

# Pharmacy (Professional Program: PharmD)

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<https://pharmacy.uic.edu/programs/pharmd>

## PharmD Program

The College of Pharmacy offers the Doctor of Pharmacy degree. The PharmD is the highest level of professional education in pharmacy and has been approved by the [Accreditation Council for Pharmacy Education \(ACPE\)](#) as the sole entry-level degree for the profession.

The curriculum provides a patient-centered education that develops skills and attitudes necessary to anticipate change, criticize, evaluate, and modify practice in a changing healthcare arena. The curriculum also provides a fundamental core of knowledge necessary to meet the competencies for a general practitioner who delivers pharmaceutical care.

The program prepares students to:

- enter the practice of pharmacy to serve society as ethical and caring professionals;
- apply knowledge of drugs and drug therapy to solve problems and make decisions on behalf of their patients;
- educate, communicate, and collaborate with patients, colleagues, and other health professionals;
- learn—professional practice is a lifelong learning experience;
- practice pharmacy in traditional and nontraditional settings;
- assume a leadership role in the future direction of the profession.

To earn the Doctor of Pharmacy degree, students complete a minimum of six years of study: the first two years of pre-pharmacy coursework can be accomplished at any regionally accredited college or university; the final four years of professional education are completed at the UIC College of Pharmacy (Chicago or Rockford Campus). The prospective applicant is advised to contact the Office of Student Affairs (OSA) at the College of Pharmacy for further information at (312) 996-7242 or to obtain information from the [College of Pharmacy website](#).

The Doctor of Pharmacy is a professional degree program. For more information on the PharmD program and the application process, please consult the following websites:

- [Information for prospective students](#), including pre-pharmacy coursework and admission requirements
- [PharmD curriculum outline](#)
- [Information for current students](#), including advising and the Student Handbook

The following are the joint degrees programs currently offered in the College of Pharmacy. Visit the College of Pharmacy website for additional [information about the joint programs](#) or contact the College of Pharmacy Office of Student Affairs, Room 154.

## Optional PharmD Concentrations

The PharmD program offers eight optional concentrations. The Urban Pharmacy Services (UPHARM) in Chicago and Rural Pharmacy Services (RPHARM) in Rockford are interprofessional programs of study available to students who plan to practice pharmacy in rural Illinois or urban Illinois. Students apply to these programs upon admission into the PharmD, but before they enroll in the PharmD program.

In addition, the college offers six concentrations designed to deliver a focused level of expertise through didactic coursework, independent study, and APPE. Students apply to these concentrations in the fall of the P2 year. These concentrations are offered in the following areas:

- Pharmaceutical Sciences
- Health Economics and Outcomes Research
- Acute Care Pharmacy
- Ambulatory Care Pharmacy
- Experimental Therapeutics and Clinical Research
- Pharmacy Administration and Leadership

Detailed information on all PharmD concentrations can be found on the [PharmD Academic](#) page.

## Joint Degrees

### PharmD-PhD Program

In response to industry and academic demands for pharmacists with PhD training, the college offers a joint Doctor of Pharmacy (PharmD) – PhD degree program. Students enrolled in this program can pursue the PharmD—the standard degree for pharmacists—simultaneously with any of the college's PhD degree offerings. The joint program is highly competitive and designed for select students who have interests in both the clinical aspects of pharmacy and research in the pharmaceutical sciences. With judicious selection and timing of courses, joint program participants can earn both degrees in less overall time than would be required to complete the degrees separately.

### PharmD-MSHI Program

This joint degree program integrates Pharmacy Science and clinical practice with health informatics, the goal being identification, collection, processing and management of information to support pharmacy practice, administration, education and research. It promotes the expansion of pharmacy knowledge and leadership and is an important new dimension of pharmacy practice. Students in this joint program learn to identify the social issues that inhibit the effective use of information technology in health care and to apply creative solutions that address these issues.

