Biomedical Sciences, B.S.

Requirements

The Bachelor of Science with a major in biomedical sciences requires a minimum of 120 s.h., including at least 77-83 s.h. of work for the major. Students must maintain a g.p.a. of at least 2.00 in all courses for the major and in all UI courses for the major. They also must complete the College of Liberal Arts and Sciences GE CLAS Core.

The interdisciplinary major provides an excellent foundation for medical training and for research and/or practice in the chemical, genetic, cellular, and physiological bases of human disease. The curriculum includes required and elective coursework in biochemistry and molecular biology, biology, chemistry, health and human physiology, mathematics, microbiology and immunology, physics, psychology, sociology, and statistics. Students who wish to apply transfer credit toward the major should consult their departmental advisor.

The B.S. with a major in biomedical sciences requires the following coursework.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Required Courses</td>
<td>65-66</td>
</tr>
<tr>
<td></td>
<td>Elective Courses</td>
<td>12-17</td>
</tr>
<tr>
<td></td>
<td><strong>Total Hours</strong></td>
<td>77-83</td>
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**Required Courses**

Students complete the following coursework (65-66 s.h.).

**Chemistry**

- All of these:
  - BIOC:3120 Biochemistry and Molecular Biology I 3
  - BIOC:3130 Biochemistry and Molecular Biology II 3
  - CHEM:1110 Principles of Chemistry I 4
  - CHEM:1120 Principles of Chemistry II 4
  - CHEM:2210 Organic Chemistry I 3
  - CHEM:2220 Organic Chemistry II 3
  - CHEM:2410 Organic Chemistry Laboratory 3

**Life Sciences**

- All of these:
  - BIOL:1411 Foundations of Biology 4
  - BIOL:2211 Genes, Genomes, and the Human Condition 3
  - BIOL:3373 Human Population Genetics and Variation 3
  - HHP:3500 Human Physiology 3

**Mathematics**

- One of these:
  - MATH:1460 Calculus for the Biological Sciences 4
  - MATH:1550 Engineering Mathematics I: Single Variable Calculus 4
  - MATH:1850 Calculus I 4

**Statistics**

- This course:
  - STAT:3510 Biostatistics 3

**Physics**

- One of these sequences:
  - PHYS:1511-1512 College Physics I-II 8
  - PHYS:1611-1612 Introductory Physics I-II 8

**Social Sciences**

- All of these:
  - PSY:1001 Elementary Psychology 3
  - PSY:2130 Advanced Psychology for Pre-Medical Track 3
  - SOC:1010 Introduction to Sociology 3-4

**Elective Courses**

Students complete a total of 12-17 s.h. of elective coursework chosen from the following lists.

**Lecture Courses**

- Two of these:
  - BIOC:4241 Biophysical Chemistry I 3
  - BIOL:2254 Endocrinology 3
  - BIOL:2723 Cell Biology 3
  - BIOL:2753 Introduction to Neurobiology 3
  - BIOL:3233 Introduction to Developmental Biology 3
  - BIOL:3343 Animal Physiology 3
  - BIOL:4213 Bioinformatics 2.4
  - MICR:3147 Immunology and Human Disease 3
  - MICR:3159 Bacteria and Human Disease 3
  - MICR:3168 Viruses and Human Disease 3
  - MICR:2157-2158 General Microbiology Laboratory (both courses should be taken in the same semester) 5
### Investigative Lab

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL:3626</td>
<td>Cell Biology Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIOL:3656</td>
<td>Neurobiology Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIOL:3676</td>
<td>Evolution Lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL:3716</td>
<td>Genetics and Biotechnology Lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL:3736</td>
<td>Developmental Biology Lab</td>
<td>4</td>
</tr>
<tr>
<td>MICR:3165</td>
<td>Bacteria and Human Disease Laboratory and Discussion</td>
<td>3</td>
</tr>
</tbody>
</table>

### Experiential Learning

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>One of these (4-6 s.h.):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL:4999</td>
<td>Honors Research in Biology</td>
<td>6</td>
</tr>
<tr>
<td>Another approved honors research course</td>
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<td>6</td>
</tr>
<tr>
<td>An additional &quot;Investigative Lab&quot; course from list above</td>
<td></td>
<td>4</td>
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