

# DOCTOR OF PHARMACY, PHARM.D.

URL- <https://pharmacy.ouhsc.edu/index.php?p=programs/doctor-of-pharmacy> (<https://pharmacy.ouhsc.edu/?p=programs/doctor-of-pharmacy>)

## Degree offered: Doctor of Pharmacy

The Doctor of Pharmacy (Pharm.D.) program, fully accredited by the Accreditation Council for Pharmacy Education (ACPE), provides educational training and experience in accord with ACPE standards and guidelines required of entry-level positions in all areas of contemporary pharmacy practice. Pharmacy graduates train for careers in all professional practice settings. Graduates may also choose from multiple opportunities in the pharmaceutical industry, government, or education and more. Board-certified specialties (<https://www.bpsweb.org/bps-specialties/>) for pharmacists are available in multiple areas, including ambulatory care, cardiology, critical care, emergency medicine, geriatrics, infectious diseases, nuclear pharmacy, nutrition support services, oncology, pediatrics, psychiatric pharmacy, and solid organ transplantation.

The University of Oklahoma College of Pharmacy Pharm.D. program is a four-year, full-time, in-person, professional doctoral program. Students spend the first three years in the classroom and spend the fourth year completing 9, one-month rotations in various pharmacy settings including but not limited to community, hospital, clinical services, social and administrative services, and more.

## Degree offered: Doctor of Pharmacy/Master of Business Administration

The College of Pharmacy, in partnership with the OU Price College of Business, provides a unique dual-degree program offering students the knowledge and benefits of both a Doctor of Pharmacy degree and Masters in Business Administration within a shortened time frame, 5 years (saves 6 months). All courses for the dual degree program are offered on the University of Oklahoma Health Sciences Center campus. Students begin the program at OU College of Pharmacy for the first two years. In the third year, students take courses both at OU College of Pharmacy and OU Price College of Business. For the fourth year, it's a full schedule of business classes. Finally, the fifth year is spent on monthly rotations. You can find a sample schedule on the Price College of Business website HERE ([https://www.ou.edu/price/mba/mba\\_fulltime/academics/dual-accelerated-degrees/sample-schedule-pharm/](https://www.ou.edu/price/mba/mba_fulltime/academics/dual-accelerated-degrees/sample-schedule-pharm/)). Interested first-year pharmacy students can contact Adrienne Jablonski at the OU Price College of Business on the OUHSC campus ([ajablonski@ou.edu](mailto:ajablonski@ou.edu), 405-325-5623), or for information, go to: <http://www.ou.edu/price/mba> (<http://www.ou.edu/price/mba/>).

## Degree Options and Specialty Tracks

URL <https://pharmacy.ouhsc.edu/index.php?p=programs/doctor-of-pharmacy/degreeoptions> (<https://pharmacy.ouhsc.edu/?p=programs/doctor-of-pharmacy/degreeoptions>)

Through degree options and specialty tracks, the college provides a unique opportunity for students to develop pharmacy practice skills within special patient populations, develop general leadership skills, or research skills supporting college efforts to stimulate interest in

continued education, discovery, and professional development after graduation.

Each option or track consists of at least 16 hours composed of a minimum of eight hours of focused advanced professional pharmacy experiences (rotations) and eight hours of elective didactic coursework approved for the specific track. Specific requirements may vary by option or track.

Admitted students must be in good academic standing and are selected by a committee that conducts interviews after reviewing applicants' curricula vitae and essays outlining career goals. Students accepted into a degree option or track are given preference for enrollment in required coursework.

## Degree Options

### Ambulatory Care Degree Option

Ambulatory care pharmacy practice has been defined as the "...provision of integrated, accessible healthcare services by pharmacists who are accountable for addressing medication needs, developing sustained partnership with patients, and practicing in the context of family and community."

The purpose of the ambulatory care specialty track is to improve competence in ambulatory care for graduates interested in pursuing postgraduate-education, graduate education, and other areas of pharmacy practice that serve ambulatory patients. Through the didactic and experiential components of this track, students will be given opportunities to enhance their skills in communication, in identifying and prioritizing problems, and in managing the problems appropriately. In addition, it will sharpen student knowledge of various standard measures of care specific to various chronic disease states.

