# BIOINFORMATICS - MINOR

## Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Required Courses</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Introduction to Computation</td>
<td>4</td>
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<tr>
<td>CSCE 110</td>
<td>Programming I</td>
<td></td>
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<tr>
<td>or CSCE 111</td>
<td>Introduction to Computer Science Concepts and Programming</td>
<td></td>
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<tr>
<td></td>
<td>Bioinformatic Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 451</td>
<td>Bioinformatics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Computational Bioinformatics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 350</td>
<td>Computational Genomics</td>
<td></td>
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<tr>
<td></td>
<td><strong>Upper Level Biology</strong></td>
<td></td>
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<tr>
<td></td>
<td>Biological Molecules and Processes</td>
<td>3-4</td>
</tr>
<tr>
<td></td>
<td>Select one of the following:</td>
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<tr>
<td>BIOL 213</td>
<td>Molecular Cell Biology</td>
<td></td>
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<tr>
<td>GENE 302</td>
<td>Principles of Genetics</td>
<td></td>
</tr>
<tr>
<td>GENE 320/ BIMS 320</td>
<td>Biomedical Genetics</td>
<td></td>
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<tr>
<td></td>
<td>Applied Bioinformatics</td>
<td>3-4</td>
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<td>Select one of the following:</td>
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<tr>
<td>BICH 419/ GENE 419</td>
<td>Computational Techniques for Evolutionary Analysis</td>
<td></td>
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<tr>
<td>BICH 464/ GENE 464</td>
<td>Bacteriophage Genomics</td>
<td></td>
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<tr>
<td>BIOL 430</td>
<td>Biological Imaging</td>
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<tr>
<td>BIOL 450/ BICH 450</td>
<td>Genomics</td>
<td></td>
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<tr>
<td>STAT 446</td>
<td>Statistical Bioinformatics</td>
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<tr>
<td>VTPP 438</td>
<td>Analysis of Genomic Signals</td>
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<tr>
<td></td>
<td><strong>Total Semester Credit Hours</strong></td>
<td>16</td>
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</tbody>
</table>

Minimum of 16 hours required.

Minimum of 6 hours at the 300- to 400-level.

Must make a grade of C or better in all required Bioinformatics minor courses.

Students must complete at least one course in each of the five categories. If a course in statistics is not already required for a student's major, then STAT 211, STAT 301, STAT 302, or STAT 303 is strongly recommended. Independent research experiences through 491 courses is encouraged.