MOLECULAR & CELLULAR BIOLOGY, BSLAS

for the degree of Bachelor of Science in Liberal Arts and Sciences Major in Molecular & Cellular Biology

School website: https://mcb.illinois.edu/undergrad/
school faculty: School Faculty (https://mcb.illinois.edu/people)
advising: MCB advising (https://mcb.illinois.edu/undergrad/advising)
overview of college admissions & requirements: Liberal Arts & Sciences (http://catalog.illinois.edu/schools/las/academic-units)
college website: https://las.illinois.edu/
email: undergrad@mcb.illinois.edu

The Molecular and Cellular Biology major provides students with a solid preparation in molecular biology, molecular genetics, microbiology, cellular biology, biochemistry, physiology, and structural biology. Students will also acquire a strong background in chemistry, math and physical sciences. After completion of the core curriculum in MCB, students may complete the required advanced course work by taking a variety of MCB courses or by selecting a more focused group of courses in any of the following areas: biochemistry, cells and tissues, developmental biology, infection and immunity, microbiology, genetics, neurobiology and physiology. The MCB Advising Program (MAP) staff is available to help students plan their combination of advanced courses.

For students interested in adding licensure to the BSLAS in Molecular & Cellular Biology, please visit the Biology Teaching page: http://mcb.illinois.edu/undergrad/advising/teaching/

Undergraduate degree programs in Molecular & Cellular Biology
Biochemistry, BS (http://catalog.illinois.edu/undergraduate/las/biochemistry-bs)

Molecular & Cellular Biology, BSLAS (p. 1)

Molecular & Cellular Biology Honors Concentration, BSLAS (http://catalog.illinois.edu/undergraduate/las/molecular-cellular-biology-bslas/honors)

for the degree of Bachelor of Science in Liberal Arts and Sciences Major in Molecular & Cellular Biology

Certain advanced courses may be taken prior to completion of the MCB 250-MCB 253, MCB 354 sequence with permission of an academic advisor. A minimum of 15 hours of 300- or 400-level courses in MCB from the approved list is required.

In addition, undergraduate research (MCB 290, or departmental equivalent) is strongly recommended for students planning to go to graduate school. No more than 10 hours of MCB 290, or departmental equivalent credit may be counted towards the 120 hours required for a degree in MCB.

Students earning a degree in Molecular and Cellular Biology may not also earn a second degree in the Specialized Curriculum in Biochemistry.

Students earning a degree in Molecular and Cellular Biology may not double major in Integrative Biology.

Distinction
Students in MCB can qualify for Distinction via one of the following:

Distinction for Excellence in Research:

To be eligible for graduation with Distinction a student must:
Complete 3 semesters of MCB 290 for 2 credit hours or more each semester. Maintain a minimum cumulative GPA of 3.25 at the end of penultimate semester. Give at least one poster presentation at the Undergraduate Research symposium or other approved venue. Obtain a letter of support from their Principal Investigator.

To be eligible for graduation with High Distinction a student must:
Complete 2 semesters of MCB 290 for 2 credit hours or more each semester. Complete 1 semester of MCB 492 for 3 credit hours or more. Maintain a minimum cumulative GPA of 3.25 at the end of penultimate semester. Give at least one poster presentation at the Undergraduate Research symposium or other approved venue. Obtain a letter of support from their Principal Investigator. Submit a written thesis that is approved by the Distinction Committee.

To be eligible for graduation with Highest Distinction a student must:
Complete 2 semesters of MCB 290 for 2 credit hours or more each semester. Complete 1 semester MCB 492 for 3 credit hours or more. Maintain a minimum cumulative GPA of 3.90 at the end of penultimate semester. Give at least one poster presentation at the Undergraduate Research symposium or other approved venue. Obtain a letter of support from their Principal Investigator. Submit a written thesis that is approved by the Distinction Committee. Distinction for Excellence in Academics:

Maintain a major GPA of 3.90 or higher in the MCB major (biology, chemistry, physics and math courses for the MCB major) at the end of their penultimate semester.

General education: Students must complete the Campus General Education (https://courses.illinois.edu/gened/DEFAULT/DEFAULT) requirements including the campus general education language requirement.

Minimum required major and supporting course work: 67-71 hours, including 21 hours of 300- or 400-level courses; 12 hours of 300- and 400-level courses in the major must be taken on this campus. Minimum hours required for graduation: 120 hours.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 220</td>
<td>Calculus</td>
<td>4-5</td>
</tr>
<tr>
<td></td>
<td>or MATH 22 Calculus I</td>
<td></td>
</tr>
<tr>
<td>MATH 231</td>
<td>Calculus II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or STAT 212 Biostatistics</td>
<td></td>
</tr>
<tr>
<td>Select one group of courses:</td>
<td>8-10</td>
<td></td>
</tr>
<tr>
<td>CHEM 102</td>
<td>General Chemistry I</td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 10:and General Chemistry Lab I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 10:and General Chemistry II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 10:and General Chemistry Lab II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 202</td>
<td>Accelerated Chemistry I</td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 20:and Accelerated Chemistry Lab I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 20:and Accelerated Chemistry II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 20:and Accelerated Chemistry Lab II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 232</td>
<td>Elementary Organic Chemistry I</td>
<td>4</td>
</tr>
</tbody>
</table>

Information listed in this catalog is current as of 03/2020
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 233</td>
<td>Elementary Organic Chem Lab I</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 101</td>
<td>College Physics: Mech &amp; Heat</td>
<td></td>
</tr>
<tr>
<td>PHYS 102</td>
<td>College Physics: E&amp;M &amp; Modern</td>
<td></td>
</tr>
<tr>
<td>PHYS 211</td>
<td>University Physics: Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHYS 212</td>
<td>University Physics: Elec &amp; Mag</td>
<td></td>
</tr>
<tr>
<td>PHYS 213</td>
<td>Univ Physics: Thermal Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 214</td>
<td>Univ Physics: Quantum Physics</td>
<td></td>
</tr>
<tr>
<td>IB 150</td>
<td>Organismal &amp; Evolutionary Biol</td>
<td>4</td>
</tr>
<tr>
<td>MCB 150</td>
<td>Molec &amp; Cellular Basis of Life</td>
<td>4</td>
</tr>
<tr>
<td>MCB 250</td>
<td>Molecular Genetics</td>
<td>3</td>
</tr>
<tr>
<td>MCB 251</td>
<td>Exp Techniqs in Molecular Biol</td>
<td>2</td>
</tr>
<tr>
<td>MCB 252</td>
<td>Cells, Tissues &amp; Development</td>
<td>3</td>
</tr>
<tr>
<td>MCB 253</td>
<td>Exp Techniqs in Cellular Biol</td>
<td>2</td>
</tr>
<tr>
<td>MCB 354</td>
<td>Biochem &amp; Phys Basis of Life</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>At least four additional courses at the 300- to 400-level from the Approved List of Advanced Courses for MCB Majors are also required, including one lab course. (<a href="http://mcb.illinois.edu/undergrad/courses/advanced">http://mcb.illinois.edu/undergrad/courses/advanced</a>)</td>
<td>15-16</td>
</tr>
</tbody>
</table>

Information listed in this catalog is current as of 03/2020