

CHEMISTRY MAJOR, BS

Campus: NYC, Westchester

This major prepares students for graduate school, medical school, or employment in the chemical or pharmaceutical industry and is approved by the American Chemical Society. It includes required CHE courses and a group of required Math and Science courses. Students interested in Forensic Science are urged to view the requirements of that major's BS program.

Major Completion Summary

Requirement	Credits
University Core Requirements	44-55
Major Requirements	68-70
Open Electives	10-16
Total Credits	128

University Core Requirements (44-55 Credits)

See complete University Core (<http://catalog.pace.edu/undergraduate/university-core-curriculum/>) requirements.

Includes many of the major's required Math and Science courses if taken to satisfy Core Foundation and Area requirements.

Code	Title	Credits
University Core		
Complete University Core Requirements ¹		44-55
Total Credits		44-55

¹ Includes many of the major's required Math and Science courses if taken to satisfy Core Foundation and Area requirements.

Major Requirements (68-70 Credits)

Code	Title	Credits
Required Chemistry Courses		
CHE 111	General Chemistry I	4
CHE 112	General Chemistry II	4
CHE 200	Mathematical Methods for Physical Chemistry	4
CHE 221	Analytical Methods and Techniques	4
CHE 223	Organic Chemistry I	5
CHE 224	Organic Chemistry II	5
CHE 301	Physical Chemistry I	4
CHE 302	Physical Chemistry II	4
CHE 326	Biochemistry	4
CHE 330	Advanced Inorganic Chemistry	4
CHE 331	Instrumental Analysis	4
CHE 340	Polymer Chemistry	3
CHE 392	Chemistry Seminar I	1
CHE 480	Research in Chemistry	3
CHE 492	Chemistry Seminar II	1
Campus Specific Chemistry Course		
Complete campus specific course.		3-4
<i>NYC Students</i>		
CHE 333	Advanced Organic Chemistry	
<i>PLV Students</i>		
CHE XXX	Recommended Advanced CHE course	
Required Math and Science Courses		
BIO 102	General Biology II	4

MAT 132	Calculus II	4
PHY 111	General Physics I	4
PHY 112	General Physics II	4
Required Advanced CHE Elective		
Select one of the following:		3-4
CHE 305	Quantum Chemistry	
CHE 310	Green Chemistry	
CHE 328	Advanced Biochemistry	
CHE 338	Spectroscopy, Theory and Practice	
CHE 370	Advanced Biophysical Chemistry: Membrane Transport and Ionic Channels	
Total Credits		76-78

Open Electives (10-16 Credits)

Code	Title	Credits
Open Electives		
Select 10-16 credits ¹		10-16
Total Credits		10-16

¹ Includes various Math and Science courses not taken for University Core Credit.

General Track

Course	Title	Credits
First Year		
Fall		
ENG 110	Composition	3
BIO 101	General Biology I	4
CHE 111	General Chemistry I	4
MAT 131	Calculus I	4
UNV 101	First-Year Seminar: Introduction to University Community (STEM Major section)	1
Credits		16
Spring		
ENG 120	Critical Writing	4
BIO 102	General Biology II	4
CHE 112	General Chemistry II	4
MAT 132	Calculus II	4
CIS 101	Introduction to Computing	3
Credits		19
Second Year		
Fall		
CHE 223	Organic Chemistry I	5
PHY 111	General Physics I	4
First Second Language course. See Advisor for guidelines		3
CHE 310	Green Chemistry (Or any one remaining Area of Knowledge course)	4
Credits		16
Spring		
CHE 224	Organic Chemistry II	5
PHY 112	General Physics II (Analysis of Human, Social, and Natural Phenomena (AOK5))	4
CHE 200	Mathematical Methods for Physical Chemistry (in NYC. Take MAT 236 in PLV)	4
Second Language Course, if applicable		3
Credits		16

Third Year**Fall**

CHE 221	Analytical Methods and Techniques	4
CHE 301	Physical Chemistry I	4
CHE 392	Chemistry Seminar I	1
One Learning Community (LC) course		3
One Learning Community (LC) course		3
Credits		15

Spring

CHE 331	Instrumental Analysis	4
CHE 302	Physical Chemistry II	4
CHE 326	Biochemistry (Writing Enhanced (WE) course)	4
Take any one remaining Area of Knowledge course		4
Credits		16

Fourth Year**Fall**

CHE 328	Advanced Biochemistry (or Any one remaining Area of Knowledge course)	3
ENG 201	Writing in the Disciplines	3
CHE 492	Chemistry Seminar II	1
CHE 480	Research in Chemistry	3
CHE 340	Polymer Chemistry (in NYC. Take any one remaining Area of Knowledge course in PLV)	3
Credits		13

Spring

CHE 333	Advanced Organic Chemistry	3
CHE 330	Advanced Inorganic Chemistry	4
Take any one remaining Area of Knowledge course		3
Take any one remaining Area of Knowledge course and Learning Community (LC) course		3
Take any one remaining Area of Knowledge course and Learning Community (LC) course		3
Credits		16
Total Credits		127