BIOINFORMATICS MINOR

Bioinformatics is a rapidly expanding interdisciplinary field focused on collecting, processing, and analyzing vast amounts of biological and biomedical data, and it has become an indispensable component of biomedical research. The Minor in Bioinformatics offers an opportunity for students majoring in other disciplines to acquire the foundations of the field and add in-demand skills to their portfolio.

Students are responsible for completing the prerequisites for all courses taken for the Bioinformatics minor.

Requirements

Prerequisites

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIST 1400</td>
<td>INTRODUCTION TO COMPUTER SCIENCE I</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1450</td>
<td>BIOLOGY I</td>
<td>5</td>
</tr>
</tbody>
</table>

Total Credits: 8

Required Courses

Core Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOI 1000</td>
<td>INTRODUCTION TO BIOINFORMATICS</td>
<td>3</td>
</tr>
<tr>
<td>BIOI 2000</td>
<td>FOUNDATIONS OF BIOINFORMATICS</td>
<td>3</td>
</tr>
<tr>
<td>BIOI 3000</td>
<td>APPLIED BIOINFORMATICS</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses

Select 9 hours from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOI 3500</td>
<td>ADVANCED BIOINFORMATICS PROGRAMMING</td>
<td>3</td>
</tr>
<tr>
<td>BIOI 4500</td>
<td>INDEPENDENT STUDY</td>
<td>3</td>
</tr>
<tr>
<td>BIOI 4050</td>
<td>SUPERVISED RESEARCH IN BIOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>BIOI 4860</td>
<td>BIOINFORMATICS ALGORITHMS</td>
<td>3</td>
</tr>
<tr>
<td>BIOI 4870</td>
<td>DATABASE SEARCH AND PATTERNDiscovery in BIOINFORMATICS</td>
<td>3</td>
</tr>
<tr>
<td>BIOI 4890</td>
<td>COMPUTERIZED GENETIC SEQUENCE ANALYSIS</td>
<td>3</td>
</tr>
<tr>
<td>BIOI 4950</td>
<td>SPECIAL TOPICS IN BIOINFORMATICS</td>
<td>3</td>
</tr>
<tr>
<td>BIOI 4970</td>
<td>SENIOR PROJECT IN BIOINFORMATICS I</td>
<td>2</td>
</tr>
<tr>
<td>BIOI 4980</td>
<td>SENIOR PROJECT IN BIOINFORMATICS II</td>
<td>2</td>
</tr>
<tr>
<td>BIOI 3020</td>
<td>MOLECULAR BIOLOGY OF THE CELL</td>
<td>3</td>
</tr>
<tr>
<td>BIOI 4130</td>
<td>MOLECULAR GENETICS</td>
<td>3</td>
</tr>
<tr>
<td>BIOI 4140</td>
<td>CELLULAR BIOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>CSCI/MATH 4150</td>
<td>GRAPH THEORY &amp; APPLICATIONS</td>
<td>3</td>
</tr>
<tr>
<td>CSCI 4850</td>
<td>DATABASE MANAGEMENT SYSTEMS</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits: 18

1 A minimum grade of C is required for CIST 1400 and CSCI 1620 as a prerequisite for all subsequent CSCI classes.

2 The number of combined credits from BIOI 4500 and BIOL 4050 cannot exceed 3.