

# PHARMACEUTICAL SCIENCES

*The Interdisciplinary Ph.D. program is no longer accepting applications. The Civil Engineering, Computer Science, Economics, Education, Electrical and Computer Engineering, Humanities, Mechanical Engineering, and Natural Sciences Ph.D. programs are now open for applications. Please inquire to [umkcs@umkc.edu](mailto:umkcs@umkc.edu) with any questions.*

## Discipline Coordinator

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Pharmaceutical Science faculty who are members of the doctoral faculty.

Pharmaceutical Science is a discipline in the Interdisciplinary Ph.D. (<https://catalog.umkc.edu/colleges-schools/graduate-studies/interdisciplinary-phd-program/>) Program administered by the School of Graduate Studies.

**Note:** The discipline-specific requirements listed here are *in addition* to the requirements listed in Interdisciplinary Ph.D. Application Procedure and Minimum Criteria for Admission and Minimum Interdisciplinary Ph.D. Academic Regulations and Degree Requirements.

## Discipline-Specific Admission Requirements

Applicants must hold a professional degree in pharmacy (Pharm.D. or B.S.) or a baccalaureate degree in a related field such as chemistry, biology or biomedical engineering with an undergraduate GPA of at least 3.0 on a 4.0 scale. Students who hold a master's degree in an appropriate discipline may be admitted on satisfaction of the general requirements of the School of Graduate Studies. Application deadlines are October 1st for the spring semester and February 1st for the fall semester.

## Qualifying Requirements for Full Admission

Admission depends on agreement of a member of the doctoral faculty in the discipline to serve as research advisor. Students seeking admission to the Pharmaceutical Science discipline of the Interdisciplinary Ph.D. program should have completed coursework in calculus, organic chemistry, physical chemistry, biochemistry, microbiology, human anatomy and physiology where appropriate to their interests. Course equivalency is determined by the Pharmaceutical Science discipline faculty on a case-by-case basis.

On admission, all students are assigned interim faculty advisors as stated in the letter of admission. Graduate students must adhere to the guidelines as stated in the School of Pharmacy Graduate Programs section of this catalog pertaining to selection and changes of faculty advisors.

## Suggested Compatible Co-disciplines

Biomedical and Health Informatics (<https://catalog.umkc.edu/colleges-schools/graduate-studies/biomedical-health-informatics/>), Chemistry (<https://catalog.umkc.edu/colleges-schools/graduate-studies/chemistry/>), Cell Biology and Biophysics (<https://catalog.umkc.edu/colleges-schools/graduate-studies/cell-biology-biophysics/>), Molecular Biology and Biochemistry (<https://catalog.umkc.edu/colleges-schools/graduate-studies/molecular-biology-biochemistry/>), Oral and Craniofacial Sciences (<https://catalog.umkc.edu/colleges-schools/graduate-studies/oral-craniofacial-sciences/>), Pharmacology (<https://catalog.umkc.edu/colleges-schools/graduate-studies/pharmacology/>)

## Core Program Requirements

### Pharmaceutical Sciences as the Primary Discipline

Code	Title	Credits
Pharmaceutical Sciences Courses		12
Co-Discipline Courses		9
Other Coursework		6
Statistics		3
PHARM 5580A or PHARM 5580C	Seminar in Pharmaceutical Sciences Seminar in Pharmacology/Toxicology	1
PHARM 5699	Research and Dissertation	1-16
Total Credits		45

### Pharmaceutical Science as Co-discipline

The Pharmaceutical Science doctoral faculty member(s) of the supervisory committee will confer regarding the student's program of study and recommend appropriate courses offered by the co-discipline. Generally, courses in the co-discipline will constitute successful completion of at least 20 percent of the approved course of study. All students choosing Pharmaceutical Science as a co-discipline must complete at least three graduate-level courses in Pharmaceutical Science compatible with research objectives recommended by the supervisory committee.

Provisionally-admitted co-discipline students in Pharmaceutical Science in fulfillment of their full-admission requirements must take at least 9 credits of the regular recommended courses:

Code	Title	Credits
Select three of the following:		9
PHARM 5521	Advanced Organic Medicinal Chemistry	
PHARM 5527	Analytical Methods	
PHARM 5533	Advanced Pharmacokinetics and Biopharmaceutics	
PHARM 5588	Biotechnology	
PHARM 5605	Fundamentals of Pharmaceutical Sciences	3
PHARM 5631	Pharmaceutical Formulations I	
PHARM 5632	Novel Drug Delivery Systems	3
PHARM 5634	Protein and Nucleic Acid Drug Delivery	
<b>Total Credits</b>		<b>15</b>

and pass with a "B" or better.

## Other Discipline-Specific Special Requirements

### Requirements for Retention

Students who receive two C grades or one D grade in didactic courses are subject to dismissal from the program. A student who receives one F grade will not be retained. Students will not be allowed to attain more than one C grade in a co-discipline course.

### Appeals

Appeals by graduate students on matters pertaining to research or studies in the discipline will be routed initially to the supervisory committee and managed according to the appropriate procedures established within the School of Pharmacy.

## Comprehensive Examination Guidelines

Ph.D. students who choose Pharmaceutical Science as the primary discipline must successfully pass comprehensive oral and written examinations given by the Supervisory Committee by the end of the third year. The Comprehensive Examinations will be given after the student has completed the majority of didactic coursework requirements but not later than the end of the third year. The Comprehensive Examinations (written and oral) must be passed before a doctoral student can be admitted to candidacy.