INSTRUCTIONAL PROGRAM

SCHOOL OF

MOLECULAR & CELLULAR BIOLOGY

Molecular and Cellular Biology Major

As an MCB student, you will explore fundamental questions about how organisms work at molecular, cellular, and systems levels and how these processes can go awry during injury, infections, and genetic diseases. You'll build a strong foundation in biological sciences, chemistry, physics, statistics, and math, and gain knowledge of core MCB subjects such as cell communication and gene expression. As you progress through the major, you will be able to customize the curriculum according to your interests. Our accomplished and dedicated faculty have designed a variety of advanced courses, from cancer cell biology to microbial biochemistry. As an MCB student, you will learn not only the basic principles of modern biology, but you will acquire the fundamental, critical, and analytical skills necessary for a successful career.

A BRIGHT FUTURE

Our students are well-prepared for graduate schools as well as medical, dental, and other professional schools. Alumni go on to develop novel medicines at biotechnology companies, conduct research at national laboratories, teach at universities, or pursue a range of other careers in the following fields:

- **Medicine**
- **Dentistry**
- **Pharmacy**
- **Veterinary medicine**
- **Biotechnology and pharmaceutical industries**
- **Bioinformatics**
- **Government agencies (CDC, FDA, NIH, USDA, DOE, DOD, NASA, EPA)**
- **Armed Forces**
- **Academic research**
- **Forensic science**
- **Genetic counseling**
- **Law**
- **Education**
- **Science writing**

DEPARTMENTS

The School of Molecular & Cellular Biology is comprised of the following departments:

Biochemistry, Cell & Developmental Biology, Microbiology, Molecular & Integrative Physiology

MAJORS OFFERED

Molecular and Cellular Biology
(Including Honors Concentration and Teaching Licensure)

Neuroscience

Biochemistry, Specialized Curriculum

CONTACT INFORMATION

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Molecular and Cellular Biology Major

Degree: Bachelor of Science in Liberal Arts & Sciences

Major: Molecular and Cellular Biology

Minimum Requirements: 67–72 hours, including 21 hours of 300- or 400-level courses (15 hours must be from approved list of advanced MCB courses and include one lab.

Visit: go.illinois.edu/MCB-ApprovedAdvanced; 12 hours of advanced level courses in the major must be taken on the Urbana-Champaign campus.

General Education Requirements: MCB majors must complete all LAS degree requirements: las.illinois.edu/students/requirements

Minimum GPA Required for Graduation: MCB majors are required to maintain a major GPA and cumulative GPA of 2.00 or better in order to graduate.

Minimum Hours Required for Graduation: 120 hours

Graduation with Distinction: Graduating seniors who have demonstrated excellence in research or academics may be considered for the following: Academic Distinction, Distinction for Research, High Distinction for Research; Highest Distinction for Research. Visit: go.illinois.edu/MCB-Distinction

CREDIT HOURS	REQUIREMENTS (67-72 hours total)
Introductory Biological Science Courses (8 hours total)	
4	IB 150: Organismal and Evolutionary Biology
4	MCB 150: Molecular and Cellular Basis of Life
MCB Core Courses (13 hours total, taken sequentially)	
3	MCB 250: Molecular Genetics (Lecture)
2	MCB 251: Experimental Techniques in Molecular Biology (Lab)
3	MCB 252: Cells, Tissues, and Development (Lecture)
2	MCB 253: Experimental Techniques in Cell Biology (Lab)
3	MCB 354: Biochemical and Physical Basis of Life (Lecture)
Advanced Courses (15 hours total)	
15	MCB majors choose at least four advanced MCB courses, including one lab course, from our approved list. Options include courses from Biochemistry, Microbiology, Cell & Developmental Biology, Molecular & Integrative Physiology, Biophysics and Neuroscience. For a complete list of approved advanced MCB courses, visit **go.illinois.edu/MCB-ApprovedAdvanced** *Note: MCB 354 does not count toward the 15 advanced hours, as it is part of the Core Curriculum.*
Supporting Courses (31-36 hours total)	
4-5	MATH 220 **or** 221: Calculus I
3	MATH 231: Calc II **or** STAT 212: Biostatistics
8-10	Choose one of the following course sequences: CHEM 102, 103, 104 & 105: General Chemistry I & II with Lab **or** CHEM 202, 203, 204 & 205: Accelerated Chemistry I & II with Lab
6	Choose one of the following course sequences: CHEM 232 & 233: Elementary Organic Chemistry I with Lab **or** CHEM 236, 237 & 436: Fundamental Organic Chemistry I, Structure and Synthesis Lab & Fundamental Organic Chemistry II
10-12	Complete one of the following course sequences in its entirety: PHYS 101 & 102: College Physics **or** PHYS 211, 212, 213 & 214: University Physics

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