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: https://las.illinois.edu/

undergraduate degree programs in Molecular & Cellular Biology
Biochemistry, BS (p. 1)

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

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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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 202 &amp; CHEM 203 &amp; CHEM 204 &amp; CHEM 205</td>
<td>Accelerated Chemistry I and Accelerated Chemistry Lab I and Accelerated Chemistry II and Accelerated Chemistry Lab II (preferred sequence)</td>
<td>8-10</td>
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<tr>
<td>CHEM 102 &amp; CHEM 103 &amp; CHEM 104 &amp; CHEM 105</td>
<td>General Chemistry I and General Chemistry Lab I and General Chemistry II and General Chemistry Lab II (with advisor approval)</td>
<td>9-10</td>
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<tr>
<td>MCB 150</td>
<td>Molec &amp; Cellular Basis of Life</td>
<td>17</td>
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<tr>
<td>MCB 250</td>
<td>Molecular Genetics</td>
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<td>MCB 251</td>
<td>Exp Techniqs in Molecular Biol</td>
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<tr>
<td>MCB 252</td>
<td>Cells, Tissues &amp; Development</td>
<td></td>
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<tr>
<td>MCB 253</td>
<td>Exp Techniqs in Cellular Biol</td>
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<tr>
<td>MCB 354</td>
<td>Biochem &amp; Phys Basis of Life</td>
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<tr>
<td>or</td>
<td>equivalent as approved by academic advisor</td>
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<tr>
<td>CHEM 440</td>
<td>Physical Chemistry Principles (Biological Perspective Section)</td>
<td>7-8</td>
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<tr>
<td>BIOW 446</td>
<td>Physical Biochemistry (preferred sequence)</td>
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<td>or</td>
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<tr>
<td>CHEM 442</td>
<td>Physical Chemistry I</td>
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<tr>
<td>CHEM 444</td>
<td>Physical Chemistry II (with advisor approval)</td>
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<tr>
<td>Mathematics &amp; Statistics</td>
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<td>14-15</td>
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<tr>
<td>STAT 212</td>
<td>Biostatistics</td>
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<tr>
<td>MATH 220</td>
<td>Calculus</td>
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<tr>
<td>or MATH 221 Calculus I</td>
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<tr>
<td>MATH 231</td>
<td>Calculus II</td>
<td></td>
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<tr>
<td>MATH 241</td>
<td>Calculus III</td>
<td></td>
</tr>
<tr>
<td>Physics, select from:</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>PHYS 211 &amp; PHYS 212 &amp; PHYS 213</td>
<td>University Physics: Mechanics and University Physics: Elec &amp; Mag and Univ Physics: Thermal Physics (preferred sequence)</td>
<td></td>
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<tr>
<td>or</td>
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</tbody>
</table>

Information listed in this catalog is current as of 03/2021
Biochemistry, BS

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

Biochemistry: 4
BIOC 455  Technqs Biochem & Biotech
BIOC 460  Biochemistry Senior Seminar
BIOC 406  Gene Expression & Regulation
BIOP 401  Introduction to Biophysics

Select 10 hours of Advanced Science/Technical Electives
(may include up to 7 hours of BIOC 492, Senior Thesis) from
approved list. 5

Nontechical Requirements: 6 variable

General education:
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
Composition I writing requirement to satisfy the campus
Composition I requirement
Advanced Composition writing requirement (BIOC 460 is
required)
Humanities/Arts to satisfy the campus general education
requirements
Social/Behavioral sciences to satisfy the campus general
education requirements
Cultural Studies to satisfy the campus general education
requirement
Electives (not including any credit in satisfaction of the above
requirements) variable

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.

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