

# PHARMACY (PHARM.D. RESEARCH SCHOLARS)

The College offers to qualified applicants a professional program leading to the Doctor of Pharmacy (Pharm.D.). The Doctor of Pharmacy program develops a highly qualified expert in pharmacotherapy who is prepared to provide professional leadership in the practice of pharmacy.

**Admission:** Students are admitted to the Doctor of Pharmacy program for the fall semester only. Enrollment is limited to applicants who have met the general requirements for admission to the University by the stipulated deadline and present evidence of professional admissibility and promise of academic and professional competence in pharmacy.

The applicant must have completed (or be pursuing completion of) pre-professional core courses at the undergraduate level, with a grade point average of 3.00 or better, and demonstrated competency in computer literacy, critical thinking, and oral communication.

For complete information on admission, and pre-professional and professional undergraduate program requirements, consult the Wayne State University Undergraduate Bulletin.

**Application:** Deadline for submission of all application materials is November 1 each year. The Doctor of Pharmacy Program participates in the Early Decision program. Applications are available through the Pharmacy College Application Service (<http://www.pharmCAS.org>) (PharmCAS). A competitive score on the Pharmacy College Admissions Test (PCAT) is also required. Only candidates who have completed all prerequisites by the end of the winter term preceding the fall term of prospective admission, are considered for admission.

## Admission Requirements

Admission to the Doctor of Pharmacy program is competitive and the following criteria are used to evaluate applications from prospective students. Admissions decisions are made by the Admissions Committee. The committee evaluates all factors, including interview evaluation. Admission granted to students while they are in the pre-professional program will be contingent upon their completion of that program with grade point averages as indicated below.

1. Minimum core grade point average of 3.00 (on a four-point system), calculated on the final grades earned in the required pre-professional courses. Completion of prerequisites with minimum grades does not guarantee admission.
2. Minimum undergraduate grade point average of 2.75 (on a four point system).
3. Promise of success in a professional curriculum. Transcripts are evaluated for evidence of continued success in a full-time, science-based curriculum. Patterns of course repetition and excessive withdrawals are considered. It is recommended that applicants repeat not more than two mathematics and science courses in order to improve grades.
4. All applicants must take the Pharmacy College Admissions Test (PCAT). The PCAT must be taken no later than the year prior to admission. Applicants are preferred to have a minimum composite PCAT percentile score of 50. Applicants with a score lower than 50th percentile will be considered for admission only if their prerequisite GPA is greater than or equal to 3.2. Scores on the individual components of the PCAT examination will be reviewed by the Admissions Committee.
5. All applicants must complete the Wayne State University English Proficiency Requirement during the winter semester prior to fall

admission. Applicants not enrolled at Wayne State University may arrange for out-state testing to satisfy this requirement at their present educational institution; for information, call the Testing and Evaluation Office: 313-577-3400.

6. A personal interview is required.
7. Nonacademic factors including work experience, community service and leadership abilities will be evaluated.
8. A criminal background check is performed on all accepted applicants and is evaluated prior to an applicant matriculating into the program.

## Admissions Requirements to the Research and Scholars Concentration

Pharm.D. students admitted to the WSU Doctor of Pharmacy program are eligible to apply to the Research Scholars Program by January 15th of their P1 year only. Application requirements include:

1. A grade of "B" or better in PHA 4125 Drug Literature and Foundations of Research Course.
2. A cumulative undergraduate G.P.A. of 3.0 or higher at end of fall semester in the P1 year.
3. A minimum composite score at the 75th percentile on the PCAT, with minimum PCAT component scores at the 75th percentile in the chemistry, quantitative and biology sections. The PCAT requirement can be waived by the Research Scholars admissions committee. (As an exception for the 2016 entering class, the PCAT requirement is waived for HealthProStart students who were not required to take PCAT for admission to the PharmD program.)
4. Submission of an essay describing interests, career goals, and any past research experiences. Additionally, a resume or curriculum vitae should be included with the application.

## Pharm.D. Professional Curriculum with Research Scholars Concentration

The Research Scholars concentration is offered to students who desire to complete a focus aimed at the development of research related knowledge and skills. There are a limited number of seats available and interested students must apply and be accepted to take this Concentration. Students are selectively offered a position in the Research Scholars Concentration and complete a longitudinal research project as part of that concentration. This program requires completion of PHA 4395 Research Scholars: Research and Development. In subsequent semesters, 4 credit hours of Research Scholars elective (PHA 5195) must be taken between Winter P2 and Winter P3 year, as agreed upon by the faculty research mentor and Research Scholars Program Director. Students in the Research Scholars Concentration will take a special section of the Pharmacy Seminar (PSC 6285) Students electing to and being accepted into this concentration must also complete 1 additional mandatory research focused Advanced Pharmacy Practice Experience (PPR 7195) for 4 credit hours in the place of an elective Advanced Pharmacy Practice Experience offering.

