Graduate Studies in the School of Molecular and Cellular Biology at the University of Illinois, Urbana-Champaign
Faculty and students in the School of Molecular and Cellular Biology (MCB) investigate fundamental questions about how organisms work and how they evolve. Our world-renowned researchers and educators share a culture rich in intellectual collaboration, and their discoveries contribute to local, state, national, and international objectives.
The MCB Ph.D. degree program is among the finest in the nation. Our community of over 350 students brings energy, productivity, and diversity to our research enterprise. Multi-investigator and cross-disciplinary teams address complex biological issues that confront today's world, and MCB scientists enhance their collaborative efforts through close interactions with national laboratories and membership in specialized campus institutes and centers of excellence. The research portfolio for the School of Molecular and Cellular Biology spans the full range of modern biological science—from atomic structures of proteins and molecular mechanisms of cell signaling to the processes of tissue development and interactions of complex networks. Much of this work has direct medical relevance, including ongoing investigations into neurological disorders such as Alzheimer's disease, epilepsy, sleep disorders, and mental retardation; the study of infectious diseases, including Salmonella, anthrax, and herpes infections; research focused upon tumorigenesis, including the involvement of estrogen in breast cancer; and studies of cardiovascular function.

Ph.D. students generally are offered a tuition waiver and a stipend. Incoming graduate students choose from an exceptionally broad range of top-notch research groups throughout MCB. After spending the first semester doing research rotations, students select a thesis lab in one of the four degree-granting departments within MCB, which then becomes the focus of their graduate education. Graduate studies in MCB are offered through the Departments of Biochemistry, Cell and Developmental Biology, Microbiology, and Molecular and Integrative Physiology, along with interdisciplinary programs. These provide an impressive range of training and research opportunities. With a Ph.D. from any MCB department or program, you will be well-prepared for a research career in academia, pharmaceutical, and biotechnology industries, and government laboratories.

The First Year

In your first semester of Ph.D. studies in MCB, you will perform three research rotations, choosing from laboratories in any department within MCB. In December of your first year, you will formally join one of the departmental graduate programs by choosing a research adviser and laboratory for your thesis research. You can choose from available laboratories run by nearly 70 faculty members throughout MCB. Subsequent coursework is determined by the departmental program of the thesis lab that you joined at the end of your first semester.
**Biochemistry** offers unique opportunities for graduate students to become skilled biochemists and molecular biologists. Research topics cover a diverse range of modern biochemical sciences, including RNA biology, membrane biology, regulation of gene expression, bioenergetics and biophysics, structural biology, and sophisticated computational studies. We have outstanding resources in our internationally recognized faculty, graduate students, and research facilities. Our graduate program not only allows our research students to learn the latest techniques but also fosters their development as independent scholars and research scientists.

**Microbiology** has been consistently ranked as one of the best microbiology departments in the United States. The 21 research laboratories in the department offer diverse opportunities to students. They apply modern tools to understand microbes, viruses, and host responses at levels ranging from the molecular to microbial communities and host-microbe systems. Many of the research projects are collaborative, promoting interactions with other researchers in the department, the school, the university, and beyond.
Cell and Developmental Biology (CDB) has distinguished itself through the accomplishments of its faculty and its excellence in research and education. Illinois is positioned at the forefront of discoveries made possible by breakthroughs in the biology of the cell, especially through emerging opportunities in cross-disciplinary research on our campus. The future of cell, molecular, and developmental biology is changing, and we believe that CDB is well-positioned to provide training for your future.

Molecular and Integrative Physiology (MIP) offers unique opportunities for graduate students to become creative biologists who have the expertise to conduct research from the molecular to the whole-animal levels. A major challenge in physiology is to determine how multiple genes and their products work together to make a complex living organism, and how their dysfunction underlies human disease. The research in MIP laboratories incorporates vertebrate models, systems biology, and translational approaches. Major focus areas include neuroscience and neurological diseases, reproductive biology and cancer, and metabolic regulation and dysfunctions.
The University of Illinois campus is located between the two adjoined communities of Urbana and Champaign. Urbana-Champaign offers residents and visitors a broad palette of cultural opportunities combined with the ease of small-town life. Manageable traffic, safe bicycling, and walking-length distances combine with a low cost of living and safe streets to make a highly livable experience. The Champaign-Urbana Mass Transit District offers numerous convenient bus lines—free to students—serving campus and the twin cities. Five community and university radio stations offer a consistently fresh experience when scanning the FM dial. Trees and parks proliferate. The university offers innumerable programs and groups serving international students and those with specific ethnic backgrounds. Champaign-Urbana has a thriving international community, on-campus and -off, with a wealth of ethnic groceries and restaurants. And there are many opportunities to enjoy culture, entertainment, Big 10 sporting events, and the nightlife.

