## Chemistry Courses Required for a MAJOR in Chemistry

(Printed November 21, 2012)

<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>335 Organic Chemistry I</td>
<td>4</td>
<td>Fall Summer</td>
<td>Chem 116</td>
</tr>
<tr>
<td>336 Organic Chemistry II</td>
<td>4</td>
<td>Spring Summer</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>
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<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)
- Physics I & II (Phys 213-214 or Phys 203-204)
- NCAS General Education Requirements
- Physics Lab I & II (Phys 205-206)

### American Chemical Society Certification

To qualify for ACS certification, majors must complete Chem 581 (Biochemistry), one additional three-credit graduate chemistry course, and at least six credits of the Chemical Research course (Biochemistry Lab, Chem 588, may be substituted for three of these research credits).

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