Biomedical Sciences Option

The curriculum of the biomedical sciences option provides a strong background for students who plan on a career in medicine or other health profession. This option is also for students that are interested in a biomedical sciences career in research or teaching in cell biology, molecular biology, developmental biology, or neuroscience. The curriculum provides the opportunity to take the courses necessary to make a competitive application to health profession school, graduate school or to obtain a technical position. The curriculum has sufficient breadth to introduce the student to a wide range of disciplines, but is flexible enough so that students can focus, in their last two years, on areas of specific interest. Students interested in a career in a health science profession should consult the Health Professions Advising Office for information regarding admission to professional schools.

Employment opportunities, especially at the technical level, are available with a B.S. in Cell Biology and Neuroscience. However, this curriculum is designed to better prepare students for professional or graduate training. The biomedical sciences curriculum is designed to allow the students to take basic courses in physical sciences while tailoring the courses in life sciences to meet their personal objectives and interests.

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOS 185 - Integrated Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>CHMY 141 - College Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>STAT 216Q - Introduction to Statistics</td>
<td>3</td>
</tr>
<tr>
<td>WRIT 101W - College Writing I</td>
<td>3</td>
</tr>
<tr>
<td>University Core and Electives</td>
<td>1</td>
</tr>
<tr>
<td>BIOS 260 - Cellular and Molecular Biology</td>
<td>4</td>
</tr>
<tr>
<td>CHMY 143 - College Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>M 161Q - Survey of Calculus</td>
<td>4</td>
</tr>
<tr>
<td>CLS 101US - Knowledge and Community</td>
<td>3</td>
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<td>Year Total:</td>
<td>15</td>
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<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOS 313 - Neurophysiology</td>
<td>3</td>
</tr>
<tr>
<td>CHMY 321 - Organic Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>PHSX 205 - College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>University Core and Electives</td>
<td>4</td>
</tr>
<tr>
<td>BIOS 320 - Biomedical Genetics</td>
<td>3</td>
</tr>
<tr>
<td>CHMY 323 - Organic Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>PHSX 207 - College Physics II</td>
<td>4</td>
</tr>
<tr>
<td>University Core and Electives</td>
<td>4</td>
</tr>
<tr>
<td>Year Total:</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BCH 380 - Biochemistry</td>
<td>5</td>
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</tbody>
</table>

WRIT 201 - College Writing II or WRIT 221 - Intermediate Tech Writing
University Core and Electives | 7 |
BIOB 425 - Adv Cell & Molecular Biology | 3 |
BIOB 420 - Evolution | 3 |
University Core and Electives | 9 |
Year Total: | 15 |

<table>
<thead>
<tr>
<th>Senior Year</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>University Core and Elective</td>
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<tr>
<td>BIOS 499 - Senior Thesis/Capstone</td>
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<tr>
<td>University Core and Elective</td>
<td>13</td>
</tr>
<tr>
<td>Year Total:</td>
<td>15</td>
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</tbody>
</table>

Total Program Credits: 120

Additional Requirements

A minimum of 24 additional elective credits in the life sciences must be completed, most typically from courses in Cell Biology & Neuroscience, Microbiology and Immunology, and Biochemistry. Of these 24 credits, at least 18 must be upper division. No more than 6 credits of research can be applied toward these 24 elective credits. See the department office for a full list of approved electives.

Examples of elective courses include, but are not limited to:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOS 201</td>
<td>Human Anatomy &amp; Physiology I</td>
<td>5</td>
</tr>
<tr>
<td>BIOS 211</td>
<td>Human Anatomy &amp; Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>BIOS 309</td>
<td>Human Neuroanatomy</td>
<td>4</td>
</tr>
<tr>
<td>BIOS 323</td>
<td>Human Developmental Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOS 395</td>
<td>Human Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 411</td>
<td>Adv Human Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>BIOS 422</td>
<td>Genes and Cancer</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 425</td>
<td>Sensory Neurophysiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 435</td>
<td>Cognitive Neuroscience</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 440</td>
<td>Neuroscience of Mental Illness</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 445</td>
<td>Intro Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 455</td>
<td>Molecular Medicine</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 465R</td>
<td>Gene Expression Lab: From Genes to Proteins to Cells</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 409</td>
<td>Advanced Human Torso Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>BIOM 435</td>
<td>Virology</td>
<td>3</td>
</tr>
</tbody>
</table>
Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Adobe Garamond Pro.

The editor may contact Leepfrog for a draft with the correct fonts in place.