<td>Graduate Seminar IV</td>
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</tr>
<tr>
<td>Health Economics</td>
<td>3</td>
</tr>
<tr>
<td>Pharmacoeconomics</td>
<td>3</td>
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<td>Research Project</td>
<td>4</td>
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<tr>
<td>Theories of Health-Seeking Behavior</td>
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<tr>
<td>Elective</td>
<td>3</td>
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</tbody>
</table>

**Total Credits** ............................................................... **36**

*HPD Core Courses
Ph.D. Program Description

The Health Professions Division at Nova Southeastern University 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. Pharmacy graduate students must select one of the three following tracks to focus their graduate studies upon: Social and Administrative Pharmacy, Drug Development (Pharmaceutics), or Molecular Medicine and Pharmacogenomics. Research topics available to students are consistent with the expertise of faculty members in the College of Pharmacy (COP) at NSU. In addition, the Ph.D. program is consistent with the criteria for accreditation set by the Commission on Colleges of the Southern Association of Colleges and Schools.

The Social and Administrative Pharmacy 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 are expected to choose one of two tracks: 1) Sociobehavioral and Cultural Pharmacy or 2) Pharmacy Economics and Outcomes. Students who pursue either track in this sequence will be advised by faculty members in the department of Sociobehavioral and Administrative Pharmacy, a group with expertise in pharmacoeconomics, health disparities and vulnerable populations, cultural competency, development and implementation of sustainable pharmacy services, patients’ decision making, pharmacy marketing, outcomes research, and related areas.

The Drug Development (Pharmaceutics) sequence emphasizes the coursework, laboratory, and literature research 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 sequence will be advised by faculty members in the department of pharmaceutical sciences, a group that has expertise in pharmaceutics-related disciplines. Particular areas of expertise include a variety of drug formulations and novel drug delivery systems.

The Molecular Medicine and Pharmacogenomics sequence emphasizes the coursework, laboratory, and literature research skills that are integral to elucidation of the mechanism of action of drugs and the extent and characteristics of drug actions. Students who pursue this sequence will be advised by faculty members in the department of pharmaceutical sciences, a group that has expertise in areas such as pharmacology, medicinal chemistry, toxicology, and biochemistry. Particular areas of expertise include cardiovascular pharmacology, molecular pharmacology, anti-inflammatory steroids, and cancer pharmacology.

Students are required to take a minimum of 60 credits, at least 36 of which must be in didactic coursework. An average GPA of 3.0 or higher is expected in the didactic work. Coursework aimed at correcting an academic gap in a student’s background will not count toward program requirements. Both a written or comprehensive and an oral qualifying examination are also required to advance to candidacy. Research, culminating in a successfully defended dissertation, is required of all students in their respective areas.

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 their specialty
- design and conduct independent research that adds to the understanding of their specialty
- prepare and defend rational and structured proposals seeking support for research
- prepare and present lucid manuscripts on their own research
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### Social and Administrative Pharmacy

**First Year**

- Bioethics Principles of Life
- Science Research* ......................................................... 3
- Biostatistics I* .............................................................. 3
- Biostatistics II* ............................................................... 3
- Graduate Seminar .......................................................... 2
- Health Economics .......................................................... 3
- Pharmaceutical Marketing ............................................. 3
- Pharmacy Management and Finance .............................. 3
- Population Health and Public Policy ............................... 3
- Research Design* .......................................................... 3
- Research/Internship ....................................................... 3

**Second Year**

- Advanced Quantitative Methods ..................................... 3
- Elective ........................................................................... 6
- Graduate Research ......................................................... 9
- Graduate Seminar .......................................................... 2
- Pharmacoeconomics ....................................................... 3
- Research Funding and Proposal Development* ................. 1
- Scientific Writing* .......................................................... 1
- Social Measurement and Techniques ............................... 3
- Theories of Health-Seeking Behavior ................................ 3

**Third Year**

- Dissertation Research ................................................... 16
- Elective ........................................................................... 3
- Graduate Research .......................................................... 3
- Graduate Seminar .......................................................... 2