It is our hope that students within this track will be able to contribute to improved quality of life and prevention of healthcare costs for patients with chronic diseases.

### Leadership Degree Option

To cultivate the pharmacy leaders of today to serve the healthcare needs of tomorrow.

### Courses

The goal of the Leadership Degree Option is to provide leadership development for future healthcare professionals in order to equip them with the knowledge, skills, and attitudes necessary to assume the roles of leaders, change agents, and advocates in an ever changing health care environment. The degree option consists of 10 didactic hours and 8 Advanced Pharmacy Practice Experience (APPE) hours. Four of the APPE hours must be completed on the OKC campus. Entry into the degree option is by application only and is competitive. Applications are accepted in the spring semester of the P2 year. All courses listed below are required for the Leadership Degree Option.

### Pediatric Pharmacy Degree Option (PDOP)

The University of Oklahoma College of Pharmacy remains notable as a professional college with three faculty clinicians trained in pediatrics. In addition, we are fortunate to have several adjunct preceptors participate in the didactic and experiential programs with the PDOP. These practitioners maintain active practice sites in acute care and ambulatory care settings. While most professional programs lack any trained practitioners in this specialty, the OU College of Pharmacy is able to provide both didactic and experiential training within this area of study. The college has made a significant commitment to serving children as well as to support post-graduate pharmacy residency and fellowship

training in pediatrics on the University of Oklahoma Health Sciences Center on the Oklahoma City campus.

Completion of the PDOP will provide the student with additional skills and experiences in the pediatric population to translate into the hospital setting, community setting, and other areas of pharmacy practice. In addition, the track will provide a foundation for students interested in advanced training experiences through post-graduate residencies and fellowships.

### **The Importance of Pediatric Pharmacy**

Pediatrics is a heterogeneous field composed of patients ranging from newborn infants to adolescents. It is estimated that approximately 24% of the U.S. population is less than 18 years of age. Evidence suggests that many pharmacists report filling a prescription for a pediatric patient on a daily basis. Furthermore, parents often seek the advice of pharmacists regarding over-the-counter medications for this population. Children are at significant risk for medication errors, including medication dosing errors, compared to other populations. Pharmacists can play a vital role in preventing medication errors in this population.

### **PDOP Global Objectives**

- Describe patient age-related pharmacokinetic principles that impact medication dosing in neonates, infants, children, & adolescents
- Identify normal growth & development of children & understand impact of acute & chronic illness on that development
- Perform calculations to determine appropriate medication dosages for children
- Utilize appropriate drug information retrieval skills & evaluate relevant literature appropriate to the pediatric population
- Demonstrate appropriate counseling skills when presented with a pediatric patient and/or caregiver
- Implement advanced-pharmacy practice skills into pharmacy practice settings that serve children

### **Research Degree Option Overview**

The College of Pharmacy at the University of Oklahoma is at the forefront of offering various specialization options to our professional students. Many faculty members are actively engaged and funded in cutting-edge research in both basic pharmaceutical sciences and in clinical and administrative sciences. Additionally, a number of our students within the professional program express a keen desire to be involved in research while pursuing the Pharm. D. curriculum. The research degree option gives students experience in the application of scientific principles and methodology, the ability to critically analyze biomedical literature and conduct research, and to present their own findings in a scientific format. Ultimately, these skills can be applied in the practice of the profession to improve health outcomes or to leverage post graduate education and training beyond the Pharm.D. degree.

### **Research Degree Option Faculty**

Research Degree Option faculty may include faculty members within either the department of Pharmaceutical Sciences (basic sciences) or the department of Pharmacy: Clinical and Administrative Sciences. These faculty members are actively engaged in research within their areas of expertise and are in a position to actively mentor interested students in the didactic and experiential components of the training in this track.

### **Research Degree Option Requirements**

Students must complete 16 credit hours of coursework in the degree option that goes above and beyond the core/required Pharm. D. curriculum.

