



Bachelor of Science

Major: Chemistry Education

2021-2022 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 114/114L	4	F	
ENGL 101	Composition I		3	F, S, SU	
MATH 123	Calculus I	Based on placement	4	F, S, SU	
SGR #3	Social Science Elective (from two different disciplines)		3		
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	
EDFN 101	Explore Teaching/Learning		1		
ENGL 201	Composition II	p. ENGL 101	3	F, S, SU	
MATH 125	Calculus II	p. MATH 123	4	F, S, SU	
SGR #4	Humanities Elective (from two different disciplines)		3		
Total Credit Hours			15		

Second Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 237	Intermediate Lab Investigations	p. CHEM 114/114L	1	F	
CHEM 326/326L	Organic Chemistry I and Lab	p. CHEM 114/114L	4	F	
CHEM 332/332L	Analytical Chemistry I and Lab	p. CHEM 114/114L	4	F	
CMST 101	Fundamentals of Speech		3	F, S, SU	
PHYS 111/111L	Introduction to Physics I and Lab	p. MATH 114 or higher	4	F, S	
Total Credit Hours			16		

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	p. CHEM 237	2	F, S, SU	
AIS 211	SD American Indian Culture and Education		3	F, S, SU	
PHYS 113/113L	Introduction to Physics II and Lab	p. PHYS 111/111L	4	S	
SGR #3	Social Science Elective (from two different disciplines)		3		
Total Credit Hours			16		



Third Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 452/452L	Inorganic Chemistry and Lab	p. CHEM 326/326L	4	F (even)	
CHEM 464	Biochemistry I	p.. CHEM 328/328	3	F	
CHEM 482 or CHEM 484	Environmental Chemistry (Fall odd years) or Chemical Toxicology (Fall even years)	p. CHEM 114/114L or p. CHEM 464	3	F	
BIOL 151/151L	General Biology I and Lab		4	F	
EDFN 340	Adolescent Development in Educational Contexts	c. EDFN 351; Teaching, Learning and Leadership department consent required	3		
EDFN 351	Teaching and Learning I	c. EDFN 340: Teaching, Learning and Leadership department consent required	1		
Total Credit Hours			18		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 343	Fundamentals of Thermodynamics	p. MATH 123 and CHEM 114/114L	2	S	
CHEM 466	Laboratory Methods in Biochemistry	p. CHEM 464	1	F, S	
BIOL 153/153L	General Biology II and Lab	p. BIOL 151/151L	4		
EDFN 352/352L	Teaching and Learning II and Lab	p. EDFN 351; Teaching, Learning and Leadership department consent required.	5		
SGR #4	Humanities Elective (from two different disciplines)		3		
General Elective		Taken as needed to reach 120 credits and 33 upper division credits	1		
Total Credit Hours			16		

Fourth Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
EDFN 453	Teaching and Learning III	p. EDFN 352; Teaching, Learning and Leadership department consent required	3		
EDFN 453L	Teaching and Learning III Lab	p. EDFN 352; Teaching, Learning and Leadership department consent required	4		
SEED 413	7-12 Science Methods		3		
SEED 450	Reading and Context Literacy	p. Teaching, Learning and Leadership department consent required.	2		
Total Credit Hours			12		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
EDFN 454	Teaching and Learning IV	p. EDFN 453; Teaching, Learning and Leadership department consent required.	11		
SEED 456	Capstone/Action Research	c. EDFN 454; Teaching, Learning and Leadership department consent required.	1		
Total Credit Hours			12		

Comments/Notes

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

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 (SEED 456)
- a designated diversity, equity, and inclusion course – 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.