Bachelor of Science in Chemistry (certified by the American Chemical Society)

The B.S. degree provides thorough preparation for students who wish to pursue advanced degrees in the chemical sciences, go to professional school, or work as chemists in industry. All courses in the major core, major electives, and supporting courses must be taken in the traditional grading mode (A-F). Transcripts will be noted as approved by the American Chemical Society.

Please see the current approved curriculum on the SSU official catalog web page.

Major Core Requirements	**Units**	**Completed**	**To do (Semester)**
CHEM 115AB or CHEM 125AB*, General Chemistry	4	☐	_____
(10 units, 4 in the major core, 6 in general education (GE B1 & B3)			
CHEM 255, Quantitative Analysis*	4	☐	_____
CHEM 310AB, Physical Chemistry	6	☐	_____
CHEM 316, Physical Chemistry Laboratory	2	☐	_____
CHEM 325, Inorganic Chemistry	3	☐	_____
CHEM 335AB, Organic Chemistry	8	☐	_____
CHEM 336, Organic Chemistry Laboratory	2	☐	_____
CHEM 401, Chemical Synthesis and Characterization I	3	☐	_____
CHEM 402, Chemical Synthesis and Characterization II	3	☐	_____
CHEM 445, 446, or 340, Biochemistry	3	☐	_____
CHEM 494, Undergraduate Research	2	☐	_____
CHEM 497, Research Seminar	1	☐	_____
Total units in the major core	41		

Supporting Courses

MATH 161, Calculus I (3 units, counted as GE B4)	1	☐	_____
MATH 211, Calculus II	4	☐	_____
MATH 261, Calculus (IV)	4	☐	_____
PHYS 114, Introduction to Physics I	4	☐	_____
PHYS 116, Introduction to Physics Laboratory I	1	☐	_____
PHYS 214, Introduction to Physics II	4	☐	_____
PHYS 216, Introduction to Physics Laboratory II	1	☐	_____
Total units in supporting courses	19		

GE Courses

CHEM 115AB	6
MATH 161	3
Others	42
Total units in GE courses	51

Electives……. 9

Total units to graduate……**120**

Sample Four-year Program for B.S. in Chemistry

Freshman Year:

Fall semester (15 units)	*Spring semester (17 units)*
CHEM 115A or CHEM 125A (5)	CHEM 115B or CHEM 125B (5)
MATH 161 (4)	MATH 211 (4)
GE (3)	PHYS 114 (4)
GE (3)	PHYS 116 (1)
	GE (3)

Sophomore Year:

Fall semester (14 units)	*Spring semester (15 units)*
CHEM 335A (5)	CHEM 335B (3)
MATH 261 (4)	CHEM 336 (2)
PHYS 214 (4)	CHEM 255 (4) *
PHYS 216 (1)	GE (3)
	GE (3)

Junior Year:

Fall semester (15 units)	*Spring semester (15 units)*
CHEM 445 (3)	CHEM 310B (3)
CHEM 310A (3)	CHEM 316 (2)
GE (3)	CHEM 494 (1)
GE (3)	GE (3)
GE (3)	GE (3)
	Elective (3)

Senior Year:

Fall semester (13 units)	*Spring semester (16 units)*
CHEM 401 (3)	CHEM 402 (3)
CHEM 494 (1)	CHEM 497 (1)
GE (3)	CHEM 325 (3)
GE (3)	GE (3)
GE (3)	Elective (3)
	Elective (3)

Total semester units: 120

* Students must place into the Chemistry 125 AB series by receiving an appropriate score on the chemistry placement exam. Quantitative Analysis (CHEM 255) is not required for students who have completed CHEM 125 A & B. Students should replace these four units by completing the challenge by exam form upon completion of the series.