

# Molecular & Cellular Biochemistry

## College of Medicine

Graduate study in biochemistry is designed to prepare candidates for research careers in academics, industry, and government laboratories. Admission to the graduate program is competitive and is based upon academic background, professional recommendations, performance on the Graduate Record Examination (GRE), experience and, when possible, personal interviews. Students should have completed an undergraduate degree in chemistry, biology, biochemistry, engineering, mathematics, physics, or pharmacy. It is recommended that students have completed undergraduate courses in organic chemistry, physical chemistry, calculus, physics and biological sciences.

Students will have the opportunity to join faculty research programs studying a spectrum of topics including: signal transduction, protein structure and function, transcriptional regulation, the cytoskeleton, secretion and vesicular fusion, disease mechanisms (atherosclerosis, cancer, infectious disease, diabetes, Alzheimer's), drug design, computational biology, development, nucleic acid dynamics, and membrane biogenesis & function. The program of study stresses an interdepartmental approach both in the selection of courses and in the pursuit of research. Students are expected to participate in graduate seminars, journal clubs, and research seminars; to interact with visiting scholars; and to present the results of their research at local and national meetings. Financial aid is available to all students in the program.

### Admission Requirements

Admission to the Ph.D. program in Molecular and Cellular Biochemistry is through the Integrated Biomedical Sciences (IBS) Curriculum.

Inquiries regarding admission should be directed to the Director of Graduate Studies, Department of Biochemistry, University of Kentucky College of Medicine. Information regarding the Ph.D. program in Biochemistry may also be obtained at <http://biochemistry.med.uky.edu>.

### Graduate Courses

BCH 401g	Fundamentals Of Biochemistry	(3)
BCH 501	General Biochemistry	(3)
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BCH 601	Special Topics In Molecular And Cellular Genetics (Same As BIO/MI/PLS/PPA 601)	(1)
BCH 604	Structural Biology	(3)
BCH 605	Principles Of Neurobiology (Same As NEU/PGY/ANA/ PHA 605)	(4)
BCH 607	Biomolecules And Metabolism (Same As IBS 601)	(3)
BCH 608	Biomolecules And Molecular Biology (Same As IBS 602)	(3)
BCH 609	Plant Biochemistry (Same As PPA/PLS 609)	(3)
BCH 610	Biochemistry Of Lipids And Membranes	(3)
BCH 611	Biochemistry And Cell Biology Of Nucleic Acids	(3)
BCH 612	Structure And Function Of Proteins And Enzymes	(3)
BCH 615	Molecular Biology (Same As BIO/MI 615)	(3)
BCH 618	Seminar In Biochemistry	(1)
BCH 619	Seminar In Biochemistry	(1)
BCH 640	Research In Biochemistry	(1-9)
BCH 749	Dissertation Research	(0)
BCH 767	Dissertation Residency Credit	(2)

BCH 769	Residence Credit For Doctor's Degree	(0-12)
BCH 779	Membrane Sciences Colloquium (Same As CHE/CME/ PHR/PHA 779)	(1)
BCH 780	Topics In Biochemistry	(1-3)