



The Bachelor of Science Degree in Chemistry (B.S.)

The BS curriculum is designed for students seeking to become professional chemists.

- General Chemistry 1610–1620 and Organic Chemistry 2610–2620 are the recommended sequences for chemistry and biochemistry majors, although qualified students are urged to take Honors sequences instead.
- The major is completed with **6 hours of Advanced Science Electives**, which must include **at least 3 hours of upper-level chemistry or biochemistry coursework**, and **2 hours of Advanced Lab Electives**

Examples of Advanced Science Electives:

- Chem or Biochem 4998/4999 (Research)
- Chem **5230** (Neurotransmitter-3)^b
- Chem **5420** (Organic Spectroscopy-1.5)^b
- Chem **5430** (Carbohydrates-3)^b
- Chem **5440** (Computational-3)^a
- Chem **5520** (Nanochemistry-3)^b
- Biochemistry 4511 (4)
- Most 4000 or 5000 level courses in Physics and Math
- Other non-required graded Chem and Biochem 4000-6000 level courses

- Undergraduate Research (Chem or Biochem 4998/4999) is recommended. A maximum of 6 hours of research may be used to fulfill the requirements of the major.
- Students who wish to receive an American Chemical Society certified degree should include Biochemistry 4511 or 5613 and an advanced laboratory experience in Inorganic Chemistry 4550 or Biochemistry 5621.

Autumn Semester (Year 1)		Spring Semester (Year 1)	
General Chemistry 1 (1910H^a , 1610^a , 1210)	5	General Chemistry 2 (1920H^b , 1620^b , 1220)	5
PLTL in Gen Chem (1612^a)	1	PLTL in Gen Chem (1622^b)	1
Calculus 1 (Math 1151)	5	Calculus 2 (Math 1172)	5
GE (World Language)	4	GE (World Language)	4
Freshman Survey (ARTSSCI 1100.10^a)	1	Launch Seminar	1
	<hr/> 16		<hr/> 16
Autumn Semester (Year 2)		Spring Semester (Year 2)	
Organic Chemistry 1 (2910H^a , 2610^a , 2510)	4	Organic Chemistry 2 (2920H^b , 2620^b , 2520)	4
Organic Chemistry Laboratory 1 (2540)	2	Organic Chemistry Laboratory 2 (2550)	2
Physics 1, calculus based (1250)	5	Physics 2, calculus based (1251)	5
Integrals & Differential Equations (Math 2177)	4	Analytical Chemistry 1 (2210H^b , 2210)	5
	<hr/> 15		<hr/> 16
Autumn Semester (Year 3)		Spring Semester (Year 3)	
Physical Chemistry 1 (4300)	3	Physical Chemistry 2 (4310^b)	3
Inorganic Chemistry (3510^a)	3	Physical Chemistry Laboratory (4410)	3
Advanced Science Elective	3	Analytical Chemistry 2: Instrumental Analysis (4870^b)	3
GE (World Language)	4	Adv. Lab (Chem 4998/Inorg. 4550^b /Biochem 5621 ^c)	2-4
GE (Foundations)	3	GE (Themes)	4
	<hr/> 16		<hr/> 15-17
Autumn Semester (Year 4)		Spring Semester (Year 4)	
Advanced Science Elective	3	Elective	3
Laboratory Practice in Instrumental Analysis (4880)	2	GE (Foundations)	3
GE (Foundations)	3	GE (Foundations)	3
GE (Foundations)	3	GE (Themes)	3-4
GE (Themes)	3-4	Reflection Seminar	1
	<hr/> 14-15		<hr/> 13-14

^aOnly offered in autumn semester (bold)

^bOnly offered in spring semester (bold)

^cBiochemistry 4511 & Biochemistry 5621= 4 credit hours each