# **Doctor of Pharmacy**

## The School of Pharmacy

Since its founding in 1885, the University of Kansas School of Pharmacy (http://pharmacy.ku.edu/) has been a leader in pharmacy education. Since 1996, the school has offered only the Doctor of Pharmacy degree as the entry-level practice degree. The curriculum gives the student the knowledge, skills, and ability required of the pharmacy practitioner; it is comprehensive and produces a highly competent general practitioner.

About 60 full-time faculty members teach in the professional Doctor of Pharmacy program and in the graduate programs. 3 departments (Pharmacology and Toxicology, Medicinal Chemistry, and Pharmaceutical Chemistry) offer Master of Science and Doctor of Philosophy degrees. Pharmacy Practice offers the master's degree.

Both the undergraduate and graduate divisions have outstanding national and international reputations based on the excellence and productivity of the faculty. KU is consistently ranked in the top 5 among colleges/schools of pharmacy that receive National Institutes of Health research funding.

The School of Pharmacy is fully accredited by the Accreditation Council for Pharmacy Education (https://www.acpe-accredit.org/), 190 S. LaSalle St, Suite 2850, Chicago, IL 60603-4810, (312) 664-3575, info@acpe-accredit.org, the official accrediting body for American schools of pharmacy.

## **Advising**

On admission to the school, students are assigned faculty members as advisors. The advisor serves continuously during the student's tenure in the school. Students are expected to meet with their advisors at least once each semester and are encouraged to meet more often to discuss academic issues and career and professional development.

Pre-pharmacy students are advised by the Undergraduate Advising Center, and/or by faculty members from the College of Liberal Arts and Sciences, while they complete pre-pharmacy coursework. All pre-pharmacy students are strongly encouraged to make appointments in the Deans office of the School of Pharmacy, 2010 Becker Drive, Room 2050, for co-advising services and when they have questions concerning pharmacy course requirements or appropriate electives or any other concerns about their preparation for pharmacy admission. Pre-pharmacy students are also encouraged to participate in the pre-pharmacy club. Email pharmacy@ku.edu to request to be added to the club's e-mail distribution list.

## **Undergraduate Admission to KU**

Prospective students must be eligible for admission to the University of Kansas as an undergraduate student. See the Office of Admissions (http://admissions.ku.edu/), KU Visitor Center, 1502 lowa St., Lawrence, KS 66044-7576, 785-864-3911, adm@ku.edu for information regarding requirements. Prospective pharmacy students should declare prepharmacy as the major field of study. Visit the Office of International Support Services (http://iss.ku.edu/) for information about international admissions.

# **Undergraduate Admission to the School of Pharmacy**

Students should apply via PharmCAS to the School of Pharmacy during the application period (late July through February 1). When they apply, they should have completed or be on pace to complete the 68 credit hours of required pre-pharmacy courses by August of the following fall. The required pre-pharmacy curriculum may be completed at accredited schools other than KU. Students not yet at KU should submit an undergraduate application for transfer admission. International students should apply for undergraduate admission via International Admissions.

#### Requirements

Applying students should meet the following requirements:

- Complete the required pre-pharmacy courses (http:// pharmacy.ku.edu/academics/) and document the credit with official transcript(s) sent to KU Admissions.
- Maintain a grade-point average (GPA) of 2.50 or higher, overall and in the sciences. This is the minimum GPA acceptable for admission; the average GPA is generally much higher: approximately 3.50.
- Complete the PharmCAS application at www.PharmCAS.org (http://www.pharmcas.org/). To complete the PharmCAS application, one will need:
  - Official transcripts sent directly to PharmCAS from each postsecondary institution attended.
  - Contact information for individuals who will provide letters of recommendation (evaluations) directly to PharmCAS.
  - Submit application payment directly to PharmCAS.
  - PCAT scores are not required; only considered supplemental.
  - Supplemental application: transfer students and international students not already attending KU must also submit the corresponding KU undergraduate admission application.
  - An interview is scheduled with select applicants.

#### **Procedures**

The School of Pharmacy admissions committee, consisting of at least 2 faculty members from each department and representation from the Deans office, determines admissions. A record documenting the required materials is created by each applicant through PharmCAS. Consideration is given to a student's overall GPA, science GPA, and GPA within the prepharmacy curriculum. The average GPA of past admits is approximately 3.50. Good scholarship is considered a predictor of success in the pharmacy curriculum. However, good communication skills, emotional maturity, leadership ability, professional attitude, an understanding of the pharmacy profession, work experience in a pharmacy, and interest in service to the community are also important. These additional skills may outweigh very high grades or choice of pre-pharmacy courses. Admission is competitive and depends on the number of applications received and the qualifications of the applicants.

