Pharmacists promote the safe and effective use of drugs by providing pharmaceutical care. In addition to preparing and dispensing medications prescribed by physicians, pharmacists provide information to patients about medications and their use; advise physicians and other health care practitioners on the selection, dosages, interactions, and adverse effects of drug therapy; and monitor patient response to drug therapy.

The profession of pharmacy requires a significant amount of patient contact. Counseling by the pharmacist is considered essential in improving drug therapy outcomes. Traditionally, most pharmacists work in a community setting, such as a retail pharmacy, or in a health-care facility, such as a hospital. Community pharmacists dispense medications, counsel patients, and answer questions about prescription drugs. They provide information and make recommendations about over-the-counter medications, products, and medical equipment. A community pharmacy offers the opportunity to combine specialized pharmaceutical training with skills in clinical patient management, business administration, and marketing. In addition to patient contact and counseling, community pharmacists also spend considerable time discussing health-related matters with the prescribing physicians. Pharmacists in health-care facilities dispense medications and collaborate with medical staff regarding the selection and effects of drugs. They also assess, plan, and monitor drug regimens and counsel patients on use of medications while in the hospital and at discharge. Hospital pharmacists have the opportunity to apply clinical skills in the management of drug therapy through participation in patient rounds, drug utilization review, and consultation with physicians on individual therapeutic regimens. Some pharmacists specialize in specific drug therapy areas, such as geriatrics or oncology (cancer).

Opportunities are expanding for pharmacists elsewhere. Health maintenance organizations, private practice groups, long-term-care facilities, home health care, the Public Health Service, the armed services, and law enforcement agencies such as the Federal Drug Enforcement Administration all require pharmacists. Other graduates find employment in drug development or marketing, colleges of pharmacy, or professional association management. Many graduates of the pharmacy program go on to leading graduate schools, residencies, or fellowship programs for specialized training.

The six-year Doctor of Pharmacy curriculum offers a blend of academic, cooperative education, and advanced practice experiences.

In order to be eligible for a pharmacy degree, a student must have satisfactorily completed all prescribed courses in his or her curriculum, have an overall 2.000 GPA, and must meet the cooperative education, advanced practice experience, and other requirements as stated in the Bouvé College of Health Sciences Undergraduate Student Information Manual. The undergraduate program, which is accredited by the Accreditation Council for Pharmacy Education (ACPE), subscribes to the standards established by ACPE and the American Association of Colleges of Pharmacy.

Pharmacy graduates must meet certain requirements to obtain a license from the state in which they want to practice. Those requirements include graduating from an accredited school of pharmacy, passing an examination given by a state board of pharmacy, and completing an internship.

The internship is a period of practical experience under the supervision of a registered pharmacist. Massachusetts requires 1,500 internship hours, of which 1,100 hours can be satisfied through cooperative education in years three through five. Students may apply for up to 400 internship hours during their advanced-practice experiences in year six.

**Academic Progression Standards**

Students must adhere to the program plan for their year of graduation. Any deviation from the prescribed curriculum will require permission and an approved plan of study from the Pharmacy Academic Standing Committee. Students must receive a grade of C or better in professional prerequisites beginning with the second year. Students must have an overall GPA of at least 2.700 to progress from second- to third-year status and have satisfactorily completed all courses in years one and two of the curriculum. In order to progress into any subsequent year of the program, the student must have passed all professional courses with a grade of C or better.
PharmD—Doctor of Pharmacy

PHARMACY MAJOR GRADE REQUIREMENT
A grade of C or higher is required in all PMD and PSC courses. A GPA of 2.700 is necessary to progress from second to third year. See “Academic Requirements” on page 218 and “Academic Progression Standards” on page 237 for additional grade and progression requirements.

SEMESTER 1 (FALL)
Freshman Seminar
Complete the following course:
BHS U100 College: An Introduction 1 SH

Biology 1
Complete the following course with corresponding lab:
BIO U111 General Biology 1 4 SH
with BIO U112 Lab for BIO U111 1 SH

Chemistry 1
Complete the following course with corresponding lab:
CHM U211 General Chemistry 1 4 SH
with CHM U212 Lab for CHM U211 1 SH

Introductory English
Complete the following course with a grade of C or higher:
ENG U111 College Writing 4 SH

Psychology
Complete the following course:
PSY U101 Foundations of Psychology 4 SH

SEMESTER 2 (SPRING)

Biology 2
Complete the following course with corresponding lab:
BIO U113 General Biology 2 4 SH
with BIO U114 Lab for BIO U113 1 SH

Chemistry 2
Complete the following course with corresponding lab:
CHM U214 General Chemistry 2 4 SH
with CHM U215 Lab for CHM U214 1 SH

Calculus
Complete the following course:
MTH U141 Calculus 1 4 SH

Profession of Pharmacy
Complete the following course:
PMD U101 Introduction to the Profession of Pharmacy 1 SH

Arts/Humanities Level 1
Complete one course to satisfy the NU Core arts/humanities level 1 requirement as described on page 42.

SEMESTER 3 (FALL)

Physics
Complete the following course with corresponding lab:
PHY U149 Physics for Pharmacy 4 SH
with PHY U150 Lab for PHY U149 1 SH

Organic Chemistry 1
Complete the following course with corresponding lab:
CHM U311 Organic Chemistry 1 4 SH
with CHM U312 Lab for CHM U311 1 SH

Human Physiology 1 and Human Anatomy Lab
Complete the following course with corresponding lab:
PSC U301 Human Physiology 1 3 SH
with PSC U302 Human Anatomy Lab 1 SH

Comparative Study of Cultures
Complete one course to satisfy the NU Core comparative study of cultures requirement as described on page 42.

