

School of Pharmacy

Division of Pharmacology

Graduate Studies

Pharmacology is a discipline in the Interdisciplinary Ph.D. Program administered by the School of Graduate Studies.

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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 biological, chemical science, or health science. In special situations, baccalaureate degrees in other disciplines will be evaluated for possible admission. For graduates of foreign schools, the applicant must have completed a course of study at least the equivalent of a U.S. baccalaureate degree.

Prospective students must have an aggregate minimum grade-point average of 3.0 on a 4.0 scale for all college work taken prior to the bachelor's degree, or an aggregate GPA of at least 3.5 on all post-baccalaureate work to date (minimum of 9 hours). For graduates of foreign schools, the applicant must have above-average grades in previous college study.

Prospective students must have a minimum aggregate GRE score of 1000 out of 1600 for verbal and qualitative and 3.0 out of 6.0 for analytical writing or combined 1500 out of 2400 for verbal, qualitative, and analytical.

For graduates of foreign schools, the applicant must have a minimum score of 550 on written, or 213 computer-based, or 80 on internet-based TOEFL exam AND a minimum score of 4.0 out of 6.0 on the TWE.

If you are an international student applying for admission, please refer to the Web site for the [International Student Affairs Office](#) for additional information.

Qualifying Requirements for Full Admission

Students seeking admission to the pharmacology discipline of the Interdisciplinary Ph.D. program should have completed coursework in organic chemistry I & II, biochemistry I & II, calculus, anatomy, microbiology, physiology I & II, and a biostatistics course. Deficiencies existing on admission must be satisfied during the first two semesters of graduate work. In addition, during the first year of graduate study, provisional Ph.D. students with pharmacology as a discipline must complete the following courses with a grade of B or better: [Pharmacy 519](#) (4 hours), [Pharmacy 520](#) (5 hours), and [Pharmacy 615](#) (3 hours), or their equivalents. Equivalency is determined by the pharmacology discipline faculty on a case-by-case basis.

Suggested Compatible Co-disciplines

[Pharmaceutical sciences](#), [Cell Biology and Biophysics](#), [Chemistry](#), [Molecular Biology and Biochemistry](#), [Oral Biology](#), or other related fields in health sciences that offer Ph.D. degrees.

Core Program Requirements

Pharmacology as Coordinating-unit Discipline

Specific course requirements will be determined by the student in consultation with the research adviser and the supervisory committee. Generally, 65 post-baccalaureate credit hours, including 20 hours of research and dissertation and 45 hours of coursework, are required for the Ph.D. degree. No more than 27 credit hours (60 percent) can be obtained from a single discipline (preferably in pharmacology). The remaining 18 credit hours (40 percent) can be obtained from one or more participating disciplines. No more than 25 percent of the coursework from the non-participating disciplines will be counted toward the Ph.D. degree. As many as 15 credits may be allowed for courses taken in a master's degree program at another institution with the concurrence of the student's supervisory committee.

The total of 27 hours required for pharmacology as the coordinating discipline will be composed of [Pharmacy 519](#) (4 credits), [Pharmacy 520](#) (5 credits), [Pharmacy 615](#) (3 credits), 3 hours of [Pharmacy 580C](#) (pharmacology seminar), and 12 additional hours of advanced courses (500-level or above) in pharmacology or toxicology as approved by the supervisory committee.

In the remaining 18 hours, 3 credit hours of statistics, plus 15 credit hours in one or a combination of co-disciplines, which may include cell biology and biophysics, chemistry, molecular biology and biochemistry, oral biology, pharmaceutical sciences or other pertinent areas as approved by the supervisory committee.

Other Electives

A supervisory committee may require that additional coursework be taken to prepare the student in a specific research area. This additional requirement may not exceed 6 credit hours, may be taken in any approved doctoral discipline, and must be completed prior to the semester in which the dissertation defense occurs.

Pharmacology as Co-discipline

Students who apply for Pharmacology as a co-discipline should have completed coursework equivalent to Pharmacy Physiology I & II (LS-PHSL 399 and 400) and Human Biochemistry I & II (Bio-Sc 365G and 366G), which are offered at UMKC. Deficiencies existing on admission must be satisfied during the first two semesters of graduate work. When pharmacology is chosen as the co-discipline, the minimum course requirements are completion of [Pharmacy 519](#) (4 credits), [Pharmacy 520](#) (5 credits) and 1 credit hour of seminar ([Pharmacy 580C](#)), plus sufficient courses constituting the required percentage of their program of study, as approved by the supervisory committee. No more than one C grade in any core course will be permitted. Students who receive more than one C grade or lower will be dropped from pharmacology as a co-discipline. Students must take and successfully pass a written and oral comprehensive examination administered by the supervisory committee members from the Division of Pharmacology. Co-discipline students should take the pharmacology comprehensive examination no later than one semester after completing their required co-discipline coursework.

*For complete information regarding the program, go to the [Pharmacology](#) page on the Web Site for the School of Graduate Studies.

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