### Chemistry Courses Required for a MAJOR in Chemistry

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Offered</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>113 General Chemistry Lab I</td>
<td>1</td>
<td>Fall Spring Summer</td>
<td>Chem 115 (or co-requisite)</td>
</tr>
<tr>
<td>114 General Chemistry Lab II</td>
<td>1</td>
<td>Spring Summer</td>
<td>Chem 115, Chem 116 (or corequisite)</td>
</tr>
<tr>
<td>115 General Chemistry I</td>
<td>4</td>
<td>Fall Spring Summer</td>
<td>Math 109 or 113 (College Algebra)</td>
</tr>
<tr>
<td>116 General Chemistry II</td>
<td>4</td>
<td>Spring Summer</td>
<td>Chem 115, Math 114 (Precalculus)</td>
</tr>
<tr>
<td>223 Analytical Chemistry</td>
<td>3</td>
<td>Fall</td>
<td>Chem 114, Chem 116</td>
</tr>
<tr>
<td>227 Experimental Analytical Chemistry</td>
<td>2</td>
<td>Spring</td>
<td>Chem 223</td>
</tr>
<tr>
<td>313 Inorganic Chemistry I</td>
<td>3</td>
<td>Fall</td>
<td>Chem 114, Chem 116</td>
</tr>
<tr>
<td>331 Organic Chemistry Lab</td>
<td>2</td>
<td>Fall Spring</td>
<td>Chem 114, Chem 116, Chem 335, Chem 336 (or co-requisite)</td>
</tr>
<tr>
<td>335 Organic Chemistry I</td>
<td>4</td>
<td>Fall Spring</td>
<td>Chem 116</td>
</tr>
<tr>
<td>336 Organic Chemistry II</td>
<td>4</td>
<td>Spring</td>
<td>Chem 335</td>
</tr>
<tr>
<td>345 Physical Chemistry I</td>
<td>3</td>
<td>Fall</td>
<td>Chem 336, Math 136, Math 235 (Calculus III or co-requisite), Phys 204 (General Physics II)</td>
</tr>
<tr>
<td>346 Physical Chemistry II</td>
<td>3</td>
<td>Spring</td>
<td>Chem 336, Chem 313, Math 235 (Calculus III), Phys 204 (General Physics II)</td>
</tr>
<tr>
<td>350 Writing and Presentation of Chemistry*</td>
<td>3</td>
<td>Spring</td>
<td>Chem 336, English 101-102</td>
</tr>
<tr>
<td>413 Inorganic Chemistry II</td>
<td>3</td>
<td>Fall</td>
<td>Chem 313, Chem 346</td>
</tr>
<tr>
<td>427 Physical Chemistry Lab</td>
<td>4</td>
<td>Fall</td>
<td>Chem 345 (or co-requisite), Chem 346, Chem 350</td>
</tr>
<tr>
<td>453 Chemistry Seminar</td>
<td>1</td>
<td>Fall</td>
<td></td>
</tr>
</tbody>
</table>

* Chem 350 is a writing intensive course – part of the General Education Requirements of the College.

### Other Requirements

- Calculus I, II, & III (Math 135,136,235)
- NCAS General Education Requirements
- Physics I & II (Phys 213-214 or Phys 203-204)
- Physics Lab I & II (Phys 205-206)

### American Chemical Society Certification

To qualify for ACS certification, majors must complete Biol 360 (Biochemistry), one additional three-credit graduate chemistry course, and at least six credits of the Chemical Research course. The Biochemistry course has as prerequisites Concepts in Biology and Foundations in Cell and Molecular Biology (lecture and lab).

**Chemistry Advisor:** Dr. Huskey, 214 Olson Hall, huskey@newark.rutgers.edu
**Department Web Page:** [http://chemistry.rutgers.edu](http://chemistry.rutgers.edu)

- also see the other side -
A Suggested Sequence of Courses for the Chemistry MAJOR

**Freshman Year**

*Fall Term*
- 21:160:113 General Chemistry Lab I (1)
- 21:160:115 General Chemistry I (4)
- 21:640:135 Calculus I (4)

*Spring Term*
- 21:160:114 General Chemistry Lab II (1)
- 21:160:116 General Chemistry II (4)
- 21:640:136 Calculus II (4)

**Sophomore Year**

*Fall Term*
- 21:160:335 Organic Chemistry I (4)
- 21:750:203 General Physics I (4) or 21:750:213 University Physics I (4)
- 21:750:205 Introductory Physics Lab I (1)

*Spring Term*
- 21:160:331 Organic Chemistry Lab (2)
- 21:750:204 General Physics II (4) or 21:750:214 University Physics II (4)
- 21:750:206 Introductory Physics Lab II (1)

**Junior Year**

*Fall Term*
- 21:160:223 Analytical Chemistry (3)
- 21:160:313 Inorganic Chemistry I (3)
- 21:160:345 Physical Chemistry I (3)
- 21:640:235 Calculus III (4)

*Spring Term*
- 21:160:227 Experimental Analytical Chemistry (2)
- 21:160:346 Physical Chemistry II (3)
- 21:640:350 Writing and Presentation of Chemistry (3)

**Senior Year**

*Fall Term*
- 21:160:413 Inorganic Chemistry II (3)
- 21:160:427 Physical Chemistry Lab (4)
- 21:640:453 Seminar (1)

*Spring Term*
- 21:160:448 Inorganic and Materials Lab (4)