

Master of Science in Medicinal Chemistry

Medicinal Chemistry Graduate Programs

Medicinal chemistry is an interdisciplinary field at the interface of chemistry and biology. It approaches important biological and health-related problems through application of fundamental principles of organic chemistry, biochemistry, natural product chemistry, and molecular pharmacology. Graduates are expected to be thoroughly familiar with the chemistry of organic compounds, including their synthesis and biosynthesis, their reactivity, and their interactions with and alteration by living systems. Research is at the heart of the program, and the department's research activities encompass many areas of modern medicinal chemistry.

Currently, the department has 10 full-time faculty members, about 25 graduate students, more than 20 postdoctoral associates, numerous undergraduate researchers, and an outstanding technical staff. The department is recognized nationally and internationally, and most graduates have gone on to successful careers in the pharmaceutical industry and in academia. Medicinal chemistry faculty members are directors of two Centers for Biomedical Research Excellence (COBRE) — Protein Structure and Function (<http://psf.cobre.ku.edu>) — as well as the Center for Chemical Biology of Infectious Diseases (<http://cbid.cobre.ku.edu>) both funded by the National Institutes of Health.

Graduate Admission

Graduate students are primarily admitted to the department to pursue the Ph.D. degree. The M.S. degree and postdoctoral training are also available. An applicant wishing to enter the graduate program must have earned a bachelor's or master's degree in pharmacy, medicinal chemistry, chemistry, biochemistry, or a closely related field, and must have completed 1 year of organic chemistry with laboratory (equivalent to CHEM 330, CHEM 331, CHEM 335, and CHEM 336). In all cases, general admission requirements must be met.

Applications are evaluated by the graduate selection committee. Applications must be supported by 1 copy of official transcripts of all previous college and university work, both undergraduate and graduate. In addition, a resume, a statement of purpose, and 3 letters of recommendation from current or former teachers, advisors, or employers must be submitted. Students from non-English-speaking countries also must furnish proof of proficiency in English. Graduate Record Examination (GRE) general test scores are required, and applicants are strongly encouraged to take the subject test in chemistry as well.

The graduate selection committee makes admission decisions based on grade-point averages for previous college work (particularly in the relevant science areas), letters of recommendation, previous research or employment experience relevant to the graduate training being sought, GRE scores, etc. The number of applicants who can be admitted at any time varies, depending on the availability of laboratory space, research facilities, and financial support for research activities, but it is usually about 10 a year.

Graduate applications (<http://www.graduate.ku.edu>) and all other requested application materials (transcripts, résumé, statement of purpose, recommendation letters, etc.) must be submitted online:

The University of Kansas
Department of Medicinal Chemistry
Malott Hall
1251 Wescoe Hall Drive, Room 4070
Lawrence, KS 66045

M.S. Degree Requirements

Candidates for this degree must satisfy general requirements as well as those of 1 of the following options:

- Students who are proceeding toward the Ph.D. degree at KU receive the master's degree after satisfactorily completing the course work requirement for the Ph.D. and passing a comprehensive oral examination.
- Students who wish to earn only the M.S. degree must complete a prescribed subset of the course work requirements for the Ph.D. degree and a thesis representing at least 10 credit hours of research and pass a thesis defense.