## PharmD-MBA Program

The five-year joint PharmD/MBA program provides students with the business skills necessary to manage health care facilities as well as their own practices. Students spend the first two academic years in the College of Pharmacy. During the summers of the first two years, they can complete up to 16 semester hours of MBA core courses. The third year of the program will be dedicated to fulfilling the remaining requirements towards the MBA through the CBA. If students carefully follow the recommended course sequence, they should be able to complete the program in five years. Pharmacy students must complete all requirements in the College of Pharmacy prior to receiving the MBA.

## Admission Requirements

- **Prerequisite Coursework<sup>a</sup>** The following prerequisite courses with a grade of C- or better are required. Each course must be a minimum of 3 semester or 4 quarter hours.

- **AP and Test-Out Credits:** AP and test-out credits will be accepted to meet pre-pharmacy prerequisite coursework if credit for these are given on a transcript. [Pre-Pharmacy Prerequisite Coursework Guides](#) are available for most Illinois schools and some out-of-state schools.
- **Prerequisite Completion Deadline:** All pre-pharmacy prerequisite courses do not need to be completed at the time of application. The prerequisites remaining at the time of application must be included in the coursework section of the PharmCAS application, indicating the particular course that will be taken, as well as where and when the course(s) will be taken.
- **Foreign Coursework:** Any applicant with foreign coursework (other than study abroad coursework taken through a US college) must provide a WES foreign coursework report. Please contact the Office of Student Affairs (email [Pharmd@uic.edu](mailto:Pharmd@uic.edu)) with any questions.

- **Code**                      **Title**    **Hours**

### Communication Coursework

Written Communication: 1 semester or 1 quarter course

Verbal Communication: 1 semester or 1 quarter course

Additional (Written or Verbal): 1 semester or 1 quarter course

### Life Sciences Coursework

General Biology and Labs: 2 semester or 3 quarter courses

Anatomy and Physiology: 2 semester or 2-3 quarter courses

Microbiology and Lab: 1 semester or 1 quarter courses

### Physical Sciences Coursework

General (Inorganic) Chemistry and Labs: 2 semester or 3 quarter courses

Organic Chemistry and Labs: 2 semester or 3 quarter courses

Physics: 1 semester or 1 quarter courses

Biochemistry: 1 semester or 1 quarter course

### Mathematics/Statistics Coursework

Calculus (integrals and derivatives): 1 semester or 1 quarter course

Statistics: 1 semester or 1 quarter course

### Social/Behavioral Science Coursework

Social/Behavioral Sciences: 1 semester or quarter course

### Humanities Coursework

Humanities: 1 semester or 1 quarter course

- **Minimum Grade Point Average** To be considered applicants must have a GPA of 2.50/4.00 or higher in three areas:
  - *Cumulative:* All coursework taken at every institution attended; grades from all attempts of repeated courses are included.
  - *Pre-Pharmacy Prerequisites:* Only coursework used to meet the prerequisites; only the highest grades from the repeated courses are included.
  - *Science/Math:* All science and math-related coursework; grades from all attempts of repeated courses are included.
  - Applicants not meeting the GPA requirements at the time of application will be considered for review again after the PharmCAS Fall and/or Spring Academic Update.
- **Test Scores** Although the **PCAT** (Pharmacy College Admissions Test) is not required, it is one of many things considered in a holistic application review if an applicant opts to take it. Admitted students composite scores have ranged from 30 to 99 (percentile). Low scores cannot hurt an applicant. Scores above 50th percentile will be a plus and taken into account in the application review process.
- **Service and Professional Development Activities** Prospective students are expected to demonstrate a record of participation in activities that develop and demonstrate personal responsibility, improve communication and people skills, further personal knowledge of pharmacists' roles and the pharmacy profession, and activities that demonstrate leadership abilities. These include health care-related employment opportunities, pharmacy/healthcare shadowing or volunteer experiences, sustained organizational memberships, and community service.
- **Minimum English Competency Test Score**
  - **TOEFL iBT** 80, with subscores of Reading 19, Listening 17, Speaking 20, and Writing 21, **OR**,
  - **IELTS Academic** 6.5, with 6.0 in each of the four subscores, **OR**,
  - **PTE-Academic** 54, with subscores of Reading 51, Listening 47, Speaking 53, and Writing 56.
- **Recommenders** Names of at least two recommenders must be provided (one academic and one work or volunteer supervisor).
- **Application<sup>a</sup>** Students apply using the PharmCAS application. Students who have met the prerequisite and GPA requirements will be invited to submit the UIC PharmD Supplemental Application after the coursework and GPA information have been verified.

a For detailed information on meeting the admissions requirements and submitting the application, please see the [PharmD Admissions Requirements website](#).

