



Bachelor of Science

Major: Chemistry

2022-2023 Sample 4-Year Plan

Total Degree Requirements: 120 credits

Student _____ Student ID# _____ Student Phone # _____

Advisor _____ Minimum GPA 2.0 Minor/Career Interest(s) _____

Students are not limited to this plan; it is meant to be used as a guide for planning purposes in consultation with your advisor. The sample schedule is one possible path to completing your degree within four years. For official program requirements, please refer to the [Undergraduate Catalog](#).

First Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 119	First Year Seminar		1	F	
CHEM 112/112L	General Chemistry I and Lab	p. MATH 114	4	F	
AHSS 111	Intro to Global Citizenship and Diversity		3	F, S	
ENGL 101	Composition I		3	F, S, SU	
MATH 123	Calculus I	Based on Placement	4	F, S, SU	
Total Credit Hours			15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 114/114L	General Chemistry II and Lab	p. CHEM 112/112L and MATH 114	4	S	
MATH 125	Calculus II	p. MATH 123	4	F, S, SU	
CMST 101	Fundamentals of Speech		3	F, S, SU	
SGR #3	Social Science Elective (from two different disciplines)		3		
Total Credit Hours			14		

Second Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 326/326L	Organic Chemistry I and Lab	p. CHEM 114/114L	4	F	
CHEM 237	Intermediate Lab Investigations	p. CHEM 114/114L	1	F	
CHEM 332/332L	Analytical Chemistry I and Lab	p. CHEM 114/114L	4	F	
ENGL 201	Composition II	p. ENGL 101	3	F, S, SU	
SGR #4	Humanities Elective (from two different disciplines)		3		
Total Credit Hours			15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 328/328L	Organic Chemistry II and Lab	p. CHEM 326/326L	4	S	
CHEM 498	Undergraduate Research/Scholarship (need 4 credits total over a minimum of two semesters for graduation)	p. CHEM 237	1-3	F, S, SU	
SGR #3	Social Science Elective (from two different disciplines)		3		
SGR #4	Humanities Elective (from two different disciplines)		3		
Minor/2 nd Major Course			3		
Total Credit Hours			14-16		



Third Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 464	Biochemistry I	p. CHEM 328/328L	3	F	
CHEM 452/452L	Inorganic Chemistry and Lab	p. CHEM 332/332L or CHEM 326/326L	4	F (even)	
CHEM 498	Undergraduate Research/Scholarship (need 4 credits total over a minimum of two semesters for graduation)	p. CHEM 237	1-3	F, S, SU	
MATH 225	Calculus III	p. MATH 125	4	F, S	
PHYS 211/211L	University Physics I and Lab	p. MATH 123	4	F, S	
Total Credit Hours			16-18		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 466	Laboratory Methods - Biochemistry	p. CHEM 464	1	S	
PHYS 213/213L	University Physics II and Lab	p. PHYS 211/211L c. MATH 125	4	F, S	
Advanced Chemistry Electives (choose from list below)			3		
Minor/2 nd Major Course			6		
Total Credit Hours			14		

Fourth Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
Advanced Chemistry Elective (choose from list below)			3		
Minor/2 nd Major Course			3		
Minor/2 nd Major Course			3		
General Elective			3		
General Elective			3		
Total Credit Hours			15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 343/343L	Fundamental of Chemical Thermodynamics and Lab	p. MATH 123 and CHEM 114/114L	3	S	
CHEM 490	Senior Seminar	p. CHEM 498	1	F	
Advanced Chemistry Elective (choose from list below)			3		
Minor/2 nd Major Course			3		
General Electives		Taken as needed to reach 120 credits and 33 upper division credits	5		
Total Credit Hours			15		

Comments/Notes

Students from all academic majors can pursue graduation with Fishback Honors College distinction. View the [Honors program requirements](#).

Advanced Chemistry Electives (9 credits)

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 329	Organic Chemistry III	p. CHEM 328	2	S (even)	
CHEM 229L	Organic Chemistry Lab III	p. CHEM 328L	2	S (even)	
CHEM 432	Analytical Chemistry II	p. CHEM 332/332L	2	S (odd)	

Information Subject to Change. This is not a contract.

p. = Course Prerequisite
Semester: F = Fall, S = Spring, SU = Summer



Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 433	Bioanalytical Chemistry	p. CHEM 332/332L and CHEM 464	2	S (even)	
CHEM 448/448L	Biophysical Chemistry and Lab	p. MATH 125 and CHEM 464	4	F	
CHEM 465	Biochemistry II	p. CHEM 464	3	S	
CHEM 467	Essentials of Glycobiology	p. CHEM 464	3	S (odd)	
CHEM 482	Environmental Chemistry	p. CHEM 114/114L	3	F (odd)	
CHEM 484	Chemical Toxicology	p. CHEM 464	3	F (even)	
CHEM 492	Chemical Biology	p. CHEM 328	3	S (even)	

As part of the Department of Chemistry and Biochemistry, students in this program must complete:

- a minimum of 33 upper division credits (300-400 level courses)
- a capstone course in the major (CHEM 490)
- a designated diversity, equity, and inclusion course – AHSS 111 (or AIS 211 for teaching specialization students only)
- minor, second major, or teaching specialization

A grade of “C” or better is required in all courses required for the major.