

2008

Doctor of Pharmacy Program Overview

Nova Southeastern University

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Ph.D.

doctor of pharmacy

NOVA SOUTHEASTERN UNIVERSITY • COLLEGE OF PHARMACY



NOVA SOUTHEASTERN
UNIVERSITY

HEALTH PROFESSIONS DIVISION

program description

Nova Southeastern University (NSU) College of Pharmacy (COP) offers a program of graduate study and research leading to the doctor of philosophy degree (Ph.D.). This unique, four-year program is composed of three areas of emphasis within professional pharmacy: drug discovery principles, the development and formulations of new drug products, and assessment of the socio-behavioral and economic impact on society and the health care system. COP faculty members have both Ph.D.s and Pharm.D.s, with a wide range of scholarly backgrounds and interests, including economics, pharmacology, management, medicinal chemistry, pharmacy administration, medical science, clinical psychology, biochemistry, chemistry, and health care administration. There are also two M.D.s and a lawyer on the COP faculty.

The Ph.D. program requires all graduate students to take the same courses in their first year. After completing a first year of study common to all, students will choose their own area of emphasis. Each of these plans is a highly focused, three-year course of study that emphasizes just one particular role in the effort to provide drugs for the treatment of disease. The student follows the plan deemed most appropriate by his or her academic background, new-found interests, and COP adviser. Because of its exclusive emphasis on pharmacy topics, the program does not duplicate degrees or courses offered by other NSU centers.



the three plans of study and research in the COP Ph.D. program are

Drug Discovery: emphasizing the coursework and laboratory and literature search skills that are key to determining the mechanisms, extent, and character of drug actions. The principle thrust of this particular plan centers on cardiovascular disease and, to a degree, cancer.

Drug Development: focusing on the theory and practice of incorporating drugs into the forms and formulations that best deliver the drugs to the site of the intended medical action.

Drug Use Issues: focuses on the various facets of the practitioner-patient interface, with emphasis on gerontology and ethnic experiences.

In addition, the Ph.D. graduate program is consistent with the criteria for accreditation set by the Southern Association of Colleges and Schools Commission on Colleges.

curriculum outline

Students are required to take and successfully complete a minimum of 60 credit hours, 36 of which must be in didactic coursework. A grade of B or better is required in the didactic work. No less than 54 of the credit hours 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 (GTA) and graduate research assistants (GRA) will be limited to a maximum load of 10 and a minimum of 6 credit hours per semester. Other students will be limited to a maximum of 15 and a minimum of 9 credit hours per semester.

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

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



COP Ph.D. Program Course Schedules

drug discovery
course schedule

Credits

Year 1—Fall Semester

Legal and Ethical Regulation of Pharmaceuticals	3
Bioethics*	3
Graduate Seminar	1
Graduate Research	2
Biostatistics 1*	3

Year 1—Spring Semester

Clinical Drug Development	3
Biostatistics 2*	3
Graduate Seminar	1
Graduate Research	2
Scientific Writing*	1

Year 1—Summer Semester

Research/Internships	3
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Year 2—Fall Semester

Research Techniques and Instrumentation	3
Molecular and Cellular Pharmacodynamics	3
Graduate Seminar	1
Graduate Research	2
Elective	3

Year 2—Spring Semester

Advanced Pharmacogenomics Molecular Medicines	3
Applied Medicinal Chemistry	3
Graduate Seminar	1
Graduate Research	2
Elective	3

Year 2—Summer Semester

Comprehensive Exams	0
Research Funding and Proposal Development*	1
Research Design*	3

Year 3—Fall Semester

Dissertation Research	8
Graduate Seminar	1

Year 3—Spring Semester

Dissertation Research	8
Graduate Seminar	1

Year 4—Fall Semester

Dissertation Research	8
Graduate Seminar	1

Year 4—Spring Semester

Dissertation Research	8
Graduate Seminar	1

drug development
course schedule

Credits

Year 1—Fall Semester

Legal and Ethical Regulation of Pharmaceuticals	3
Bioethics*	3
Graduate Seminar	1
Graduate Research	2
Biostatistics 1*	3

Year 1—Spring Semester

Clinical Drug Development	3
Biostatistics 2*	3
Graduate Seminar	1
Graduate Research	2
Scientific Writing*	1

Year 1—Summer Semester

Research/Internships	3
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Year 2—Fall Semester

Research Techniques and Instrumentation	3
Pharmaceutical Technology	3
Graduate Seminar	1
Graduate Research	2
Elective	3

Year 2—Spring Semester

Advances in Drug Delivery	3
Polymers in Pharmaceutical and Biomedical Systems	3
Graduate Seminar	1
Graduate Research	2
Elective	3

* Core Course

COP Ph.D. Program Course Schedules (cont.)

