## BIOCHEMISTRY MAJOR, BS

**Campus:** NYC, Westchester

*In addition to the courses listed below, students are required to complete two courses with the Anti-Racism Education attribute attached. These courses may be taken during any semester of their education. See advisor for more information.*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td><strong>First Year</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Fall</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 110</td>
<td>Composition</td>
<td>3</td>
</tr>
<tr>
<td>BIO 101</td>
<td>General Biology I (Required Lab component carries zero credits)</td>
<td>4</td>
</tr>
<tr>
<td>CHE 111</td>
<td>General Chemistry I (Required Lab component carries zero credits)</td>
<td>4</td>
</tr>
<tr>
<td>MAT 131</td>
<td>Calculus I</td>
<td>4</td>
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<tr>
<td>UNV 101</td>
<td>First-Year Seminar: Introduction to University Community (STEM Major section)</td>
<td>1</td>
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<tr>
<td><strong>Credits</strong></td>
<td></td>
<td>16</td>
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<tr>
<td><strong>Spring</strong></td>
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<tr>
<td>ENG 120</td>
<td>Critical Writing</td>
<td>4</td>
</tr>
<tr>
<td>BIO 102</td>
<td>General Biology II (Required Lab component carries zero credits)</td>
<td>4</td>
</tr>
<tr>
<td>CHE 112</td>
<td>General Chemistry II (Required Lab component carries zero credits)</td>
<td>4</td>
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<tr>
<td>MAT 132</td>
<td>Calculus II</td>
<td>4</td>
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<tr>
<td><strong>Credits</strong></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td><strong>Second Year</strong></td>
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<tr>
<td><strong>Fall</strong></td>
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<td></td>
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<tr>
<td>CHE 223</td>
<td>Organic Chemistry I (Required Lab component carries zero credits) (^1)</td>
<td>4</td>
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<tr>
<td>PHY 111</td>
<td>General Physics I (Required Lab component carries zero credits)</td>
<td>4</td>
</tr>
<tr>
<td>BIO 231</td>
<td>Genetics (Required Lab component carries zero credits)</td>
<td>4</td>
</tr>
<tr>
<td>CIS 101</td>
<td>Introduction to Computing (Required Lab component carries zero credits)</td>
<td>3</td>
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<tr>
<td><strong>Credits</strong></td>
<td></td>
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<tr>
<td><strong>Spring</strong></td>
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<tr>
<td>CHE 200</td>
<td>Mathematical Methods for Physical Chemistry (CHE 200 in NYC, MAT 253 in PLV) or Differential Equations</td>
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<tr>
<td>or MAT 253</td>
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<tr>
<td>CHE 224</td>
<td>Organic Chemistry II (Required Lab component carries zero credits) (^1)</td>
<td>4</td>
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<tr>
<td>PHY 112</td>
<td>General Physics II (Counts for Analysis of Human, Social, and Natural Phenomena (AOK5). Required Lab component carries zero credits)</td>
<td>4</td>
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<tr>
<td>COM 200</td>
<td>Public Speaking</td>
<td>3</td>
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<tr>
<td><strong>Credits</strong></td>
<td></td>
<td>15</td>
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<tr>
<td><strong>Third Year</strong></td>
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<td><strong>Fall</strong></td>
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<tr>
<td>CHE 221</td>
<td>Analytical Methods and Techniques (Required Lab component carries zero credits) (^1)</td>
<td>3</td>
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<tr>
<td>CHE 301</td>
<td>Physical Chemistry I: Quantum Mechanics and Spectroscopy (Required Lab component carries zero credits)</td>
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<tr>
<td>ENG 201</td>
<td>Writing in the Disciplines</td>
<td>3</td>
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<tr>
<td>AOK II to IV (LC or INT) (two linked 3-credit LCs or one 6-credit INT)</td>
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<td>3</td>
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<tr>
<td><strong>Credits</strong></td>
<td></td>
<td>16</td>
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<tr>
<td><strong>Spring</strong></td>
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<tr>
<td>CHE 331</td>
<td>Instrumental Analysis (Required Lab component carries zero credits)</td>
<td>4</td>
</tr>
<tr>
<td>CHE 302</td>
<td>Physical Chemistry II: Thermodynamics, Molecular Interactions and Kinetics (Required Lab component carries zero credits)</td>
<td>4</td>
</tr>
<tr>
<td>CHE 326</td>
<td>Biochemistry (Required Lab component carries zero credits)</td>
<td>4</td>
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AOK I (CE) ideally also a AoK II-IV

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<thead>
<tr>
<th>Credits</th>
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<td>15</td>
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**Fourth Year**

### Fall

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHE 310</td>
<td>Green Chemistry (Required Lab component carries zero credits)</td>
<td>3</td>
</tr>
<tr>
<td>CHE 328</td>
<td>Advanced Biochemistry</td>
<td>3</td>
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<tr>
<td>CHE 480</td>
<td>Research in Chemistry</td>
<td>3</td>
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<td></td>
<td>Second Language</td>
<td>3</td>
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### Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHE 330</td>
<td>Advanced Inorganic Chemistry (Required Lab component carries zero credits)</td>
<td>4</td>
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<tr>
<td>CHE 333</td>
<td>Advanced Organic Chemistry (CHE 333 in NYC, CHE 370 in PLV)</td>
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<tr>
<td>or CHE 370</td>
<td>Advanced Biophysical Chemistry, Membrane Transport and Ionic Channels</td>
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<tr>
<td>CHE 392</td>
<td>Chemistry Seminar I</td>
<td>1</td>
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<td></td>
<td>Second Language</td>
<td>3</td>
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<tr>
<td>AoK V</td>
<td>(MAT 141 recommended)</td>
<td>4</td>
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### Total Credits

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<tr>
<th>Credits</th>
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<tbody>
<tr>
<td>120</td>
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</tbody>
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1. Reduced credits (effective from Spring 2025) shown
2. Students must take one Civic Engagement (CE) course. Many AoK II-V courses also counts as CE.