

Undergraduate Information & Curriculum Guide

Opportunities for Undergraduate Research

Although not a requirement for graduation, the Chemistry department encourages undergraduate students to pursue individual laboratory research under the supervision of a faculty mentor. For an application and for more information, visit the department website at hunter.cuny.edu/chemistry/research

IMPORTANT! All students registering for CHEM 291 or 491 must complete the designated Laboratory Safety Training Program and have it *renewed yearly*. Permission for those classes will be given ONLY upon submission of printed copies of all certificates of completion for the safety training. The current Laboratory Safety Program can be accessed online by clicking on the link to “CLMI” at hunter.cuny.edu/ehs/training.

Requirements for Departmental Honors

In order to receive departmental honors upon graduation, students must: 1) have a minimum 3.5 GPA in chemistry courses, and 2) conduct faculty-mentored research with a minimum of six hours credit (???) in CHEM 291 plus CHEM 491. (An honors thesis is required for CHEM 491.)

Minor in Chemistry (See table for details)

Sixteen credits of general chemistry, organic chemistry, and one elective.

Major in Chemistry (See table for details)

The Chemistry Department offers four academic tracks for undergraduate Chemistry majors.

Major I –Chemistry, ACS Certified (Graduate School Track)

Major II, Option 1 – Chemistry

Major II, Option 2 – Biochemistry (Premedical Track)

Major II, Option 3 – Bioinformatics Specialization

Requirements for Chemistry Major or Minor

Minor Chemistry	Major 1 ACS Chemistry	Major 2, Option 1 Chemistry	Major 2, Option 2 Biochemistry	Major 2, Option 3 Bioinformatics
CHEM 102/104 & CHEM 106 lab	CHEM 102/104 & CHEM 106 lab	CHEM 102/104 & CHEM 106 lab	CHEM 102/104 & CHEM 106 lab	CHEM 102/104 & CHEM 106 lab
CHEM 222/224 & CHEM 223 lab	CHEM 222/224 & CHEM 223/225 lab	CHEM 222/224 & CHEM 223/225 lab	CHEM 222/224 & CHEM 223/225 lab	CHEM 222/224 & CHEM 223 lab
CHEM 225 or 249 lab	CHEM 249 lab	CHEM 249 lab		
				CHEM 333*
	CHEM 352/356 & CHEM 355/357 lab	CHEM 352/356 & CHEM 355/357 lab		
			CHEM 350	CHEM 350
	CHEM 349	CHEM 349*		
	CHEM 366			
	CHEM 376		CHEM 376/377 & CHEM 378	CHEM 376/377
	CHEM 367			
	CHEM 291 & CHEM 491 (6 cr)			
Elective	Elective		Elective	
	PHYS 111/121	PHYS 111/121		
			PHYS 110/120	PHYS 110/120
	MATH 150/155	MATH 150/155	MATH 150/155	MATH 150/155
	MATH 250	MATH 250		
	MATH 254 or MATH 260			
				STAT 213
				CSCI 132
				CSCI 232
			BIOL 100/102	BIOL 100/102
				BIOL 425

Hunter Chemistry Major/Minor Course Offerings

Courses are taught both semesters, except as designated

Any 300 course and CHEM 249, if not specifically required, is a possible elective
(*course number links to syllabus*)

Designation	Title	Prereq.
CHEM 102/104	General Chemistry Lecture 1/2	MATH 150 (coreq.)
CHEM 106	General Chemistry Laboratory	
CHEM 222/224	Organic Chemistry Lecture 1/2	CHEM 102,104, & 106
CHEM 223/225	Organic Chemistry Lab 1/2	
CHEM 322	Organic Chemistry Lecture 3 (fall)	CHEM 224
CHEM 249	Quantitative Analysis (fall)	CHEM 104 & 106
CHEM 291 lec	Introduction to Research	CHEM 224
CHEM 291 lab	Introduction to Research (may repeat)	CHEM 291 lec, 223, 224
CHEM 491	Intro. to Research (Honors, with thesis)	CHEM 291 lab
CHEM 333	Computational Drug Discovery (spring)	CHEM 376
CHEM 349	Instrumental Analysis (spring)	CHEM 356
CHEM 350	Biophysical Chemistry	CHEM 224, 376; BIOL 102; PHYS 120
CHEM 351	Biophysical Chemistry Laboratory	
CHEM 352/355	Physical Chemistry 1 lec/lab (fall)	PHYS 121, CHEM 249, MATH 155
CHEM 356/357	Physical Chemistry 2S lec/lab (spring)	CHEM 352
CHEM 354	Physical Chemistry 2F	CHEM 352, MATH 250
CHEM 360	Introduction to Nanotechnology (fall)	CHEM 350 or 352
CHEM 366	Inorganic Chemistry (fall)	CHEM 352
CHEM 367	Inorganic Chemistry Lab (spring)	
CHEM 368	Structural Biology (spring)	CHEM 376
CHEM 369	Polymer Chemistry (fall)	CHEM 224
CHEM 370	Medicinal Chemistry (spring)	CHEM 376
CHEM 371	Biological Spectroscopy (spring)	CHEM 376
CHEM 376/377	Biochemistry Lecture 1/2	CHEM 224
CHEM 378	Biochemistry Lab	
CHEM 38861	Structure and Function of Nucleic Acids (fall)	CHEM 377 preferred
CHEM 388XX	Special Topics in Chemistry	variable
CHEM 392	Introduction to Radiochemistry (spring)	CHEM 224

Chemistry Major Suggested Course Scheduling

	Major 1 ACS Chemistry	Major 2, Option 1 Chemistry	Major 2, Option 2 Biochemistry	Major 2, Option 3 Bioinformatics
Year 1 Fall	CHEM 102 or 111 PHYS 111 MATH 150	CHEM 102 or 111	CHEM 102 or 111 MATH 150	CHEM 102 or 111 MATH 150
Year 1 Spring	CHEM 104 & 106, or 112 PHYS 121 MATH 155	CHEM 104 & 106, or 112 MATH 150	CHEM 104 & 106, or 112 BIOL 100 MATH 155	CHEM 104 & 106, or 112 BIOL 100 MATH 155
Year 2 Fall	CHEM 222 & 223 CHEM 249 MATH 250	CHEM 222 & 223 MATH 155	CHEM 222 & 223 BIOL 102	CHEM 222 & 223 BIOL 102
Year 2 Spring	CHEM 224 & 225 MATH 254 or 260 CHEM 29101	CHEM 224 & 225 MATH 250	CHEM 224 & 225 PHYS 110	CHEM 224 PHYS 110
Year 3 Fall	CHEM 352 & 355 CHEM 366 CHEM 29100	PHYS 111 CHEM 249	PHYS 120 CHEM 376	PHYS 120 CSCI 132 CHEM 376
Year 3 Spring	CHEM 356 & 357 CHEM 367 CHEM 29100	PHYS 121 CHEM 349	CHEM 350	CSCI 232 STAT 213 CHEM 377
Year 4 Fall	CHEM 376 CHEM 29100	CHEM 352 & 355	Elective	CHEM 350
Year 4 Spring	CHEM 349 Elective CHEM 491	CHEM 356 & 357	CHEM 377 CHEM 378	CHEM 333 BIOL 425