



Bachelor of Science in Natural Science

Major: Chemistry Education

2019-2020 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 (SGR #6)	p. MATH 114 or higher	4	F, S, SU	
ENGL 101	Composition I (SGR #1)	Based on placement	3	F, S, SU	
SGR #3	Social Science Elective (from two different disciplines)	SGR #3 satisfied by coursework from 2 different disciplines	3		
MATH 123	Calculus I (SGR #5)	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 (SGR #6)	p. CHEM 112/112L	4	S	
MATH 125	Calculus II (SGR #5)	p. MATH 123	4	F, S, SU	
ENGL 201	Composition II (SGR #1)	p. ENGL 101	3	F, S, SU	
SGR #4	Arts and Humanities/Diversity	SGR #4 satisfied by coursework from 2 different disciplines or 2 courses from one modern language sequence	3		
EDFN 101	Exploration of Teaching and Learning		1		
Total Credit Hours			15		

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, SU	
CHEM 332/332L	Analytical Chemistry I and Lab	p. CHEM 114 or CHEM 116 or CHEM 127	4	F	
PHYS 111/111L	Introduction to Physics I and Lab	p. MATH 114	4	F, S	
SPCM 101	Fundamentals of Speech (SGR #2)		3	F, S, SU	
CHEM 237	Intermediate Lab Investigations	c. CHEM 229/229L or CHEM 326/326L	1	F	
Total Credit Hours			16		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 237	Intermediate Lab Investigations	c. CHEM 229/229L or CHEM 326/326L	2	S	
PHYS 113/113L	Introduction to Physics II and Lab	p. PHYS 111/111L	4	S	
CHEM 328/328L	Organic Chemistry II and Lab	p. CHEM 326/326L	4	S, SU	
AIS 211	SD American Indian Culture and Education (SGR #3)		3	F, S, SU	



Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
SGR #4	Arts and Humanities/Diversity	SGR #4 satisfied by coursework from 2 different disciplines or 2 courses from one modern language sequence	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 or CHEM 332 or CHEM 352 or CHEM 442	4	F (even)	
CHEM 464	Biochemistry I	p. CHEM 229 or CHEM 328	3	F, S	
CHEM 482 or CHEM 484	Environmental Chemistry (Fall odd years) or Chemical Toxicology (Fall even years)	p. CHEM 114 or CHEM 127 or CHEM 326 p. CHEM 464 or CHEM 360	3	F	
EDFN 351	Teaching and Learning I		1		
SEED 413	7-12 Science Methods		3		
BIOL 151/151L	General Biology I and Lab		4	F	
Total Credit Hours			18		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 343	Fundamentals of Thermodynamics	p. MATH 123 and CHEM 236 or CHEM 114/114L	2	S	
CHEM 466	Laboratory Methods in Biochemistry	p. CHEM 360 or CHEM 464	1	F, S	
EDFN 352/352L	Teaching and Learning II and Lab		5		
EDFN 475	Human Relations		3		
BIOL 153/153L	General Biology II and Lab	p. BIOL 151/151L	4		
Total Credit Hours			15		

Fourth Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
EDFN 453/453L	Teaching and Learning III and Lab		7		
SEED 450	Reading and Context Literacy		2		
General Elective		Taken as needed to reach 120 credits and 33 upper division credits	4		
Total Credit Hours			12		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
EDFN 454	Teaching and Learning IV		11		
SEED 456	Capstone/Action Research		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.