SEMESTER 4 (SPRING)

Co-op Seminar/Pharmacy Practice
Complete the following course:
PMD U201 Introduction to Pharmacy Practice 1 SH

Organic Chemistry 2
Complete the following course with corresponding lab:
CHM U313 Organic Chemistry 2 4 SH
with CHM U314 Lab for CHM U313 1 SH

Human Physiology 2 and Human Physiology Lab
Complete the following course with corresponding lab:
PSC U303 Human Physiology 2 3 SH
with PSC U304 Human Physiology Lab 1 SH

Medical Microbiology
Complete the following course:
PSC U360 Medical Microbiology 3 SH

Free Elective
Complete one course outside pharmacy.

GPA PROGRESSION REQUIREMENT FOR THIRD YEAR
A 2.700 GPA is required to progress to the third year.

SEMESTER 5 (FALL)

Biochemistry
Complete the following course:
PSC U320 Biochemistry 4 SH

Pharmacology/Medicinal Chemistry 1
Complete the following course:
PSC U501 Pharmacology/Medicinal Chemistry 1 5 SH

Writing for the Health Professions
Complete the following course with a grade of C or higher:
ENG U306 Advanced Writing in the Health Professions 4 SH

Pharmaceutics 1
Complete the following course:
PSC U411 Pharmaceutics 1 4 SH

SEMESTER 6 (SUMMER)

Health-Care Systems
Complete the following course:
PMD U350 Health-Care Systems 3 SH
Communication Skills for Pharmacists
Complete the following course with corresponding lab:
PMD U310 Communication Skills for Pharmacists 3 SH
with PMD U311 Lab for PMD U310 1 SH

Pharmacology/Medicinal Chemistry 2
Complete the following course:
PSC U502 Pharmacology/Medicinal Chemistry 2 5 SH

Pharmaceutics Laboratory
Complete the following course:
PSC U419 Pharmaceutics Laboratory 1 SH

Pharmaceutics 2
Complete the following course:
PSC U412 Pharmaceutics 2 4 SH

SEMESTER 7 (SPRING)
Pharmacokinetics and Biopharmaceutics
Complete the following course:
PSC U430 Pharmacokinetics and Biopharmaceutics 3 SH

Immunology
Complete the following course:
PSC U330 Immunology 3 SH

Self-Care Therapeutics
Complete the following course:
PMD U440 Self-Care Therapeutics 4 SH

Pathophysiology
Complete the following course:
PMD U401 Pathophysiology 4 SH

Research Methodology and Biostatistics
Complete the following course:
PMD U450 Research Methodology and Biostatistics 4 SH

SEMESTER 8 (SUMMER)
Therapeutic Drug Monitoring
Complete the following course:
PMD U510 Therapeutic Drug Monitoring and Applications 2 SH

Toxicology
Complete the following course:
TOX U570 Clinical Toxicology 2 SH

Pharmacy Care Management
Complete the following course:
PMD G250 Pharmacy Care Management 3 SH

Therapeutics 1
Complete the following course with corresponding seminar:
PMD U539 Therapeutics 1 3 SH
with PMD U540 Therapeutics Seminar 1 1 SH

Drug Information
Complete the following course:
PMD U560 Drug Information and Evaluation 3 SH

SEMESTER 9 (FALL)
Therapeutics 2 and 3
Complete the following two courses with corresponding seminar:
PMD G244 Therapeutics 2 4 SH
PMD G242 Therapeutics 3 4 SH
PMD G243 Therapeutics Seminar 2–3 1 SH

Jurisprudence
Complete the following course:
PMD U530 Jurisprudence 3 SH

Pharmaceutical Care Practice 1 and Lab
Complete the following course with corresponding lab:
PMD U565 Pharmaceutical Care Practice 1 1.5 SH
with PMD U566 Lab for PMD U565 0.5 SH

Free Elective
Complete any one elective.

SEMESTER 10 (SPRING)
Therapeutics 4 and 5
Complete the following two courses with corresponding seminar:
PMD G244 Therapeutics 4 4 SH
PMD G245 Therapeutics 5 4 SH
PMD G246 Therapeutics Seminar 4–5 1 SH

Pharmacoconomics
Complete the following course:
PMD G270 Pharmacoconomics 4 SH

Pharmaceutical Care Practice 2 and Lab
Complete the following course with corresponding lab:
PMD U575 Pharmaceutical Care Practice 2 1.5 SH
with PMD U576 Lab for PMD U575 0.5 SH

Free Elective
Complete any one elective.

YEAR 6 (SUMMER, FALL, SPRING)
Advanced Practice Experience
Select courses from the following list to complete six 6-week rotations for a total of 36 semester hours:
PMD G440 to PMD G468

NU CORE REQUIREMENTS
See page 42 for requirement list.

GENERAL ELECTIVES
Additional courses taken beyond college and major course requirements to satisfy graduation credit requirements.

COOPERATIVE EDUCATION

UNIVERSITY-WIDE REQUIREMENTS
210 total semester hours required
Minimum 2.000 GPA required