

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



The Bachelor of Science 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.
- Chemistry 1612 & 1622 are highly recommended. They provide a structure in which students can work actively in groups of 6 to 8 peers to enhance learning.
- The major is completed with **six (6) hours of advanced science electives**, which must include **at least three (3) hours of upper level chemistry or biochemistry coursework**.

Examples of some approved science electives include:

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| • Chem or Biochem 4998/4999 (Research) | • Biochemistry 4511 (4) |
| • Chem 5420 (Organic Spectroscopy - 1.5) | • Most 4000 or 5000 level courses in Physics |
| • Chem 5430 (Carbohydrates - 3) | • Most 4000 or 5000 level courses in Mathematics |
| • Chem 5440 (Computational - 3) | • Other non-required graded Chem and Biochem 4000-6000 level courses |
| • Chem 5520 (Nanochemistry - 3) | |

- Undergraduate Research (Chem or Biochem 4998/4999) is recommended. A maximum of six (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, 1610, 1210)	5	General Chemistry 2 (1920H, 1620, 1220)	5
PLTL in Gen Chem (1612)	1	PLTL in Gen Chem (1622)	1
Calculus 1 (Math 1151)	5	Calculus 2 (Math 1172)	5
GE Elective	3-4	GE Elective (<i>e.g. Biological Science</i>)	4
Freshman Survey	1	GE Elective	3
	<hr/> 14-15		<hr/> 17
Autumn Semester (Year 2)		Spring Semester (Year 2)	
Organic Chemistry 1 (2910H, 2610, 2510)	4	Organic Chemistry 2 (2920H, 2620, 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, 2210)	5
	<hr/> 15		<hr/> 16
Autumn Semester (Year 3)		Spring Semester (Year 3)	
Physical Chemistry 1 (4300)	3	Physical Chemistry 2 (4310)	3
Inorganic Chemistry (3510)	3	Physical Chemistry Laboratory (4410)	3
Advanced Science Elective (Chem/Biochem ^a)	3-4	Analytical Chemistry 2: Instrumental Analysis (4870)	3
Elective	3	Adv. Lab (Chem 4998/Inorg. 4550/Biochem 5621 ^a)	2-4
GE Elective	3	GE Elective	4
	<hr/> 15-16		<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 Elective	3
GE Elective	3	GE Elective	3
GE Elective	3	GE Elective	3
GE Elective	3-4	GE Elective	3-4
	<hr/> 14-15		<hr/> 15-16

^aBiochemistry 4511 & Biochemistry 5621 = 4 credit hours