The degree option coursework may consist of a combination of elective courses, selective Advanced Pharmacy Practice Experiences (APPE) and independent study/research and must consist of:

- A minimum of 8 credit hours of didactic elective coursework (P1-P3 years). Didactic courses will include a combination of journal club, integrity in scientific research, fundamentals of scientific writing and other approved electives in specific discipline or research area.
- A minimum of 8 credit hours of APPEs (P4 year). This will fulfill the requirement of research in a defined topic/focus area.

Admission to the degree option will be based on applications made by May 1 deadline in the P1 year.

## **Specialty Tracks**

### **Nuclear Pharmacy Specialty Track**

The University of Oklahoma College of Pharmacy remains notable as a professional college to have an operating nuclear pharmacy onsite. This distinction enables the college to provide comprehensive educational programs for both professional students and graduate students in its region. The college has made a significant commitment to nuclear medicine to provide quality radiopharmaceuticals for patient care in the region as well as to support graduate work in diagnostic and therapeutic radiopharmaceuticals on the Health Sciences campus.

The focused elective track in nuclear pharmacy enables students with an interest in molecular science to identify and recognize opportunities earlier in their academic career. Through this track, professional pharmacy students can work toward an Authorized Nuclear Pharmacist status or follow other paths such as the graduate M.S. and Ph.D. programs.

### **The Importance of Nuclear Pharmacy**

A nuclear pharmacy prepares and dispenses radio-pharmaceuticals, which are then supplied to the nuclear medicine department of hospitals and clinics. These hospitals and clinics then use these radiopharmaceuticals as diagnostic and/or therapeutic agents for conditions such as infections, myocardial perfusion, pulmonary embolism, thyroid imaging and therapy, and cancers.

As unit dose preparation of radiopharmaceuticals shifted from primarily a function of the nuclear medicine department in the hospital to primarily the function of a centralized nuclear pharmacy, it is now rare to find an area in the United States that is not within the service area of a nuclear pharmacy, and rare to find a hospital or other facility that still prepares its own unit doses.

It is the student's responsibility to ensure they are enrolled in the prescribed courses and to pay tuition and fees at the time designated by the Bursar's Office. Details regarding tuition/fee charges and collection are available from the Bursar's Office.

## **Admissions Process**

OU College of Pharmacy is committed to admitting and matriculating a quality diverse student body consistent with the educational mission of the college. Admission to the Pharm.D. program is overseen by the

Admissions Committee, led by the committee chair. This committee is appointed by the Dean of the college.

The application and admissions process is administered by the Office of Pharmacy Student Affairs. Questions regarding the application and admissions should be directed to the Office of Pharmacy Student Affairs at OUPharmD@ouhsc.edu or at 405-271-6598. Application advisement appointments may be made by clicking the button below:

Schedule Appointment (<https://outlook.office365.com/owa/calendar/CollegeofPharmacy@ou.edu/bookings/>) URL (<https://outlook.office365.com/owa/calendar/CollegeofPharmacy@ou.edu/bookings/>)

OUCOP engages in a holistic admissions process. This means that each aspect, both academically and non-academically of the applicant's record is important. Eligibility for an interview is based on an evaluation of the applicant's academic record including the prerequisite, overall, science & math, biology & chemistry, and last 60 hours GPAs as well as an applicant's non-academic record including their experiences and attributes. Applicants should be equally strong in all three areas to be competitive for an interview.

## Admissions Policies

Admissions policies are defined by the Admissions Committee in consultation with the Office of Pharmacy Student Affairs and approved by the Dean of the college. All admissions policies adhere to accreditation standards as well as federal and state laws and the governance of the Oklahoma State Regents for Higher Education and the University of Oklahoma Board of Regents. All admissions policies may be found at <https://pharmacy.ouhsc.edu/index.php?p=programs/doctor-of-pharmacy/admission> (<https://pharmacy.ouhsc.edu/?p=programs/doctor-of-pharmacy/admission>).

## Enrollment requirements

Students admitted to the Doctor of Pharmacy program have requirements they must complete in order to be enrolled to attend classes. These requirements include but may not be limited to, providing required immunization documentation, completing a criminal background check, completing a random drug screening, and providing any final transcripts or other requests.