The campus area is dense with taverns and a wide variety of restaurants. The Illini Union Bookstore, in addition to textbooks, has an excellent selection of general books, school supplies, and other merchandise. That's Rentertainment, an independent video rental store, stocks a thorough selection of mainstream, independent, and foreign films. The Krannert Art Museum and the Krannert Center for the Performing Arts offer year-round exhibitions and performances for patrons of the arts. In addition to campus recreation centers with tennis, basketball, and racquetball courts, weight lifting, cardio machines, and swimming pools, the campus also has an ice skating rink. The Illini Student Union hosts a bowling alley, a pool hall, and video games. For those who enjoy the outdoors, there are botanical gardens, the expanses of Orchard Downs, and the spectacular Allerton Park to explore.

On the other side of the surrounding prairies can be found the most cosmopolitan cities in the midwest. Champaign-Urbana is conveniently situated less than three hours from Chicago, Indianapolis, and St. Louis. Iowa City, Madison, Cincinnati, Minneapolis, Memphis, Nashville, and even New Orleans are also less than a day’s drive away. Amtrak’s famous City of New Orleans line stops in downtown Champaign on its way between Chicago and New Orleans. Willard airport is a convenient option for those wishing to travel longer distances.
Biophysics and Computational Biology

The Center for Biophysics and Computational Biology serves physical and computer science students who are interested in applying their knowledge to biology, as well as students with a biological background interested in instrumentation, computation, and physical aspects of biology. The cooperation and cross-training of scientists with engineering, physical sciences, and life sciences backgrounds has infused biology with powerful technologies and exciting new paradigms. Biology is experiencing the application of modern computational methods that can manage huge amounts of information and simulate highly complex processes. Experiment, theory, and computational modeling are working hand-in-hand to solve problems of unprecedented complexity.

www.life.illinois.edu/biophysics

Medical Scholars (M.D./Ph.D.) Program

The Medical Scholars Program (MSP) exists jointly between the Graduate College and the College of Medicine at Illinois. The MSP is a rigorous program that leads to two degrees without academic shortcuts. Applications to the MSP are reviewed by the College of Medicine, the MSP, and the departmental admissions committees. To be considered, you must be a U.S. citizen or permanent resident alien. Upon acceptance, you begin your first year of Ph.D. studies in your chosen department. Students are supported during their Ph.D. work by graduate assistantships.

www.med.illinois.edu/msp

Neuroscience Program

The Neuroscience Program (NSP) at Illinois is an interdisciplinary program of study and research leading to the doctoral degree. It offers a rigorous yet flexible program designed to foster the growth of the student through research activities, close interactions with the faculty, and exposure to top neuroscientists through a seminar series and attendance at professional meetings. Students design their own programs leading to the Ph.D., with oversight by faculty committees ensuring appropriate depth and breadth of training. The NSP promotes an atmosphere of collegiality, goodwill, and frequent interactions, leading to an unusually high number of collaborations among program faculty and with other researchers at Illinois.

www.neuroscience.illinois.edu
Candidates interested in one or more of the departmental programs in MCB (Biochemistry, Cell and Developmental Biology, Microbiology, or Molecular and Integrative Physiology) should apply directly to the School of MCB.

Admission to the MCB Ph.D. program requires a bachelor’s degree in biological or physical sciences.

Additional information regarding application to an MCB graduate-degree program can be obtained at our web site (www.mcb.illinois.edu)—select “Graduate Programs” then “Prospective Students.”

**Admission Procedure**

1. Apply online through the Graduate College Apply Yourself Application System. Important Note: Applicants will need to select Molecular and Cellular Biology as the Ph.D. department and then indicate their departmental preference under Field of Specialization. The Field of Specialization is not a commitment—admitted students are eligible to rotate into any of the four MCB departments.

2. Transcripts from all previous undergraduate and graduate institutions should be mailed directly to the MCB Graduate Program Office.

3. Three letters of recommendation are required for consideration. Forms and instructions are available at the Apply Yourself Application System. Recommendation letters should be submitted electronically for quick and efficient processing.

4. Official GRE (and, when necessary, TOEFL) Test Scores should be sent to the Office of Admissions and Records, University of Illinois at Urbana-Champaign, using campus institutional code 1836 and program code 0206 (GRE) and 74 (TOEFL). Please note that the subject GRE is not required.

**MSP Applicants:** Medical College Admissions Test (MCAT) scores will be accepted in lieu of GRE scores for applicants to the Medical Scholars Program.

**TOEFL Note:** A minimum score of 590 (paper-based test) or 96 (internet-based test) on the Test of English as a Foreign Language (TOEFL) is required of applicants from countries where English is not the primary language.

**Application Deadline:** To ensure full consideration, please submit your application and all materials by January 15.

**Questions? Contact Us.**

MCB Graduate Program  
School of Molecular and Cellular Biology  
University of Illinois at Urbana-Champaign  
B103 CLSL  
601 South Goodwin Avenue  
Urbana, IL 61801-3709  
Phone: (217) 333-1737  
Fax: (217) 244-6697  
Email: gradinfo@mcb.illinois.edu  

[www.mcb.illinois.edu](http://www.mcb.illinois.edu)