## B.S. in Bioinformatics

(120 credit minimum)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td><strong>First Year</strong></td>
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<td><strong>1st Semester</strong></td>
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<tr>
<td>R120 101</td>
<td>General Biology</td>
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<tr>
<td>CHEM 125</td>
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<tr>
<td>MATH 111</td>
<td>Calculus I</td>
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<td>HUM 101</td>
<td>English Composition: Writing, Speaking, Thinking I</td>
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<td>BNFO 135</td>
<td>Programming for Bioinformatics</td>
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<td>YWCC 107</td>
<td>Computing as a Career</td>
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<td>CHEM 124</td>
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<td>CHEM 126</td>
<td>General Chemistry II</td>
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<td>MATH 112</td>
<td>Calculus II</td>
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<td>R120 201</td>
<td>Foundations Of Biology</td>
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<td>R120 352</td>
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<tr>
<td>CS 241</td>
<td>Foundations of Computer Science I</td>
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<td>MATH 333</td>
<td>Probability and Statistics</td>
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<td>HUM 102</td>
<td>English Composition: Writing, Speaking, Thinking II</td>
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<td>BNFO 330</td>
<td>Princ of Bioinformatics II</td>
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<td>Molecular Biology</td>
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<td>CHEM 243</td>
<td>Organic Chemistry I</td>
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<td>ECON 201</td>
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<td>YWCC 207</td>
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<td>PHYS 111A</td>
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<td>BNFO 340</td>
<td>Data Analysis for Bioinformatics II</td>
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<td>History and Humanities GER 200 level (<a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level</a>)</td>
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<td>CS 431</td>
<td>Database System Design and Management</td>
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<tr>
<td>MATH 337</td>
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<td>CS 435</td>
<td>Advanced Data Structures and Algorithm Design</td>
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<td>IS 350</td>
<td>Computers, Society and Ethics</td>
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<td>YWCC 307</td>
<td>Professional Dev in Computing</td>
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**Fourth Year**

1st Semester

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<tr>
<td>BNFO 482</td>
<td>Databases and Data Mining in Bioinformatics</td>
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<td>Select one of the following:</td>
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<td></td>
<td>ENG 340 Oral Presentations</td>
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<td>ENG 352 Technical Writing</td>
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<tr>
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<td></td>
<td>History and Humanities GER 300+ level</td>
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|          | **Term Credits**                                          | **15**  |

2nd Semester

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<tr>
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<tr>
<td>BNFO 491</td>
<td>Computer Science Project</td>
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<td></td>
<td>Humanities and Social Science Senior Seminar GER</td>
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<td>Select one elective in mathematics, science, computer science, or engineering</td>
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| General Elective | 3 |

| General Elective | 3 |

|          | **Term Credits**                                          | **15**  |

|          | **Total Credits**                                         | **120-121**  |

**Electives**

<table>
<thead>
<tr>
<th>Code</th>
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<tr>
<td></td>
<td><strong>Specialty Electives</strong></td>
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<td>A sequence of four 200/300/400-level courses from mathematics, science, engineering, computer science, information systems, information technology or business. ACCT 115/ACCT 117 are permitted as business specialty elective. ¹</td>
<td>12</td>
</tr>
</tbody>
</table>

| General  | 3 |

| General  | 6 |

¹ Please consult your advisor for appropriate Specialty and General Electives.

Refer to the **General Education Requirements** for further information on electives.

*This curriculum represents the maximum number of credits per semester for which a student is advised to register. A full-time credit load is 12 credits. First-year students are placed in a curriculum that positions them for success which may result in additional time needed to complete curriculum requirements. Continuing students should consult with their academic advisor to determine the appropriate credit load.*