Admitted students will receive notification of deadlines and other instructions for these requirements prior to matriculation in the fall. Admitted students will also be required to attend new student orientation the week before classes begin in August. Orientation is mandatory so students should take this into account when planning trips or other life events.

Since all first-year students are enrolled in the same courses, the Office of Pharmacy Student Affairs will complete the enrollment process for all admitted students in August prior to orientation. Admitted students do not have to enroll themselves.

Additional details may be found at <https://pharmacy.ouhsc.edu/index.php?p=programs/doctor-of-pharmacy/admission> (<https://pharmacy.ouhsc.edu/?p=programs/doctor-of-pharmacy/admission>).

Code	Title	Hours
<b>Fall Year 1 (18 credit hours)</b>		
PHAR 7122	Pharmacy Practice I	2
PHAR 7104	Introductory Biochemistry	4
PHAR 7112	Pharmaceutical Mathematics	2

PHAR 7456	Physiology	6
PHAR 7614	Pharmaceutics I	4
<b>Spring Year 1 (18 credit hours)</b>		
PHAR 7124	Pharmacy Practice II	4
PHAR 7133	Principles of Drug Action I	3
PHAR 7422	Principles of Drug Action II	2
PHAR 7153	Pharmaceutical Immunology	3
PHAR 7712	Drug Information Systems	2
PHAR 7624	Pharmaceutics II	4
<b>Fall Year 2 (19 credit hours)</b>		
PHAR 7212	Pharmacy Practice III	2
PHAR 7143	Pharmaceutical Biotechnology	3
PHAR 7834	Pharmacokinetics	4
PHAR 7704	Public Health and Health Policy	4
PHAR 7733	Clinical Communications	3
PHAR 7813	Pharmaceutical Care I	3
<b>Spring Year 2 (17-19 credit hours)</b>		
PHAR 7222	Pharmacy Practice IV	2
PHAR 7713	Pharmacy Practice: Management and Operations	3
PHAR 7802	Patient Assessment	2
PHAR 7824	Pharmaceutical Care II	4
PHAR 7833	Pharmaceutical Care III	3
PHAR 7891	Pharmaceutical Care IX	1
Electives <sup>1</sup>		2-4
<b>Fall Year 3 (18-19 credit hours)</b>		
PHAR 7313	Pharmacy Practice V	3
PHAR 7732	Pharmacy Law and Ethics	2
PHAR 7163	Biostatistics	3
PHAR 7853	Pharmaceutical Care V	3
PHAR 7862	Pharmaceutical Care VI	2
PHAR 7873	Pharmaceutical Care VII	3
Electives <sup>1</sup>		2-3
<b>Spring Year 3 (19-20 credit hours)</b>		
PHAR 7323	Pharmacy Practice VI	3
PHAR 7812	Advanced Drug Literature Evaluation	2
PHAR 7512	Clinical Toxicology	2
PHAR 7883	Pharmaceutical Care VIII	3
PHAR 7894	Pharmaceutical Care of Neurologic and Psychiatric Disorders	4
PHAR 7882	Nonprescription Products	2
Electives <sup>1</sup>		3-4
<b>Fall Year 4 (22 credit hours)</b>		
PHAR 7010	Community Pharmacy Practicum	4
PHAR 7020	Hospital Pharmacy Practicum	4
PHAR 7004	Adult Medicine I Practicum	4
PHAR 7024	Ambulatory Care Practicum	4
PHAR 7970	Seminar in Advanced Pharmacy Practice	2
Clinical Pharmacy <sup>2</sup>		4
<b>Spring Year 4 (16 credit hours)</b>		
Selective (4, 4-Credit Hour Selective Practicums) <sup>3</sup>		16
<b>Total Credit Hours</b>		<b>149</b>

Students have twelve months to complete a minimum of nine one-month practicums after completion of the three years of required professional courses. Each student will complete five required and four selective practicums.

<sup>1</sup> Electives- a minimum of 9 hours of elective courses are required in the Pharm.D. curriculum.

<sup>2</sup> Clinical Pharmacy Practicum can be satisfied by PHAR 7644, PHAR 7014, PHAR 7030, PHAR 7034, or PHAR 7064.