Applications are considered and admissions are determined on a rolling basis during the PharmCAS application period. Our preferred application deadline is February 1, however the school may consider later applications. Most admission decisions are made by March. As a condition of matriculation into the KU School of Pharmacy, all admitted students must successfully clear an investigative criminal background check and successfully obtain pharmacy intern status with the Kansas Board of Pharmacy. Successful clearance of the background check

and attainment of pharmacy intern status with the Board of Pharmacy is required to enroll in the School of Pharmacy and to participate in curricular and extracurricular curricular activities including interacting with patients. Instructions for completing the background check are provided with the letter of acceptance.

## **Doctor of Pharmacy Degree Requirements Pre-pharmacy Requirements**

The Doctor of Pharmacy degree requires completion of all of the required pre-pharmacy and professional courses and a total of 207 credit hours with an overall and professional grade-point average of at least 2.5.

The pre-pharmacy requirements of 67 credit hours include a year each of English, general chemistry, and organic chemistry. Other required courses include calculus, interpersonal communication, molecular and cellular biology, microbiology, human anatomy, physiology, statistics, physics; and 12 credit hours of general studies that satisfy the following KU Core Curriculum requirements: goal 3 humanities; goal 3 social science; goal 4 outcome 1; and goal 4 outcome 2. The KU Core Curriculum goals 1 through 4 must be satisfied during the completion of the pre-pharmacy curriculum requirements. KU Core goals 5 and 6 are satisfied during the professional curriculum.

Students are expected to have or to develop basic competence with personal computers, including word processing and spreadsheet software. All students are required to personally own electronic devices that are capable of running software to complete some class assignments, assessments, as well as for professional work assignments. Information regarding this technology requirement will be provided to matriculating students.

Courses in other professional schools (e.g., engineering, education) may not be counted toward the degree unless the student can show that such courses are directly relevant to pharmacy. For example, a course in business law taken in the business school may count (consult with the office of the dean in the school of pharmacy).

## **Pre-pharmacy Curriculum**

#### Year 1

Year 2

Fall	Hours Spring	Hours
ENGL 101	3 ENGL 102	3
CHEM 130	5 CHEM 135	5
BIOL 150	3 BIOL 240	3
MATH 115, 125, or 145	3 MATH 365, 526, BIOL 370, PSYC 210, SOC 380, BSAN 202, or HSES 310	3
General studies <sup>1</sup>	3 PHSX 114	4
	17	18

Fall	Hours Spring	Hours	
CHEM 330	3 CHEM 335	3	
CHEM 331	2 CHEM 336	2	
BIOL 400	3 BIOL 546	3	
BIOL 402	2 BIOL 547	2	
COMS 130 (approved	3 General studies <sup>1</sup>	6	

alternatives include COMS 131-132, JOU 150, THR 120, and PHIL 150)

General studies <sup>1</sup> 3		16	16
	General studies <sup>1</sup>	3	

**Total Hours 67** 

Select a course that satisfies KU Core Curriculum requirements: goal 3 humanities; goal 3 social science; goal 4 outcome 1; or goal 4 outcome 2. All of the above need completed.

## **Professional Requirements**

The Doctor of Pharmacy degree requires completion of all the required prepharmacy and professional courses and a total of 207 credit hours with an overall and professional grade-point averages of 2.5.

The curriculum includes instruction in the 3 basic sciences: medicinal chemistry, pharmaceutical chemistry, and pharmacology and toxicology. It also includes courses in the various aspects of pharmacy practice, including the health care system, law, and emerging roles for pharmacy practitioners. The curriculum integrates course material among departments. Assignments within the curriculum foster development of independent learning, communication skills, problem solving, and professional motivation. The professional curriculum includes a requirement that each student must complete a minimum of 4 elective credit hours within School of Pharmacy. One credit hour must be completed from the pharmacy practice department, 1 credit hour must be completed from a basic science department (either medicinal chemistry, pharmaceutical chemistry, and pharmacology and toxicology) and the remaining two credit hours are left to the students discretion.

Students enroll in introductory pharmacy practice experiences during the summer following the first and second years. These experiences are located throughout the state of Kansas and vary in the type of professional setting.

The final year of the curriculum consists of nine 4-week advanced pharmacy practice experiences with preceptors at pharmacy practice sites throughout Kansas. Students must have their own transportation to reach their assigned sites. Housing at these sites is also the student's responsibility.

## **Professional Program**

The following curriculum is applicable to the graduating class of 2019 (matriculating in the fall of 2015) and later. See http://pharmacy.ku.edu/ academics (http://pharmacy.ku.edu/ academics/) for the curriculum for the graduating classes of 2016, 2017, and 2018.

