**AS Biological Sciences**

A major in Biological Sciences is a preparation for advanced academic work, for careers in civil service, industry, or teaching; as a background for professional training in such fields as biological science education, biotechnology, nursing, public health, environmental health, pre-medicine and all related areas of biology. Natural resources are among the most important assets of man and the wise use of renewable resources is basic to development in the economic, social and political areas. The basic pre-professional requirements necessary to transfer are offered in the Biological Sciences, Physical Sciences, and Mathematics Departments.

**Career Opportunities**

Degree recipients in Biological Sciences are prepared for careers in civil service, industry, or teaching; and are prepared for professional training in such fields as biological science education, biotechnology, nursing, public health, environmental health, biological or biomedical research, pre-medicine and all related areas of biology.

**Program Learning Outcomes**

Students completing this program will be able to:

1. Use the Scientific Method to investigate biological questions and critically evaluate and effectively communicate scientific data.
2. Recognize and explain the evolutionary connections between biological structures and their function and between organisms and their environment.
3. Critically evaluate biological information and examine its significance and impact on society and the environment.

**AS Degree Requirements**

**Major: Core and Selective Requirements**

**Complete Core Courses, 20 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 225</td>
<td>Biology Of Organisms</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 230</td>
<td>Cell and Molecular Biology</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 210</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 220</td>
<td>General Chemistry II</td>
<td>5</td>
</tr>
</tbody>
</table>

**Selective Courses, choose a minimum of 16 units from the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 130</td>
<td>Human Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 132</td>
<td>Human Biology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 240</td>
<td>General Microbiology</td>
<td>4</td>
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</tbody>
</table>

**Units**

1. **BIOL 250** Human Anatomy 4 units
2. **BIOL 260** Human Physiology 5 units
3. **BIOL 310** Nutrition 3 units
4. **CHEM 231** Organic Chemistry I 5 units
5. **CHEM 232** Organic Chemistry II 5 units
6. **MATH 200** Elementary Probability and Statistics 4 units
7. **MATH 251** Analytical Geometry and Calculus I 5 units
   **AND**
   **MATH 252** Analytical Geometry and Calculus II 5 units
8. **MATH 253** Analytic Geometry and Calculus III 5 units
9. **PHYS 210** General Physics I 4 units
   **AND**
10. **PHYS 220** General Physics II 4 units
   **OR**
11. **PHYS 250** Physics with Calculus I 4 units
    **AND**
12. **PHYS 260** Physics with Calculus II 4 units
13. **PHYS 270** Physics with Calculus III 4 units

*And required General Education coursework and electives as needed to meet the minimum 60 units required for the Associate degree.*

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