

# Bachelor of Science

# Biochemistry with a Major in Secondary Chemistry Education (6-12) (BS)

## Degree Program Guide

Course	Title	Credit Hours
<b>Freshman</b>		
<b>Fall</b>		
ENGL 110C	English Composition (Grade of C or better required)	3
MATH 163	Precalculus II	3
CHEM 121N and CHEM 122N		4
BIOL 121N and BIOL 122N		4
CHEM 160G	Introduction to Chemistry and Biochemistry Research and Careers	3
<b>Credit Hours</b>		<b>17</b>
<b>Spring</b>		
Select one of the following:		
ENGL 211C	Writing, Rhetoric, and Research	3
ENGL 231C	Writing, Rhetoric, and Research: Special Topics	3
MATH 211	Calculus I	4
CHEM 123N and CHEM 124N or CHEM 125		4-5
BIOL 123N and BIOL 124N		4
STEM 103	Foundations of STEM Teaching: An Inquiry-Based Approach	2
<b>Credit Hours</b>		<b>17-18</b>
<b>Sophomore</b>		
<b>Fall</b>		
CHEM 211 and CHEM 212		5
MATH 212	Calculus II	4
COMM 101R	Public Speaking	3
STEM 201	Knowing and Learning in STEM Education	3
Human Creativity		3
<b>Credit Hours</b>		<b>18</b>
<b>Spring</b>		
CHEM 213 AND CHEM 214 or CHEM 216		5
STEM 202	Classroom Interactions in STEM Education	3
Literature		3
Philosophy and Ethics		3
<b>Credit Hours</b>		<b>14</b>

## Junior

### Fall

CHEM 321 and CHEM 322		5
PHYS 231N	University Physics I	4
BIOL 293	Cell Biology	3
STEM 401	Project Based Instruction in STEM Education	3
Interpreting the Past		3
<b>Credit Hours</b>		<b>18</b>

### Spring

CHEM 441	Biochemistry Lecture	3
PHYS 232N	University Physics II	4
CHEM 442W	Biochemistry Laboratory (C or better required)	4
Human Behavior: GEOG 101S		3
SPED 400	Foundations of Special Education: Legal Aspects and Characteristics	3
<b>Credit Hours</b>		<b>17</b>

## Senior

### Fall

CHEM 331	Physical Chemistry Lecture I	3
CHEM 443	Intermediate Biochemistry	3
BIOL 294	Genetics	3
Impact of Technology		3
TLED 408	Reading and Writing in Content Areas	3
<b>Credit Hours</b>		<b>15</b>

### Spring

CHEM 485	Chemistry and Biochemistry Seminar	1
CHEM 333	Physical Chemistry Lecture II	3
STEM 485	Apprentice Teaching	9
<b>Credit Hours</b>		<b>13</b>

**Total Credit Hours 129-130**

Language and Culture I & II may be met in high school and are not included in this 4-year plan. Please see requirement details.