PHARMACEUTICAL SCIENCES

Discipline Coordinator
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Pharmaceutical Sciences faculty who are members of the doctoral faculty.

Pharmaceutical Sciences is a discipline in the Interdisciplinary Ph.D. (http://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

Due to course sequencing, new students will ordinarily be accepted only in the fall term. 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 mathematics 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.

Qualifying Requirements for Full Admission

Admission depends on agreement of a member of the doctoral faculty in the discipline to serve as research advisor. All students are admitted provisionally except those holding an M.S. in pharmaceutical sciences. Full admission will be granted on satisfactory completion of 16 credit hours of courses recommended by the provisional pharmaceutical sciences faculty advisor during the first calendar year on campus. Students seeking admission to the pharmaceutical sciences 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. Graduate students will be given a placement examination administered by the primary discipline faculty in order to assess undergraduate preparation for graduate-level study. Deficiencies existing on admission must be discussed with the interim faculty advisor during the first two semesters of graduate work. Course equivalency is determined by the pharmaceutical-science discipline faculty on a case-by-case basis. Students are required to pass the discipline placement exams before appearing for the comprehensive exams administered by the supervisory committee.

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 (http://catalog.umkc.edu/colleges-schools/graduate-studies/biomedical-health-informatics), chemistry, cell biology and biophysics, molecular biology and biochemistry, mathematics (http://catalog.umkc.edu/colleges-schools/graduate-studies/mathematics), and oral and craniofacial sciences (http://catalog.umkc.edu/colleges-schools/graduate-studies/oral-craniofacial-sciences), pharmacology.

Core Program Requirements

Pharmaceutical Sciences as the Primary Discipline

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceutical Sciences Courses</td>
<td>12</td>
</tr>
<tr>
<td>Co-Discipline Courses</td>
<td>9</td>
</tr>
<tr>
<td>Other Coursework</td>
<td>6</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PHARM 5580A Seminar in Pharmaceutical Sciences</td>
<td>1</td>
</tr>
<tr>
<td>PHARM 5699 Research and Dissertation</td>
<td>1-16</td>
</tr>
<tr>
<td>Total Credits</td>
<td>45</td>
</tr>
</tbody>
</table>

Pharmaceutical Sciences as Co-discipline

The pharmaceutical sciences 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 sciences as a co-discipline must complete at least three graduate-level courses in pharmaceutical sciences compatible with research objectives recommended by the supervisory committee.

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

Select three of the following:
PHARM 5521  Advanced Organic Medicinal Chemistry
PHARM 5527  Analytical Methods
PHARM 5531  Physical Pharmacy Equilibria
PHARM 5533  Advanced Pharmacokinetics and Biopharmaceutics
PHARM 5550  Stability of Pharmaceuticals
PHARM 5588  Techniques in Biotechnology
PHARM 5631  Pharmaceutical Formulations I
PHARM 5634  Protein and Nucleic Acid Drug Delivery
PHARM 5690A - Foundations of Pharmaceutical Sciences

Total Credits 9

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 for the Division of Pharmaceutical Sciences, School of Pharmacy.

Comprehensive Examination Guidelines
Ph.D. students who choose pharmaceutical sciences as the primary discipline must successfully pass a qualifying examination given by the division prior to applying to take their written and oral comprehensive examinations. Once the qualifying examination has been successfully completed, 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 examinations will be administered by the student’s supervisory committee. The comprehensive examinations (written and oral) must be passed before a doctoral student can be admitted to candidacy. Before the comprehensive examination can be taken, the student must submit and have accepted a research proposal in a form satisfactory to the supervisory committee. The comprehensive examination will be administered by the student’s supervisory committee and will consist of both written and oral components.