

# BIOLOGY SECONDARY EDUCATION, BED

The Bachelor of Education (BEd) in Biology Secondary Education is designed for those students seeking teaching certification in Biology.

## Student Learning Outcomes

Biology Secondary Education Majors with a Bachelor of Education degree, upon completion of the program, will be able to:

- Understand and explain the similarities and differences between how a variety of organisms live and grow.
- Understand and explain how organisms interact with their environment.
- Understand and explain how genetic information is transmitted from one generation to the next and how genetic variation is lost or maintained.
- Understand and explain evolutionary principles and processes and how they provide evidence that shows the relatedness of different species.
- Incorporate core biological ideas, scientific and engineering practices, and crosscutting concepts into instruction.
- Demonstrate an ability to create and manage environments that support learning.

## Degree Requirements

In addition to the requirements stated below, students must complete 34-35 hours of General Education (<https://catalog.washburn.edu/undergraduate/programs-degrees-graduation-requirements/general-education-requirements/>), all requirements for a Bachelor of Education (<https://catalog.washburn.edu/undergraduate/college-arts-sciences/degrees/bachelor-education/>) degree, and any additional hours needed to reach the minimum 120 credit hours required for graduation. Some of the courses below may also fulfill general education or other degree requirements. Please see your advisor for more information.

Students seeking certification to teach Biology must also be formally admitted to the University's Professional Teacher Education (<https://catalog.washburn.edu/undergraduate/school-applied-studies/education/#admissiontext>) Programs.

Code	Title	Hours
<b>Required Courses Inside Department</b>		
BI 192	General Cellular Biology	5
BI 194	General Organismal Biology	5
BI 203	Human Impact on the Environment	3
BI 301	General Microbiology	4
BI 310	Ecology	4
BI 319	Biology for STEM Educators	3
BI 333	General Genetics	4
BI 340	Evolutionary Biology	3
Select a minimum of 6 credits of Biology at the 200 level or higher. One course must be animal focused and the other, plant focused.		6
Subtotal		37
<b>Required Courses In Other Departments</b>		

CH 121	General, Organic, and Biological Chemistry	5
MA 140	Statistics	3
PS 131	Biological Physics for the Health and Life Sciences	3
PS 132	Biological Physics for the Health and Life Sciences Laboratory	1
Subtotal		12
<b>Required Courses Inside Education Department</b>		
<i>Professional Education (Pre-Admission Courses Required for Admission to Teacher Education)</i>		
ED 155	Teaching, Learning, Leadership	3
ED 285	Educational Psychology	3
<i>Core Education Courses</i>		
ED 165	Ed. 1, Examining Teaching as a Profession: Diversity 1, Literacy 1, Technology 1	3
ED 275	Ed. 2 Exploring Teaching as a Profession (Classroom Management 1, Diversity 2, Technology 2) Ed. 2	3
ED 295	Ed. 3 Experiencing Teaching as a Profession (Classroom Management 2, Diversity 3, Literacy 2)	3
ED 302	Teaching Exceptional Learners	3
ED 350	General Secondary Methods	3
ED 354	Curriculum and Assessment	3
ED 395	Ed. 4 Extending Teaching as a Profession (Classroom Management 3, Literacy 3, Technology 3)	3
<i>Professional Semester</i>		
ED 410	Secondary Student Teaching	12
Subtotal		39
<b>Total Hours</b>		<b>88</b>