**Fourth Year**

- Graduate Seminar .......................................................... 2
- Dissertation Research ....................................................... 24

### Drug Development (Pharmaceutics) Sequence

**First Year**

- Advanced Pharmacokinetics and Biopharmaceutics ............. 3
- Advanced Physical Pharmacy .......................................... 3
- Bioethics Principles of Life Science Research* .................. 3
- Biostatistics I* ............................................................. 3
- Graduate Research ......................................................... 6
- Graduate Seminar .......................................................... 2
- Pharmaceutical Science Research Design .......................... 3
- Scientific Writing* .......................................................... 1
- Research/Internship ....................................................... 3

**Second Year**

- Elective ........................................................................... 6
- Graduate Research ......................................................... 9
- Graduate Seminar .......................................................... 2
- Product Development and Industrial Pharmacy .................. 2
- Research Funding and Proposal Development* ................. 1
- Research Techniques and Instrumentation ........................ 3
- Advanced Topics in Pharmaceutical Sciences .................... 1

**Third Year**

- Advanced Topics in Pharmaceutical Sciences .................... 2
- Dissertation Research ....................................................... 24
- Graduate Seminar .......................................................... 2

**Fourth Year**

- Graduate Seminar .......................................................... 2
- Dissertation Research ....................................................... 24

*HPD Core Courses
### Molecular Medicine and Pharmacogenomics

#### First Year

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<tr>
<td>Biostatistics I*</td>
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<td>Clinical Pharmacology</td>
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<tr>
<td>Molecular and Cellular Pharmacodynamics</td>
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<td>Experimental Statistics and Informatics</td>
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<td>Graduate Seminar</td>
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#### Second Year

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#### Third Year

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#### Fourth Year

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<tr>
<td>Dissertation Research</td>
<td>24</td>
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* HPD Core Courses

### Notes

- Qualifying exams will commence during the summer semester of the second year.
- Fourth and subsequent years are as necessary (maximum seven years).
- Graduation from the program requires the preparation and successful defense of a dissertation.
Foreign Coursework

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

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

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

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

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

**All admissions materials and foreign evaluations must be mailed to**

Nova Southeastern University
Enrollment Processing Services
3301 College Avenue, P.O. Box 299000
Fort Lauderdale, Florida 33329-9905

Transcripts can be sent electronically from the originating college/university to the following address: electronictranscripts@nova.edu.
Interview Process, Transfer Students, and Transfer Credits

Interview Process
A personal interview is part of the admissions process; however, being interviewed is not a guarantee of admission. Upon receipt of the completed application, a review will be made to determine if the applicant will be granted an interview. Not all applicants will be granted an interview. The Office of Admissions will notify selected applicants for interviews.

Pharm.D. 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 of the 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.
   a. an NSU application by March 15
   b. 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.
   a. official transcripts for all college coursework*
   b. a written statement outlining the reasons for requesting the transfer
   c. 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 indicates 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 Credits
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. Transfer credit will only be considered for courses designated with a graduate-level course number, passed with a grade of B or better, and from a regionally accredited graduate institution. Credit used toward an earned degree will not be transferred. Requests for transfer credit must be submitted in writing to the associate dean or director of the relevant program prior to August 1 of the year of matriculation. Pharm.D. students must complete a minimum of 30 credit hours of didactic coursework and all Advanced Pharmacy Practice Experiences (APPE) at NSU. Transfer credits may not exceed 2/3 of the required credits to complete the degree program. M.S. and Ph.D. students may transfer a maximum of 6 credits from a regionally accredited graduate institution.

For more information, see the NSU COP Student Handbook available at pharmacy.nova.edu.

* For information on foreign coursework, please see page 33.
Expenses, Financial Aid, Tuition, Fees, and Deposit

Expenses and Financial Aid

Students should anticipate spending approximately $2,000 a year for books, electronic devices (e.g., iPads), equipment, and supplies, and $14,000 for living expenses for a nine-month academic year.