## Degree Requirements

- **Minimum Semester Hours Required** 133.
- **Coursework<sup>a</sup>**

Code	Title	Hours
<b>Year 1, Fall Semester (17-18 hours)</b>		
PHAR 410	Integrated Physiology	

PHAR 411	Introduction Pharmacy Practice
PHAR 422	Fundamentals of Drug Action
PHAR 431	Pharmaceutics I - Pharmaceutics Principles, Drug Delivery Systems, and Calculations
PHAR 435	Pharmacokinetics
PHAR 465	Pharmacy Learning, Advising, Mentoring, and Engagement for Students (PhLAMES) 1

## Electives

**Year 1, Spring Semester (17-18 hours)**

PHAR 412	Introductory Pharmacy Practice (IPPE): Community
or PHAR 413	Introductory Pharmacy Practice Experience (IPPE): Hospital
PHAR 423	Fundamentals of Drug Action II
PHAR 432	Pharmaceutics II – Pharmaceutical Dosage Forms and Calculations
PHAR 438	Introduction to Drug Information
PHAR 461	Pharmacy and the U.S. Healthcare System
PHAR 501	Pathophysiology, Drug Action, and Therapeutics (PDAT) 1: Self Care
PHAR 502	Pathophysiology, Drug Action, and Therapeutics (PDAT) 2: GI/Endocrine
PHAR 466	Pharmacy Learning, Advising, Mentoring, and Engagement for Students (PhLAMES) 2

## Electives

**Year 2, Fall Semester (16-18 hours)**

PHAR 412	Introductory Pharmacy Practice (IPPE): Community
or PHAR 413	Introductory Pharmacy Practice Experience (IPPE): Hospital
PHAR 433	Pharmaceutics III – Complex Dosage Forms and Calculations
PHAR 462	Social and Behavioral Pharmacy
PHAR 463	Personal and Professional Development
PHAR 503	Pathophysiology, Drug Action, and Therapeutics (PDAT) 3: Renal, Electrolytes, and Nutrition
PHAR 504	Pathophysiology, Drug Action, and Therapeutics (PDAT) 4: Immunology/Respiratory
PHAR 467	Pharmacy Learning, Advising, Mentoring, and Engagement for Students (PhLAMES) 3

## Electives

**Year 2, Spring Semester (15-18 hours)**

PHAR 414	Introductory Pharmacy Practice (IPPE): Introduction to Patient Care
PHAR 434	Pharmaceutics IV – Drug Delivery Systems Design and Calculations Competency

PHAR 439	Pharmacoepidemiology and Biostatistical Reasoning
PHAR 440	Evidence-Based Medicine
PHAR 505	Pathophysiology, Drug Action, and Therapeutics (PDAT) 5: Cardiovascular
PHAR 506	Pathophysiology, Drug Action, and Therapeutics (PDAT) 6: Infectious Diseases
PHAR 468	Pharmacy Learning, Advising, Mentoring, and Engagement for Students (PhLAMES) 4

## Electives

**Year 3, Fall Semester (14-18 hours)**

PHAR 507	Pathophysiology, Drug Action, and Therapeutics (PDAT) 7: Neurology, Psychiatry, and Pain
PHAR 508	Pathophysiology, Drug Action, and Therapeutics (PDAT) 8: Special Topics
PHAR 515	Patient Care: Institutional/Hospital
or PHAR 516	Patient Care: Ambulatory Care/Community
PHAR 520	Applied Pharmaceutics, Pharmacokinetics, and Pharmacogenomics
PHAR 565	Pharmacoeconomics and Payment
PHAR 469	Pharmacy Learning, Advising, Mentoring, and Engagement for Students (PhLAMES) 5

