

The MCB Major (Effective Fall 2004)

The MCB undergraduate curriculum is focused on the fundamental structures, functions, and mechanisms of living organisms. The curriculum provides you with a solid foundation in biochemistry, cell and developmental biology, microbiology, molecular genetics, and physiology. You will also develop a strong foundation in math and physical sciences.

To major in MCB, you begin with six required courses (MCB 150, 250/251, 252/253, and 354). You then choose from a broad set of advanced offerings to complete the major. We encourage you to meet regularly with your academic advisor in the MCB Advising Program to ensure appropriate course selection and enhanced career planning.

Degree Title Bachelor of Science in Liberal Arts and Sciences

Minimum Required Courses The minimum course work requirement will usually sum to 67–71 hours, which includes 21 hours of 300- or 400-level courses. A minimum of 12 hours of advanced level courses in the MCB major must be taken on the Illinois campus at Urbana-Champaign.

General Education Requirements The LAS general education requirements are designed so that you will automatically complete the campus general education requirements when all LAS requirements are met.

Minimum Hours Required for Graduation 120 hours

Distinction To be eligible for graduation with distinction, you must complete the degree requirements with a grade point average of 3.25 or higher, and submit a thesis or report on an undergraduate research project (MCB 290 or departmental equivalent) for approval by the MCB Distinction Committee. See document on Requirements, Procedures, and Deadlines for MCB Majors Interested in Graduating with Distinction below.

All Courses Listed with New Banner Course Rubrics, Numbers, and Titles Effective Fall 2004

HOURS	REQUIREMENTS	CATEGORY SUBTOTAL
Supporting Courses^a		31–34
5	MATH 220 or MATH 221: Calculus I	
3	Select one: MATH 231: Calculus II STAT 100: Statistics	
8 OR 9	Select one group of courses: CHEM 102: General Chemistry I, and CHEM 103: General Chemistry Lab I, and CHEM 104: General Chemistry II, and CHEM 105: General Chemistry Lab II OR CHEM 202: Accelerated Chemistry I, and CHEM 203: Accelerated Chemistry Lab I, and CHEM 204: Accelerated Chemistry II, and CHEM 205: Accelerated Chemistry Lab II	
5	CHEM 232: Elementary Organic Chemistry I, and CHEM 233: Elementary Organic Chemistry Laboratory I	
10 OR 12	Select one group of courses: PHYS 101: College Physics, Mech & Heat, and PHYS 102: College Physics, E & M and Modern Physics) OR PHYS 211: University Physics, Mechanics, and PHYS 212: University Physics, Elect & Mag, and PHYS 213: University Physics, Thermal Physics, and PHYS 214: University Physics, Quantum Physics, and	
Introductory Biological Sciences Sequence		8
4	IB 150: Organismal and Evolutionary Biology ^b	
4	MCB 150: Molecular and Cellular Basis of Life	

MCB Core Courses		13
3	MCB 250: Molecular Genetics (Lecture)	
2	MCB 251: Experimental Techniques in Molecular Biology (Laboratory)	
3	MCB 252: Cells, Tissues, and Development (Lecture)	
2	MCB 253: Experimental Techniques in Cell Biology (Laboratory)	
3	MCB 354: Biochemical and Physical Basis of Life (Lecture) ^c	
Advanced Courses^{d,e}		15–16
15–16	<p>At least four additional MCB courses (MCB, BIOC, BIOP, NEUR) at the 300-level or 400-level are required, including one laboratory course. MCB 354 does not count toward the 15-16 advanced hours, as MCB 354 is part of the MCB Core Curriculum and is figured into the credit hour total in another area. Generally, students should take at least two of the following MCB Advanced Core courses:</p> <p>MCB 300: Microbiology (3 hours) MCB 400: Cell Structure and Function (4 hours) MCB 401: Cell & Membrane Physiology (3 hours) MCB 402: Systems & Integrative Physiology (3 hours) MCB 405: Genetics & Genomics (4 hours) MCB 406: Gene Expression (3 hours) MCB 408: Immunology (3 hours) MCB 414: Introduction to Neurobiology (3 hours)</p> <p><i>Note: See the Approved List of Advanced Courses for MCB Majors for the complete set of courses that serve to fulfill the hours in this category.</i></p>	
TOTAL HOURS		61–71
<p>a A more advanced course may be substituted for any of the required supporting courses in MATH, CHEM, STAT, and PHYS with permission of an academic advisor. An alternative statistics course may be substituted with permission of an academic advisor.</p> <p>b IB 150 or AP credit in IB 150 is required of all MCB majors.</p> <p>c MCB 354 counts for advanced hours in LAS. Certain advanced courses may be taken prior to completion of the MCB 250–253, 354 sequence with permission of an academic advisor. A minimum of 15 hours of 300- or 400-level courses in MCB is required. MCB 354 does not count toward the 15-16 advanced hours, as MCB 354 is part of the MCB Core Curriculum and is figured into the credit hour total in another area. Please see the Approved List of Advanced Courses for MCB Majors.</p> <p>d In addition, for students planning to go to graduate school, undergraduate research (MCB 290 or departmental equivalent) is strongly recommended, and is beneficial for students who choose professional school as well. MCB majors working with faculty from the Department of Biochemistry or from other departments outside the School of MCB should contact the MCB Core Curriculum Office (252 Davenport Hall; 217-244-6239) for details about how to obtain 290 credit for their work.</p> <p>e No more than 11 hours of 100-level MCB and IB courses may count toward graduation (including MCB 150 and IB 150).</p>		

Visit the MCB Web site for the latest information on the Undergraduate Major in MCB, the MCB Advanced Core and the Approved List of Advanced Courses for MCB Majors.

Revised 7 February 2007