BIOCHEMISTRY, BS

for the degree of Bachelor of Science Major in Biochemistry (Specialized Curriculum)

department website: http://mcb.illinois.edu/departments/biochemistry
department faculty: Biochemistry Faculty (http://mcb.illinois.edu/faculty/biochemistry)
overview of college admissions & requirements: Liberal Arts & Sciences (http://catalog.illinois.edu/schools/las/academic-units)
college website: email: biocug@mcb.uiuc.edu

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The typical program of courses required to satisfy this degree totals 126-131 hours as outlined below including up to 12 hours of non-primary language (if not completed in high school); in no case will a program totaling less than 120 hours qualify for graduation. In addition, in order to graduate there is a minimum 2.0 cumulative academic grade point average and student must attain a 2.5 academic grade point average in the chemistry, biochemistry, biology, mathematics, physics and advanced electives in science/engineering courses specified in this curriculum. All proposals for course substitutions must be approved by the academic advisor. This curriculum is intended for those students who desire a rigorous education in chemistry, biochemistry, and biology, who have definite research-oriented goals, and whose career objectives include graduate school, MD/PhD programs, or industry.

Students earning the Biochemistry degree automatically complete the Chemistry minor. Students earning a degree in the Specialized Curriculum in Biochemistry may not earn a second degree in the Science and Letters Curriculum in Molecular and Cellular Biology.

Departmental distinction: A student seeking distinction must satisfy the following:

• Complete a minimum of 6 credit hours of undergraduate research (BIOC 290 and BIOC 492) with a minimum of 4 credit hours of BIOC 492.
• Earn at least a 3.25 grade-point average.
• Present a senior thesis to the department.

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 hours required for graduation: 120 hours.

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<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CHEM 202 &amp; CHEM 20:and Accelerated Chemistry Lab I &amp; CHEM 20:and Accelerated Chemistry II &amp; CHEM 20:and Accelerated Chemistry Lab II (preferred sequence)</td>
<td>8-9</td>
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CHEM 102  General Chemistry I & CHEM 10:and General Chemistry Lab I & CHEM 10:and General Chemistry Lab II & CHEM 10:and General Chemistry Lab II (with advisor approval)

Organic chemistry, select from: 8-9


Molecular and Cellular Biology 17

MCB 150  Molec & Cellular Basis of Life
MCB 250  Molecular Genetics
MCB 251  Exp Technqs in Molecular Biol
MCB 252  Cells, Tissues & Development
MCB 253  Exp Technqs in Cellular Biol
MCB 354  Biochem & Phys Basis of Life

or equivalent as approved by academic advisor

Physical chemistry, select one group of courses: 7-8

CHEM 440  Physical Chemistry Principles (Biological Perspective Section)
BIOC 446  Physical Biochemistry (preferred sequence)

or

CHEM 442  Physical Chemistry I
CHEM 444  Physical Chemistry II (with advisor approval)

Mathematics 11-12

MATH 220  Calculus or MATH Calculus I
MATH 231  Calculus II
MATH 241  Calculus III

Physics, select from: 10-12


PHYS 101  College Physics: Mech & Heat & PHYS 102:and College Physics: E&M & Modern (or equivalent as approved by academic advisor (with advisor approval)

Biochemistry: 13

BIOC 455  Technqs Biochem & Biotech
BIOC 460  Biochemistry Senior Seminar
BIOC 406  Gene Expression & Regulation
BIOC 445

Select 10 hours of Advanced Science/Technical Electives (may include up to 7 hours of BIOC 492, Senior Thesis) from approved list.

Nontechnical Requirements:  variable

General education:
<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credit Hours</th>
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<tr>
<td>Foreign language - three semesters of college study (or three years of high school study) in a single foreign language to satisfy the campus foreign language requirement</td>
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<td>Composition I writing requirement to satisfy the campus Composition I requirement</td>
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<td>Advanced Composition writing requirement (BIOC 460 is required)</td>
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<tr>
<td>Humanities/Arts to satisfy the campus general education requirements</td>
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<td>Social/Behavioral sciences to satisfy the campus general education requirements</td>
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<td>Cultural Studies to satisfy the campus general education requirement</td>
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<tr>
<td>Electives (not including any credit in satisfaction of the above requirements)</td>
<td>variable</td>
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1. Transfer credit must be approved by an advisor in biochemistry in order to be used to satisfy degree requirements.
2. A more detailed description of the requirements is listed in the Biochemistry Curriculum Handbook, available in room 419A of Roger Adams Laboratory.
3. PHYS 213 is not required if CHEM 442/CHEM 444 sequence is taken.
4. Freshman orientation course is under development and will be required. See advisor for details.
5. An approved list of current courses will be updated annually in January/February for the coming year. Contact advisor.
6. The requirements for the Campus General Education categories of Natural Sciences and Technology and Quantitative Reasoning I are fulfilled through coursework in the curriculum.