## Electives

**Year 3, Spring Semester (13-18 hours)**

PHAR 509	Pathophysiology, Drug Action, and Therapeutics (PDAT) 9: Hematology and Oncology
PHAR 510	Pathophysiology, Drug Action, and Therapeutics (PDAT) 10: Advanced Disease Management
PHAR 515	Patient Care: Institutional/Hospital
or PHAR 516	Patient Care: Ambulatory Care/Community
PHAR 566	Management and Informatics
PHAR 567	Pharmacy Law and Ethics
PHAR 470	Pharmacy Learning, Advising, Mentoring, and Engagement for Students (PhLAMES) 6

## Electives

**Year 3, Summer and Year 4, Fall and Spring Semesters (28 Hours)**

Advanced Pharmacy Practice Experiences - APPE (7x6-week APPEs, 4 semester hours each) <sup>b</sup>	
PHAR 471	Pharmacy Learning, Advising, Mentoring, and Engagement for Students (PhLAMES) 7
PHAR 472	Pharmacy Learning, Advising, Mentoring, and Engagement for Students (PhLAMES) 8

*a Academic policies related to the College of Pharmacy curriculum are available on the [College of Pharmacy website](#).*

b Four APPE courses are required (Community, Hospital, Ambulatory Care, and Medicine). The remaining three APPE courses are selected from a list of APPE options in consultation with the program advisors.

## Optional PharmD Concentration Requirements

### Concentration in Rural Pharmacy (RPHARM)

Code	Title	Hours
<b>Required Courses</b>		
PMPR 315	Foundations in Rural Family and Community Healthcare I	
PMPR 316	Foundations in Rural Family and Community Healthcare II	
PMPR 317	Foundations in Rural Family and Community Healthcare III	
PMPR 318	Foundations in Rural Family and Community Healthcare IV	
PMPR 319	Foundations in Rural Family and Community Healthcare V	
PMPR 320	Foundations in Rural Family and Community Healthcare VI	
PMPR 321	Capstone Project in Rural Healthcare	
3 APPEs in same rural community		
RPHARM students complete a total of 135 hours for the degree.		

### Concentration in Urban Pharmacy (UPHARM)

Code	Title	Hours
<b>Required Courses</b>		
PSOP 391	Foundations in Urban Family and Community Healthcare 1	
PSOP 392	Foundations in Urban Family and Community Healthcare 2	
PSOP 393	Foundations in Urban Family and Community Healthcare 3	
PSOP 394	Foundations in Urban Family and Community Healthcare 4	
PSOP 395	Foundations in Urban Family and Community Healthcare 5	
PSOP 396	Foundations in Urban Family and Community Healthcare 6	
PSOP 397	Capstone Project in Urban Healthcare	
2 APPEs in designated urban community		
UPHARM students complete a total of 135 hours for the degree		

### Concentration in Pharmaceutical Sciences

Code	Title	Hours
<b>Required Electives (5 Hours)</b>		
PSCI 485	Concentration Research	
PSCI 501	Drug Discovery, Design, and Development	
<b>Required Experiential Elective (4 Hours)</b>		
<b>Selectives (4 Hours)</b>		

Select from:

PSCI 425	College of Pharmacy Colloquium Lecture Series
PSCI 503	Biostatistics for Pharmaceutical Scientists
PSCI 510	Principles of Pharmaceutics and Drug Delivery
PSCI 518	Advanced Drug Delivery Systems
PSCI 520	Research Techniques in Pharmacognosy
PSCI 530	Principles of Medicinal Chemistry
PSCI 541	Pharmaceutical Applications of Genomics

### Concentration in Health Economics and Outcomes Research

Code	Title	Hours
<b>Required Electives (6 Hours)</b>		
PSOP 485	Concentration Research	
PSOP 489	Health Economics and Outcomes Research Overview	
PSOP 595	Departmental Seminar in Pharmacy Systems, Outcomes and Policy	

