

## Chemistry Courses Required for a **MAJOR** in Chemistry (Printed November 21, 2012)

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

\* 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).

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**Department Web Page:** <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)
- 21:160:336 Organic Chemistry II (4)
- 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)