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 Office of Student Financial Assistance at Nova Southeastern University is there 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 on our website at nova.edu/financialaid. For more information, contact Nova Southeastern University Office of Student Financial Assistance 3301 College Avenue Fort Lauderdale, Florida 33314-7796 (954) 262-3380 or 800-806-3680

Opportunity for a limited number of student employment positions are available. However, due to the intensity of all academic programs, employment during the semester is strongly discouraged.

Tuition

Tuition for all programs will be posted on our website at pharmacy.nova.edu. All tuition and fees are subject to change by the board of trustees without notice.

Only Florida residents in the entry-level program may qualify for in-state tuition. Information on applying for Florida residency status is available at nova.edu/cwis/hpdasa/florida-in-state-tuition.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 a change in residency.

Fees and Deposit—All programs

Acceptance and Preregistration Deposit—$1,000. This deposit is required to reserve the accepted applicant’s place in the entering first-year class. This deposit will be deducted from the tuition payment due on registration day, but is not refundable in the event of a withdrawal. It is due within three weeks of an applicant’s acceptance.

Health Professions Division General Access Fee—$145. This fee is required annually.

NSU Student Services Fee—$1,350. This fee is required annually.

Late Payment Fee—$100. All tuition and fees not paid within 30 days after the start of the semester will incur this late payment fee.

College of Pharmacy Fees—Additional fees may be incurred for immunization training, pharmacy testing, and other college-approved activities. These fees are estimated at $500 over the course of the program.

The first semester’s tuition and fees, less the $1,000 deposit, are due prior to the start of the semester. Tuition and fees for each subsequent semester are due on or before the start of each semester. 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 their education. This should include tuition, fees, iPads, computer-related expenses, health insurance, books, printing, required equipment, and living and miscellaneous 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.

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General Information

Office of International Students and Scholars
It is the responsibility of the international applicant to contact the Office of International Students and Scholars (OISS) for information on immigration regulations and student visa requirements. For more information, visit nova.edu/internationalaffairs/students/.

Student Health Insurance
All NSU COP students are required to maintain adequate health insurance. NSU will automatically enroll you in the Nova Southeastern University Student Medical Insurance Plan and charge your student account. If you are insured under another insurance plan, you will be required to complete an online waiver form by the given deadline. For more information, visit the insurance website at nova.edu/bursar/health-insurance/index.html.

Professional Insurance
All registered NSU COP students are covered under university liability insurance while on official university experiences and activities.

Core Performance Standards
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. For more information, see Core Performance Standards for Admissions and Progress in the student handbook available at pharmacy.nova.edu.

Pharmacy Intern License
A pharmacy intern license is a requirement for all Pharm.D. students and for placement on pharmacy practice experiences. All students must have a valid Social Security number to apply for, and receive, a pharmacy intern license in the Pharm.D. program. Without an intern license, a student cannot complete the curricular requirements.

It is the responsibility of all accepted international students to ensure that their visa status allows for the issuance of a Social Security number. International students in the Ph.D. program who are paid teaching assistants will also need to verify that their visa status allows for the issuance of a Social Security number for employment with the university.

Transportation
Pharm.D. students are responsible for having reliable transportation (e.g., a personal vehicle) to attend IPPE and APPE sites that may not be close to campus locations or be accessible by reliable public transportation.

Student Housing
Numerous apartments, condominiums, and other rental facilities are located near the NSU campuses. On-campus housing is also available in the Fort Lauderdale/Davie area. Information concerning on-campus and off-campus housing may be obtained at nova.edu/housing or by contacting the campuses listed below directly.

Fort Lauderdale/Davie Campus
3200 South University Drive
Fort Lauderdale, Florida 33328-2018
Phone: (954) 262-1300
Fax: (954) 262-2278
Toll Free: 800-356-0026, ext., 1200
Email: phss@nova.edu

Regional Campuses
nova.edu/campuses

Miami Campus
8585 SW 124th Avenue
Miami, Florida 33183-4600
Phone: (954) 262-1300
Fax: (954) 262-2278
Email: phss@nova.edu

Puerto Rico Regional Campus
997 San Roberto Street
San Juan, Puerto Rico 00926
Phone: (787) 773-6583
Fax: (787) 773-6595
Email: prphss@nova.edu