<sup>3</sup> Selective Practicum can be satisfied by PHAR 7094, PHAR 7090, PHAR 7014, PHAR 7030, PHAR 7034, PHAR 7064, PHAR 7654, PHAR 7644, or PHAR 7664.

## Options & specializations

### Ambulatory Care Specialization (149-151 hours required)

Core Ambulatory Care courses taken in P-2 or P-3 professional years by completing one of the following:

- 7 hours of didactic coursework and 3 APPE rotations
- 9 hours of didactic coursework and 2 APPE rotations

APPE Ambulatory Care Selective Rotations include:

- Variety Care
- Geriatric Ambulatory Care
- Camp Selective
- Applied Chronic Disease Management
- Indian Health Services

Code	Title	Hours
PHAR 7773	Ambulatory Care	
PHAR 7543	Advanced Diabetes Care	
PHAR 7990	Special Studies in Pharmaceutical Sciences (2 hours)	
BMSC 5102	Fundamentals of Scientific Writing	

### Pediatric Pharmacotherapy Option (149-151 hours required)

Core Pediatric courses taken in P-2 or P-3 professional years selected from:

Code	Title	Hours
PHAR 7573	Pharmacotherapy Considerations in Pediatrics	3
PHAR 7990	Special Studies in Pharmaceutical Sciences	1-6
PHAR 7064	Pediatrics Practicum	4
PHAR 7980	Research in Pharmacy Practice	2

Selective <sup>4</sup>

<sup>4</sup> 1, 4-credit hour selective practicum from the following: *Pediatric Ambulatory Care, Neonatal Intensive Care, Pediatric Critical Care, Pediatric Nephrology/Transplant, or Pediatric Diabetes Camp*

### Leadership Option (150 hours required)

Code	Title	Hours
PHAR 7141	Introduction to Mentoring	
PHAR 7142	Leadership in Pharmacy	
PHAR 7242	Leadership in Pharmacy II	
PHAR 7703	Pharmacy Business & Entrepreneurship	

PHAR 7461	Leadership in Action I
PHAR 7094	Elective-Non Patient Care Practicum

### Research Option (149 hours required)

Code	Title	Hours
BMSC 5001	Integrity in Scientific Research	
or NURS 6101	Responsible Conduct of Research	
BMSC 5002	Principles and Practice of Clinical and Translational Research	
PHAR 7991	Current Topics in Pharmaceutical Sciences	
PHAR 7990	Special Studies in Pharmaceutical Sciences (1-4 hours)	

Any other from list of approved electives may be substituted for all or part of the PHAR 7990 requirement, based on interest in a specific discipline/area.

Student to complete at least 2 selective month-long experiential Practicums in a research setting on a defined topic/focus area.

### Psychiatric Pharmacy (149 hours required)

Code	Title	Hours
<b>Select 8 credit hours from the following courses:</b>		
PHAR 7872	Alcoholism and Other Drug Dependencies	2
PHAR 7823	Traumatic Brain Injury	3
PHAR 7843	Psychoactive Substances	3
PHAR 7863	Schizophrenia and Pharmacotherapy Treatment Options	3
PHAR 7893	Psychiatric Disorders and Comorbid Conditions	3
PHAR 7094	Elective-Non Patient Care Practicum (8 hours)	4

### Nuclear Pharmacy Specialty Track

Please consult with the program director for specific coursework.

## Pre-Pharmacy Advisement

Prospective students are highly encouraged to schedule a visit with the admissions staff to discuss application to the Pharm.D. program or to learn more about the OU College of pharmacy. These visits can prove valuable for preparing and planning an application to the Pharm.D. program and for planning your future in pharmacy!

Schedule Appointment (<https://outlook.office365.com/owa/calendar/CollegeofPharmacy@ou.edu/bookings/>)

## Pre-Pharmacy Course Policies

URL (<https://pharmacy.ouhsc.edu/index.php?p=programs/doctor-of-pharmacy/prepharmcourses>) (<https://pharmacy.ouhsc.edu/?p=programs/doctor-of-pharmacy/prepharmcourses>)

- Admission to the Doctor of Pharmacy program requires completion of a minimum of 64 semester hours of **specific pre-pharmacy coursework**.
- All prerequisite coursework must be completed at a regionally accredited college or university.
- Applicants must successfully complete the prerequisite course requirements by August 5th of the year they plan to enter. For example, if you plan to enter in Fall 2025, you must have all prerequisite courses successfully completed by August 5, 2025.