**Required Experiential Elective (4 Hours)**

**Selectives (3 Hours)**

Select from:

PSOP 516	Comparative Effectiveness Research
PSOP 526	Pharmacoepidemiology
PSOP 535	Pharmaceutical Policy
PSOP 573	Principles of Economic Evaluations of Health Care Interventions

### Concentration in Acute Care Pharmacy

Code	Title	Hours
<b>Required Electives (5 Hours)</b>		
PMPR 485	Concentration Research	
PMPR 376	Applied Research Methods and Skill Development	
or PMPR 487	Clinical Research Design	
PMPR 486	Concentration Seminar	

**Required Experiential Elective (4 Hours)**

**Selectives (4 Hours)**

Select from:

PMPR 330	Journal Club and Advanced Literature Analysis
PMPR 345	Clinical Toxicology
PMPR 347	Advanced Transplant Therapeutics
PMPR 349	Case Based Infectious Diseases
PMPR 359	Topics and Issues in Clinical Post-Graduate Training Programs
PMPR 378	Pediatric Therapeutics
PMPR 381	Chronic Kidney Disease (CKD) - Interventions and Treatment
PMPR 430	Critical Care I

## Concentration in Ambulatory Care Pharmacy

Code	Title	Hours
<b>Required Electives (5 Hours)</b>		
PMPR 485	Concentration Research	
PMPR 376	Applied Research Methods and Skill Development	
or PMPR 487	Clinical Research Design	
PMPR 486	Concentration Seminar	
<b>Required Experiential Elective (4 Hours)</b>		
<b>Selectives (4 Hours)</b>		
Select from:		
PMPR 338	Management of the HIV Patient	
PMPR 339	Exploration of Telemedicine in Pharmacy Practice	
PMPR 348	Advanced Topics in Ambulatory Care	
PMPR 356	The Role of the Pharmacist in Tobacco Cessation	
PMPR 358	Pharmacotherapeutic Issues in Women's Health	
PMPR 359	Topics and Issues in Clinical Post-Graduate Training Programs	
PMPR 362	Clinical Aspects of Diabetes Mellitus	
PMPR 378	Pediatric Therapeutics	
PMPR 381	Chronic Kidney Disease (CKD) - Interventions and Treatment	
PMPR 383	Managed Care Pharmacy	

## Concentration in Experimental Therapeutics and Clinical Research

Code	Title	Hours
<b>Required Electives (5 Hours)</b>		
PMPR 485	Concentration Research	
PMPR 376	Applied Research Methods and Skill Development	
or PMPR 487	Clinical Research Design	
PMPR 486	Concentration Seminar	
<b>Required Experiential Elective (4 Hours)</b>		
<b>Selectives (4 Hours)</b>		
Select from:		
PMPR 330	Journal Club and Advanced Literature Analysis	
PMPR 376	Applied Research Methods and Skill Development	
PMPR 380	Undergraduate Research in Pharmacy Practice	
PMPR 390	Special Projects in Pharmacy Practice	
PMPR 450	Medical writing	
PMPR 485	Concentration Research	
PMPR 487	Clinical Research Design	
PSCI 425	College of Pharmacy Colloquium Lecture Series	

## Concentration in Pharmacy Administration and Leadership

Code	Title	Hours
<b>Required Electives (7 Hours)</b>		
PMPR 485	Concentration Research	
PMPR 376	Applied Research Methods and Skill Development	
or PMPR 487	Clinical Research Design	
PMPR 486	Concentration Seminar	
PMPR 488	Pharmacy Practice Leadership	
<b>Required Experiential Elective (4 Hours)</b>		
<b>Selectives (2 Hours)</b>		
Select from:		
PMPR 329	The Dean's Seminar: Career Insights from Pharmacy Leaders	
PMPR 359	Topics and Issues in Clinical Post-Graduate Training Programs	
PMPR 383	Managed Care Pharmacy	
PMPR 442	Introduction to Specialty Pharmacy	