Drug Development Course Schedule (cont.) Credits

Year 2—Summer Semester

Comprehensive Exams	0
Research Funding and Proposal Development*	1
Research Design*	3

Year 3—Fall Semester

Dissertation Research	8
Graduate Seminar	1

Year 3—Spring Semester

Dissertation Research	8
Graduate Seminar	1

Year 4—Fall Semester

Dissertation Research	8
Graduate Seminar	1

Year 4—Spring Semester

Dissertation Research	8
Graduate Seminar	1

Drug Use Issues Course Schedule Credits

Year 1—Fall Semester

Legal and Ethical Regulation of Pharmaceuticals	3
Bioethics*	3
Graduate Seminar	1
Graduate Research	2
Biostatistics 1*	3

Year 1—Spring Semester

Clinical Drug Development	3
Biostatistics 2*	3
Graduate Seminar	1
Graduate Research	2
Scientific Writing*	1

Year 1—Summer Semester

Research/Internships	3
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Year 2—Fall Semester

Social Measurement	3
Advanced Quantitative Methods	3
Graduate Seminar	1
Graduate Research	2
Elective	3

Year 2—Spring Semester

Pharmacy and the Health Care System	3
Theories of Health- Seeking Behavior	3
Graduate Seminar	1
Graduate Research	2
Elective	3

Year 2—Summer Semester

Comprehensive Exams	0
Research Funding and Proposal Development*	1
Research Design*	3

Year 3—Fall Semester

Dissertation Research	8
Graduate Seminar	1

Year 3—Spring Semester

Dissertation Research	8
Graduate Seminar	1

Year 4—Fall Semester

Dissertation Research	8
Graduate Seminar	1

Year 4—Spring Semester

Dissertation Research	8
Graduate Seminar	1

Nova Southeastern University admits students of any race, color, sex, age, nondisqualifying disability, religion or creed, sexual orientation, or national or ethnic origin to all the rights, privileges, programs, and activities generally accorded or made available to students at the school, and does not discriminate in administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other school-administered programs. ■ Nova Southeastern University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097, Telephone number: 404-679-4501) to award associate's, bachelor's, master's, educational specialist, and doctoral degrees.

admission requirements

The College of Pharmacy selects students based on the candidates' application content, academic performance, scores from the Graduate Record Examination (GRE), letters of evaluation, and personal interviews. In order to be considered for admission into the Doctor of Philosophy in Pharmacy program, the applicant must meet the following requirements.

1. Prior to matriculation, applicants must have completed a bachelor's degree in pharmacy, mathematics, or science from a regionally accredited institution of higher education. While deficiencies in these areas do not preclude admission, at the discretion of the Graduate Committee, students may be required to make up the deficiencies prior to advancement in the program.
2. Students must have minimum cumulative grade point averages of 3.0 or better on a 4.0 scale. To assure a well-rounded background for the Ph.D. program, the college requires students to have a background in pharmacy or science.
3. Graduates of foreign institutions where English is not the primary language of instruction must submit official Test of English as a Foreign Language (TOEFL) scores. The minimum Internet-based score is 80. Candidates who take the paper-based exam must score a minimum of 213.

application procedures

Applicants may apply for matriculation into the fall semester. The Office of Admissions processes applications on a rolling admissions basis, therefore, it is in the best interest of the applicant to apply as early as possible. In order to be considered for admission, students must complete the application form and submit supporting documents and a nonrefundable fee of \$50.

candidates for admission must submit

■ application

1. Applicants may apply for admission electronically by using an interactive, Web-based application (accessed at <http://pharmacy.nova.edu/admissions>) and following the appropriate instructions.
2. Applicants may also have an application mailed to them. Please contact the Office of Admissions.

3. In order to be processed, all applications must be submitted, with the application fee, to Nova Southeastern University, Enrollment Processing Service (EPS), College of Pharmacy, Office of Admissions, 3301 College Avenue, P.O. Box 299000, Fort Lauderdale, Florida 33329-9905.

■ transcripts

Official transcripts of all work attempted at all colleges and universities must be forwarded by the institutions attended to EPS. It is the responsibility of the applicant to ensure that arrangements are made for these transcripts to be sent. A final transcript covering all of the applicant's work must be forwarded to EPS prior to matriculation.

■ letters of evaluation

Two individual letters of evaluation from professors in the applicant's major field of study are required.

■ test scores

All applicants are required to submit official Graduate Record Examination (GRE) scores. The NSU code is 5522. GRE scores must be less than five years old prior to the candidate's matriculation.

■ foreign coursework

Undergraduate coursework taken at a foreign institute must be evaluated for U.S. institution equivalence. You should contact one of the three services listed below for the evaluation. It is the applicant's responsibility to have the coursework evaluated. A complete course-by-course evaluation must be sent to the office of admissions.

1. World Education Services
2. Josef Silny & Associates
3. Educational Credential Evaluators, Inc.

personal interview

Upon receipt of the completed application and required credentials, the Committee on Admissions will select those applicants to be interviewed. Interviews will be conducted on the Nova Southeastern University Fort Lauderdale campus and are by invitation only. The Office of Admissions will notify those who are selected for an interview of the date and time of such an interview. Being granted an interview is not a guarantee of admission.