## Chemistry & Law, Technology and Culture

(130 Credits)

### First Year

#### 1st Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 125</td>
<td>General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>or CHEM 121</td>
<td>or Fundamentals of Chemical Principles I</td>
<td></td>
</tr>
<tr>
<td>CHEM 125A</td>
<td>General Chemistry Lab I</td>
<td>1</td>
</tr>
<tr>
<td>MATH 111</td>
<td>Calculus I (^1)</td>
<td>4</td>
</tr>
<tr>
<td>BNFO 135</td>
<td>Programming for Bioinformatics (^2)</td>
<td>3</td>
</tr>
<tr>
<td>HUM 101</td>
<td>English Composition: Writing, Speaking, Thinking I</td>
<td>3</td>
</tr>
<tr>
<td>FRSH SEM</td>
<td>First-Year Seminar</td>
<td>0</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
<td></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

### 2nd Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 126</td>
<td>General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>or CHEM 122</td>
<td>or Fundamentals of Chemical Principles II</td>
<td></td>
</tr>
<tr>
<td>CHEM 126A</td>
<td>Gen Chemistry Lab II</td>
<td>1</td>
</tr>
<tr>
<td>MATH 112</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 111</td>
<td>Physics I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 111A</td>
<td>Physics I Lab</td>
<td>1</td>
</tr>
<tr>
<td>HUM 102</td>
<td>English Composition: Writing, Speaking, Thinking II</td>
<td>3</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

### Second Year

#### 1st Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 222</td>
<td>Analytical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 243</td>
<td>Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 121</td>
<td>Physics II</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 121A</td>
<td>Physics II Lab</td>
<td>1</td>
</tr>
<tr>
<td>MATH 211</td>
<td>Calculus III A</td>
<td>3</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
<td></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

#### 2nd Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 221</td>
<td>Analytical Chemical Methods</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 244</td>
<td>Organic Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 244A</td>
<td>Organic Chemistry II Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>History and Humanities GER 200 level (<a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/</a>)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 222</td>
<td>Differential Equations</td>
<td>4</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
<td></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

### Third Year

#### 1st Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 473</td>
<td>Biochemistry (^3)</td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective (^3)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>CHEM 231</td>
<td>Physical Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>EPS 202</td>
<td>Society, Technology, and the Environment (^4)</td>
<td>3</td>
</tr>
<tr>
<td>EVSC 335</td>
<td>Environmental Law (^5)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

#### 2nd Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 235</td>
<td>Physical Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 480</td>
<td>Instrumental Analysis (^3)</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 412</td>
<td>Inorganic Chemistry (^3)</td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective (^3)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>
Fourth Year

1st Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 235A</td>
<td>Physical Chemistry II Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 336</td>
<td>Quantum Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 340</td>
<td>Chemistry and Engineering of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MATH 225</td>
<td>Survey of Probability and Statistics</td>
<td>1</td>
</tr>
<tr>
<td>Technical Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>R790 382</td>
<td>Environm Pol &amp; Policy</td>
<td>3</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
<td></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

2nd Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 369</td>
<td>Law and Society in History</td>
<td>3</td>
</tr>
<tr>
<td>LTC Core Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>LTC Core Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

Fifth Year

1st Semester

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSS Senior Seminar GER (<a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/</a>)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HIST 310</td>
<td>Co-op in Law, Technology, Culture and History I</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 290</td>
<td>Business Law I</td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Total Credits** 130

1. Students who do not place initially into Math 111 must take the prerequisite(s) first and catch up to the math sequence as soon as possible.
2. CS 113 is also acceptable, but it has a pre-requisite of CS 100, adding 3 more credits unless AP or transfer credit is obtained.
3. 33 credits of these courses must be taken at NJIT, Rutgers-Newark, or Essex County College by all students.
4. This course satisfies the Social Science GER.
5. This course satisfies 3 credits of the LTC Core Electives.
6. This course satisfies 3 credits of the Legal Foundations Elective.
7. Course must satisfy the 300 History and Humanities GER (https://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/).
8. MTSE 301 can be substituted for Chem 340.
9. HSS Senior Seminar must be a law-related course.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 361</td>
<td>The Founding of the American Nation</td>
<td>3</td>
</tr>
<tr>
<td>HIST 362</td>
<td>Sex, Gender, and the Law in American History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 364</td>
<td>American Law in the World</td>
<td>3</td>
</tr>
<tr>
<td>HIST 369</td>
<td>Law and Society in History</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 290</td>
<td>Business Law I</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 300</td>
<td>Philosophy of Law and Social Justice</td>
<td>3</td>
</tr>
<tr>
<td>STS 300</td>
<td>Legal Reasoning, Writing, and Technology</td>
<td>3</td>
</tr>
<tr>
<td>R790 304</td>
<td>Intro Law And Legal Res</td>
<td>3</td>
</tr>
<tr>
<td>Code</td>
<td>Title</td>
<td>Credits</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>EVSC 335</td>
<td>Environmental Law</td>
<td>3</td>
</tr>
<tr>
<td>HIST 320</td>
<td>Law and Evidence</td>
<td>3</td>
</tr>
<tr>
<td>HIST 338</td>
<td>Climate Change and Environmental Justice in America</td>
<td>3</td>
</tr>
<tr>
<td>HIST 370</td>
<td>Legal Issues in the History of Media</td>
<td>3</td>
</tr>
<tr>
<td>HIST 375</td>
<td>Legal Issues in Environmental History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 378</td>
<td>Medicine and Health Law in Modern America</td>
<td>3</td>
</tr>
<tr>
<td>HIST 384</td>
<td>Invention and Regulation</td>
<td>3</td>
</tr>
<tr>
<td>IE 447</td>
<td>Legal Aspects of Engineering</td>
<td>3</td>
</tr>
<tr>
<td>IT 331</td>
<td>Privacy and Information Technology</td>
<td>3</td>
</tr>
<tr>
<td>IT 332</td>
<td>Digital Crime</td>
<td>3</td>
</tr>
<tr>
<td>IT 400</td>
<td>Information Technology and the Law</td>
<td>3</td>
</tr>
<tr>
<td>R790 382</td>
<td>Environm Pol &amp; Policy</td>
<td>3</td>
</tr>
</tbody>
</table>