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Fall	Hours Spring	Hours Summer	Hours
MDCM 601	3 MDCM 603	3 PHAR 550	4
P&TX 630	4 P&TX 631	3	
PHCH 517	2 PHCH 518	3	
PHCH 667	2 PHPR 661	4	
PHPR 620	2 PHPR 619	3	
PHAR 500	1 PHAR 515	1	
PHAR 510	1 PHAR 517	1	

PHAR 512	1 PHPR 541	0	
	16	18	4
Year 2			
Fall	Hours Spring	Hours	Summer Hours
MDCM 625	4 MDCM 626	4 1	PHAR 560 4
P&TX 632	3 P&TX 633	3	
PHCH 625	3 PHCH 626	3	
PHPR 662	4 PHPR 663	4	
PHPR 618	1 PHAR 525	1	
PHAR 520	1 PHPR 542	0	
Elective option (1 of 4 required credits)	1 Elective option (1 of 4 required credits)	1	
	BSPS awarded		
	17	16	4
Year 3			
Fall	Hours Spring	Hours	
PHCH 693	2 PHPR 665	4	
PHPR 614	3 PHPR 621	2	
PHPR 624	2 PHPR 613	2	
PHPR 629	2 PHPR 630	1	
PHPR 664	4 P&TX 640	2	
PHAR 530	1 PHAR 535	1	
Elective option (1 of 4 required credits)	1 PHAR 537	1	
	PHPR 543	0	
	Elective option (1 of 4 required credits)	1	
	15	14	
Year 4			
Fall	Hours Spring	Hours	
PHPR 601	4 PHPR 606	4	
PHPR 602	4 PHPR 607	4	
PHPR 603	4 PHPR 608	4	
PHPR 604	4 PHPR 609	4	
PHPR 605	4		
	20	16	

#### **Total Hours 140**

\*Bachelors of Science in Pharmaceutical Studies (BSPS) awarded to students who complete all required coursework (at a GPA of 2.0 or higher) through the spring of professional year 2.

#### **Fourth Year**

The fourth year is composed of 36 credit hours of advanced pharmacy practice experiences (nine 4-week long rotations). The required experiential rotations include advanced hospital, advanced community, ambulatory care, and acute care/inpatient general medicine. The remaining 5 required rotations are flexible regarding their location/practice site. Assignments are made on the basis of the student's preference, and site availability. The five 4-week rotations of the fall semester begin in July

and conclude at the end of November. The four 4-week spring semester rotations begin in January and conclude in April.

#### Dual MBA and Pharm.D.

This dual degree program allows students to earn an MBA from the School of Business (http://business.ku.edu/) and a Doctor of Pharmacy (https://business.ku.edu/graduate-programs/full-time-mba/joint-degree-programs/mba-pharmd/) from the School of Pharmacy (http://pharmacy.ku.edu/) by extending their professional graduate study. The MBA/Pharm.D. program is combined with the Full-Time MBA Program on the Lawrence Campus. Students will take 34 hours to complete the MBA portion of this dual degree. Students gain competence and expertise in the complementary fields of business management and pharmacy.

Prospective students must submit an application and be accepted by the School of Pharmacy first. Students must meet the prerequisites of and be accepted by both schools. Diplomas are awarded concurrently by each school at the conclusion of the joint degree program requirements.

## Dual PharmD and MS in Health Informatics or Health Informatics Certificate

These dual degree programs allow students to earn a Doctor of Pharmacy degree from the School of Pharmacy and a MS Health Informatics (https://catalog.ku.edu/nursing/ms-health-informatics/#dualprogramstext) (MSHI) degree or Health Informatics (HI) Certificate (https://catalog.ku.edu/medicalcentercampusinterdisciplinarystudies/healthinfogradcert/#planofstudytext) from the KUMC School of Nursing. Students will take 30 additional credit hours to complete the PharmD/MSHI or an additional 17-18 credit hours to complete the PharmD/HI Certificate. Students gain competence and experience in the complementary fields of HI and pharmacy.

Prospective students must be currently enrolled and in good academic and professional standing with the School of Pharmacy. Students meet the prerequisites of and be accepted by both schools. Diplomas are awarded by each school separately.

#### Dual PharmD and MS in Clinical Research

Frontiers TL1 Predoctoral Clinical and Translational Research Training Program - The predoctoral track is a 1-year award specifically designed to stimulate interest in clinical research careers for MD, DO, DNP, Pharm.D., DPT and DDS students within the final two years of their clinical doctoral degree, by creating a dual-degree training track designed to foster active learning and clinical and translational science career development. Learn more about the PharmD/MS in Clinical Research (https://www.kufrontiers.org/funding-opportunities/training-programs.html).

These dual degree programs allow students to earn a Doctor of Pharmacy degree from the School of Pharmacy and a MS in Clinical Research from the KUMC School of Medicine. Students must meet the prerequisites of and be accepted by both schools. Diplomas are awarded by each school separately.