Additional documentation may be required by OU Health Sciences Office of Recruitment & Admissions.

- Prerequisite coursework may be satisfied if taken outside of the U.S. as long as the applicant provides a WES (<https://wes.org/>) course-by-course evaluation. **WES is the only acceptable foreign course evaluation accepted by OUCOP.** Acceptance of foreign coursework to satisfy prerequisite course requirements is at the discretion of the College of Pharmacy. Inquiries regarding the acceptance of foreign coursework may be directed to our admissions staff (oupharmd@ouhsc.edu). Staff cannot tell someone what prerequisites may be satisfied by foreign coursework unless they provide a copy of the WES evaluation. It is recommended this be done at least one year prior to a planned entry year.
- The 6 hours of English coursework must be completed at a U.S. college or university. Foreign coursework will not be accepted to meet this requirement.
- To be eligible for admission, an applicant must be a U.S. citizen or U.S. permanent resident **at the time of application.**
- Applicants must complete all prerequisite courses below with a minimum grade of "C" (C+, C, C- grades are all acceptable) or above. However, applicants must maintain a minimum prerequisite GPA of 3.0 and a cumulative GPA of 2.5 on a 4.0 scale to be considered for admission.

**The prerequisite courses listed below are effective for admission for all applicants.**

Code	Title	Hours
<b>Math/Science Requirements</b>		
	Calculus	3
	Physics	3
	General Chemistry I w/lab	4
	General Chemistry II w/lab	4
	Organic Chemistry I	3
	Organic Chemistry II	3
	Organic Chemistry Lab	2
	Biological Science <sup>1</sup>	4
	Biological Science <sup>1</sup>	4
	Microbiology w/lab	4
<b>Elective Requirements</b>		
	English I	3
	English II	3
	Electives	24
<b>Total Hours</b>		<b>64</b>

<sup>1</sup> Biological Sciences: Please note, you must complete a minimum of 8 hours of qualifying biological sciences in addition to the Microbiology w/Lab requirement. It's most typical a biological science will be four hours but the credit hours could vary based on the course. If you have a total of 8 hours, regardless of the number of biological science courses, that will be acceptable. We will use your best graded 8 hours to calculate the prerequisite GPA.

## Notes

1. These are minimum requirements. We highly recommend, if timing permits, applicants also successfully complete a biochemistry course, at least one upper-level science, both human anatomy and

physiology, and statistics. Our first preference is for physiology if a student is unable to take both anatomy and physiology.

2. The Overall, Science/Math, and Biology/Chemistry GPAs include all attempts of a course in the calculation of the GPA. The Prerequisite and Last 60 Hours GPAs include the most recent attempt of a course in the calculation of the GPA. Applicants must complete all prerequisites with a minimum grade of "C". Applicants must also maintain a minimum prerequisite GPA of 3.0 and a minimum overall GPA of 2.50 to be eligible for admission.
3. It is recommended prerequisite courses be equivalent to University of Oklahoma courses. Final approval of acceptable prerequisite courses is subject to College of Pharmacy and OU policies. To determine equivalency, please go to <https://bit.ly/OUTED> (<https://bit.ly/OUTED/>).
4. **Approved Elective Subject Areas:** Fine Arts (non-performance based), History, Political Science, Anthropology, Architecture, Humanities, Geography, Philosophy, Literature, Social Science, Behavioral Science, Foreign Language, Communications, English, Business(may include management, marketing, economics, accounting), Computer Science, General Studies, Personal Health, Nutrition, Leadership. **A maximum of 9 hours of Math may be chosen from the following: Algebra, Precalculus, Functions & Modeling, additional Calculus, Trigonometry, Geometry, or Statistics.** Students are encouraged to select a diverse set of courses as preference is given to those with a broad-based educational background.

Learning outcomes for pharmacists can be found here (<https://www.aacp.org/sites/default/files/2022-11/coepa-document-final.pdf>).