



## Biology B.A. Major with STEM Teaching Program Minor (Biology 5-12<sup>th</sup>)

This major partially satisfies the criteria for a teaching endorsement in Biology (5-12), qualifying students to teach biology at the high school, middle, or junior high levels. Students who successfully complete the Biology BA and STEM Teaching Program Minor (an alternative to the Professional Education Program) are eligible to apply for Washington State teacher certification. Teacher certification candidates must receive a C grade or higher in all major and STEM Teaching Program courses, have a GPA of at least 3.0 for either the last 45 graded quarter credits or overall CWU/transfer cumulative, and meet all Washington State teacher certification requirements. See the biology and STEM Teaching advisors as soon as possible to develop a course of study.

### Pre-Requisites

MATH 153 completed  Major/Minor applications completed  Entry to major survey completed

Required Courses	Credits	Plan	Completed
<b>Biology B.A. (Major)</b>			
BIOL 181, 182, 183 General Biology I, II, III	15		
BIOL 213 Introductory Biostatistics	4		
BIOL 321 Genetics	5		
BIOL 499S Senior Seminar	1		
1 course from the Molecular/Cell Group – <i>BIOL430 OR BIOL425 recommended*</i>	5		
1 course from Diversity Group – <i>BIOL323 OR BIOL322 Microbiology recommended*</i>	5		
1 course from Ecology Group – <i>BIOL360 General Ecology recommended*</i>	5		
1 course from Evolution Group – <i>BIOL470 Mechanisms of Evol recommended*</i>	5		
1 course from Structure/Function Group – <i>BIOL353 OR BIOL455 OR BIOL441 rec*</i>	5-6		
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB General Chemistry I, II, III	15		
CHEM 361, 361LAB	5		
*Recommended courses best meet teaching standards <b>Biology major subset:</b>	<b>70-71</b>		
<b>STEM Teaching Program (Minor)</b>			
<i>Pre-admission courses (must complete before full admission)</i>			
STP 301 Inquiry Approaches to Teaching	OR STP 302A Inquiry Based Teaching & Lesson Design (4)	2	
STP 302 Inquiry Based Lesson Design		2	
<b>Fully Admitted Courses (must be fully admitted to Teacher Certification)</b>			
STP 303 Knowing and Learning (pre-req to all following classes)	4		
STP 304 Classroom Interactions 1	4		
STP 305 Classroom Interactions 2	4		
STP 306 Project-Based Instruction	3		
STP 307 Functions and Modeling	3		
STP 308 Historical Perspectives in STEM Education	3		
STP 309 Research Methods	3		
EFC 480 – Student Teaching (Must meet all Student Teaching Requirements)	16		
	<b>Minor subset:</b>	<b>44</b>	
	<b>Total Credits:</b>	<b>114-115</b>	



**EXAMPLE 4-Year Plan** – Meet with your major and STP advisor(s) to individualize your plan before registering for classes.

	Fall	Winter	Spring
Freshman Year	Math 153      5 Bio 181        5 Chem 181 + L   5 <b>Total    15</b>	Gen Ed        4 Bio 182       5 Chem 182 + L   5 <b>Total    14</b>	Gen Ed        8 Bio 183       5 Chem 183 + L   5 <b>Total    18</b>
Sophomore Year	Gen Ed        5 ^Bio 213       4 Chem 361 + L   5 <b>Total    14</b>	Gen Ed        10 Bio 321       5 STP 301       2 <b>Total    17</b>	Gen Ed        10 Bio 360       5 STP 302       2 <b>Total    17</b>
Junior Year	Gen Ed        8-9 Bio 430        5 STP 303       4 <b>Total    18-19</b>	Gen Ed        5 Bio 322       5 STP 304       4 <b>Total    17</b>	Gen Ed/Elective 5+ Bio 353       6 STP 307       3 <b>Total    14+</b>
Senior Year	Gen Ed        5 Elective       2+ Bio 499S       1 STP 305       4 STP 308       3 <b>Total    15+</b>	Elective       1+ Bio 470       5 STP 306       3 STP 309       3 <b>Total    12+</b>	EFC 480       16 <b>Total    16</b>

^Pre-req to upper level Biology courses

Student Name: \_\_\_\_\_ ID#: \_\_\_\_\_

Email: \_\_\_\_\_

Signature \_\_\_\_\_ Date: \_\_\_\_\_

STEM Teaching Minor Advisor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Major Advisor Signature: \_\_\_\_\_ Date: \_\_\_\_\_