

# CHEMISTRY MAJOR

## Requirements

Requirements for the Chemistry major are as follows:

Course	Title	Credits
<b>First Year</b>		
CHEM 1321 & CHEM 1311	General Chemistry I and General Chemistry I Recitation	4
CHEM 1331	General Chemistry Lab I	2
CHEM 1322 & CHEM 1312	General Chemistry II and General Chemistry II Recitation	4
CHEM 1332	General Chemistry Lab II	2
MATH 1206	Calculus I <sup>1</sup>	4
MATH 1207	Calculus II	4
BISC 1403 & BISC 1413	Introductory Biology I and Introductory Biology Lab I <sup>2</sup>	5
BISC 1404 & BISC 1414	Introductory Biology II and Introductory Biology Lab II <sup>2</sup>	5
<b>Sophomore Year</b>		
CHEM 2521 & CHEM 2511	Organic Chemistry I and Organic Chemistry I Recitation	4
CHEM 2531 or CHEM 2541	Organic Chemistry Lab I for Chem Majors Organic Chemistry Lab I	2
CHEM 2522 & CHEM 2512	Organic Chemistry II and Organic Chemistry II Recitation	4
CHEM 2532 or CHEM 2542	Organic Chemistry Lab II for Chem Majors Organic Chemistry Lab II	2
PHYS 1701 & PHYS 1511	Physics I and Physics I Lab	4
PHYS 1702 & PHYS 1512	Physics II and Physics II Lab	4
MATH 2004	Multivariable Calculus I <sup>3</sup>	4
MATH 2005	Multivariable Calculus II <sup>3</sup>	4
CISC 1600 & CISC 1610	Computer Science I and Computer Science I Lab <sup>4</sup>	4
<b>Junior Year</b>		
CHEM 3621 & CHEM 3631	Physical Chemistry I and Physical Chemistry Lab I	6
CHEM 3622 & CHEM 3632	Physical Chemistry II and Physical Chemistry Lab II	6
CHEM 3721	Quantitative Analysis	4
CHEM 3722	Instrumental Analysis	4
CHEM 4030	Chemistry Seminar <sup>6</sup>	0
<b>Senior Year</b>		
CHEM 4221 & CHEM 4231	Biochemistry I and Biochemistry Lab I	4
CHEM 4222	Biochemistry II <sup>5</sup>	3
CHEM 4422	Inorganic Chemistry	3
MATH 3002	Differential Equations	4
CHEM 4030	Chemistry Seminar <sup>6</sup>	0

<sup>1</sup> MATH 12AB Transfer Calculus AB or MATH 12BC Transfer Calculus BC (transfer credit from AP Calculus) also fulfills the Calculus I requirement.

<sup>2</sup> Students in Pre-Health or having a strong interest in Biochemistry should take BISC 1403 Introductory Biology I and BISC 1404 Introductory Biology II, along with labs.

<sup>3</sup> Students pursuing ACS certification should take CHEM 4432 Inorganic Chemistry Lab and CHEM 4231 Biochemistry Lab I (required); it is recommended that students also take MATH 2004 Multivariable Calculus I and MATH 2005 Multivariable Calculus II.

<sup>4</sup> Students in the 3-2 Engineering program should take CISC 1600 Computer Science I and CISC 1610 Computer Science I Lab. Students who take CISC 1600 during Fordham's Summer Session do not take CISC 1610, as the summer lecture and lab are offered in a combined format.

<sup>5</sup> CHEM 4222 Biochemistry II is not required, but it is recommended for Pre-Health students.

<sup>6</sup> Four semesters of CHEM 4030 Chemistry Seminar are required, generally taken during the junior and senior years. Additional elective research courses may be taken throughout the four-year curriculum. Contact the Associate Chair for details.

## Additional information

It is recommended that all Chemistry majors take CHEM 3141 Methods of Chemical Research to fulfill their EP3 requirement.

MATH 2004 Multivariable Calculus I and MATH 3002 Differential Equations are suggested for students considering graduate studies in physical chemistry.

Interested students should consult with the director of the 3-2 engineering program for information regarding major courses to be completed in their sophomore and junior years.

Students are required to consult with the department before registering for CHEM 4030 Chemistry Seminar. Detailed instructions can be found on the department's website. Majors meet with their academic adviser within the department to have their course schedules approved each semester.

For all CHEM foundation courses (General Chemistry through Organic Chemistry) a minimum grade of C- in both lecture and lab is required in order to enroll in the next course in the sequence.

## Availability

The major in Chemistry is available at Fordham College at Rose Hill. Students in Fordham's School of Professional and Continuing Studies may major in chemistry only if they receive the approval of their advising dean and/or department, and if their schedules are sufficiently flexible to permit them to take day courses at the Rose Hill campus.

**Fordham College at Rose Hill students:** The requirements above are in addition to those of the Core Curriculum.

**Professional and Continuing Studies students:** The requirements above are in addition to those of the PCS Core Curriculum and any additional electives that may be required to earn a minimum of 124 credits.

**Fordham College at Rose Hill students:** The requirements above are in addition to those of the Core Curriculum.

**Professional and Continuing Studies students:** The requirements above are in addition to those of the PCS Core Curriculum and any additional electives that may be required to earn a minimum of 124 credits.