First Year		Credits
Fall Semester		
PHA 4105	Pathophysiology 1	3
PHA 4125	Drug Literature Evaluation and Foundations of Research	3
PSC 4115	Pharmaceutics I	3

PSC 4125	Introduction to Pharmaceut Sciences: Medicinal Chemistry / Pharmacology Immunology	3	PHA 5125	Principles of Pharmacoth III: Endocrinology, Gynecology, Urology	4
PPR 4115	Social Administrative Sciences and Professional Development I	2	PHA 5135	Pharmacotherapeutic Problem Solving II :Nephrology, Cardiology, Endocrinology, Gynecology, Urology	2
		Credits	14		
<b>Winter Semester</b>					
PHA 4205	Pathophysiology II	2	PSC 5115	Pharmacokinetics	2
PHA 4225	Principles of Pharmacoth I: Respiratory, Gastroenterology, Allergy, Ophthalmology	4	PPR 5145	Patient Care Lab II	1
PHA 4235	Pharmacotherapeutic Problem Solving I: Respiratory, Gastroenterology, Allergy, Ophthalmology	2	PPR 5155	Social Administrative Sciences and Professional Development III: Practice Management	2
PSC 4215	Pharmaceut II	2	PPR 5165	Introductory Pharmacy Practice Experience II	1
PSC 4225	Autonomic Pharmacology	2			Credits
PPR 4245	Patient Care Lab 1	1			17
PPR 4255	Social Administrative Sciences and Professional Development II	2	<b>Winter Semester</b>		
		Credits	15	PHA 5215	Principles of Pharmacotherapy IV: Infectious Diseases
<b>Spring Semester</b>					
PPR 4315	Pharmacy Jurisprudence	2	PHA 5225	Principles of Pharmacoth V: Neurology, Psychiatry	4
PPR 4365	Introductory Pharmacy Practice Experience I	1	PHA 5235	Pharmacotherapeutic Problem Solving III: Infectious Diseases, Neurology, Psychiatry	2
PHA 4395	Research Scholars: Research Development	2	PPR 5245	Patient Care Lab III	1
		Credits	5	PPR 5215	Applied Pharmacokinetics and Pharmacogenomics
<b>Second Year</b>					
<b>Fall Semester</b>					
PHA 5115	Principles of Pharmacotherapy II: Cardiology, Nephrology	5	PPR 5255	Social Administrative Sciences and Professional Development IV	2
		Credits	5	PPR 5265	Introductory Pharmacy Practice Experience III
		Credits	17-20	PHA 5195	Research Scholars: Research Conduct Elective
		Credits	17-20		

**Spring Semester**

PHA 5195	Research Scholars: Research Conduct Elective	1-4
		Credits 1-4

**Third Year**

**Fall Semester**

PHA 6125	Principles of Pharmacoth VI: Oncology, Advanced Immunology	3
PHA 6135	Pharmacotherapeutic Problem Solving IV: Oncology and Advanced Pharmacotherapeutics	3
PPR 6115	Applied Therapeutics in Self-Care	2
PPR 6145	Patient Care Lab IV	1
PPR 6155 or PPR 6175	Social Administrative Sciences and Professional Development V <sup>4</sup> or Hospital-Introductory Pharmacy Practice Experience (H-IPPE)	3
PHA 5195	Research Scholars: Research Conduct Elective	1-4
		Credits 13-16

**Winter Semester**

First Seven-week Block:

PHA 5235	Pharmacoth Problem Solving III: Infectious Diseases, Neurology, Psychiatry	2
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Second Seven-week Block:

PPR 6295	Clinical Capstone	2
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Courses Taken Throughout Semester:

PSC 6285	Pharmacy Seminar	1
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PPR 6165 or PPR 6175	Community-Introductory Pharmacy Practice Experience (C-IPPE) or Hospital-Introductory Pharmacy Practice Experience (H-IPPE)	2
PPR 6235	Social Administrative Sciences and Professional Development V	2
PPR 6245	Pharmacy Ethics and Professional Responsibility	2
PHA 5195	Research Scholars: Research Conduct Elective <sup>3</sup>	1-4
		Credits 12-15

**Fourth Year**

Students are required to complete seven advanced practice rotations during the P-4 year.

Spring/Summer, Fall, and Winter Semesters

PPR 7410	Advanced Pharmacy Practice Inpatient/Acute Care	4
PPR 7420	Advanced Pharmacy Practice Ambulatory Care	4
PPR 7430	Advanced Pharmacy Practice Patient Care Core	4
PPR 7550	Advanced Pharmacy Practice Hospital	4
PPR 7560	Advanced Pharmacy Practice Community	4
PPR 7195	Advanced Research Scholars: Advanced Pharmacy Practice Experience	4
Elective Adv. Pharm. Pract Patient Care or Non-Patient Care		4
		Credits 28
Total		122-134 Credits

<sup>3</sup> Students in the Research Scholars Concentration will elect to take 4 credits of PHA 5195 at any time over the course of the Second and Third year.

<sup>4</sup> PPR 6165 and PPR 6175 are offered in both Fall and Winter terms; students will be assigned to one of these courses in the Fall and the other in the Winter.

## Pharm.D. Practice Experiences

To provide the pharmacy student with education in the application of knowledge he/she has gained in courses in the curriculum, pharmacy practice experiences are scheduled throughout the Pharm.D. program. Pharmacy practice experiences give the student the opportunity to apply his/her pharmaceutical education directly to patients in a variety of pharmacy settings: community, ambulatory, and institutional locations. Practice experiences are required of all students.

During the fourth professional year (P-4), required pharmacy practice experiences include General Community Practice, General Hospital Practice, Ambulatory Care, and Inpatient/Acute Care General Medicine. An additional experience involving patient care is also required. Students have two elective experiences which may be in patient care or non-patient care settings, such as pharmaceutical sciences or pharmacy practice research, managed care, pharmacy organizations, institutional or community management, or pharmaceutical management.

**Requirements:** Before students are scheduled to visit practice environments, they must provide health clearance documentation, proof of professional liability insurance, personal medical insurance, and Basic Cardiac Life Support certification; and sign a travel waiver. Students provide their own transportation to practice sites. A criminal background check may also be required by a practice site before a student can visit that site. Additional information on practice experience requirements and when they are required may be obtained from the College. These change regularly. The most recent requirements can be found on the website (<http://www.cphs.wayne.edu/pharmd/resources.php>).