



northern *State* university

**Bachelor of Science in Chemistry
Plan of Study**

First Year Fall	
Course	Credit
IDL 190, Freshman Seminar	2
CHEM 130, Success in Science	1
MATH 102/L, College Algebra*	3-4
CHEM 112/L, General Chemistry I	4
Behavioral/Social Sciences Course (see catalog)	3
	13-14

First Year Spring	
Course	Credit
Arts and Humanities Course (see catalog)	3
ENGL 101, Composition I	3
MATH 120, Trigonometry	3
CHEM 114/L, General Chemistry II	4
Behavioral/Social Sciences Course (see catalog)	3
	16

Second Year Fall	
Course	Credit
MATH 123, Calculus I	4
CHEM 326/L, Organic Chemistry I	4
PHYS 111/L, Physics I	4
ENGL 201, Composition II	3
	15

Second Year Spring	
Course	Credit
CHEM 328/L, Organic Chemistry II	4
PHYS 113/L, Physics II	4
SPCM 101, Fundamentals of Speech*	3
Arts and Humanities Course (see catalog)	3
MATH 125, Calculus II***	4
	18

Third Year Fall	
Course	Credit
CHEM 332/L, Analytical Chemistry	4
MATH 225, Calculus III***	4
WEL 100/L, Wellness for Life***	2
BIOL 235/L, Introduction to Biotechnology***	3
	13

Third Year Spring	
Course	Credit
CHEM 434/L, Instrumental Analysis	4
CHEM 452/L, Inorganic Chemistry	4
ENGL 305, Professional Technical Grant Writing***	3
MIS 205, Advanced Computer Applications***	3
	14

Fourth Year Fall	
Course	Credit
CHEM 490, Seminar	1
CHEM 342, Physical Chemistry I	3
BIOL 240/L, Biotechnology Lab Methods***	3
CHEM 482, Environmental Chemistry***	3
Elective or minor course	3
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	16

Fourth Year Spring	
Course	Credit
CHEM 344, Physical Chemistry II	3
CHEM 498, Undergraduate Research and Scholarship	1
Human Values Course (see catalog)	3
BIOL 245/L, Cell Culture Techniques***	3
CHEM 314/L, Criminalistics***	3
CSC 273, Computer Mathematics with Excel and VBA***	3
	16

Suggested Double Majors: Math, Chemistry- FS

Suggested Minors: Math, Quantitative Analytics in Science

*Fulfills a General Education Requirement. Other course options may be available. **Fulfills a major requirement. Other course options may be available. ***Fulfills a general elective. Other course options may be available. This plan of study is not an official document. Depending on placement scores, developmental courses may be required. Course rotations may change. Please visit with a professional advisor at least once a semester to review appropriate course choices and plan updates.