

# NATURAL SCIENCE IN BIOLOGY FOR SECONDARY TEACHERS (BACHELOR OF SCIENCE, B.S.)

## Requirements

\*Effective Fall 2020, this program is being phased out and has a 3-year teach out plan. More information can be found here (<https://www.missouriwestern.edu/acadaff/phased-out-programs/>).

A major in Natural Science for Secondary Teachers leads to certification to teach Science courses in schools. Students who pursue this program should consider teaching as their immediate career goal.

Code	Title	Credit Hours
<b>General Studies</b>		
Students must complete General Studies courses ( <a href="http://catalog.missouriwestern.edu/undergraduate/university-information/academic-standards-regulations/baccalaureate-degree/#bachelor-general-studies">http://catalog.missouriwestern.edu/undergraduate/university-information/academic-standards-regulations/baccalaureate-degree/#bachelor-general-studies</a> )		42-47
<b>Major Requirements</b>		
BIO 105	Principles of Organismal Biology	4
BIO 106	Principles of Cell Biology	4
BIO 205	Genetics	4
BIO 225	Ecology	4
BIO 308	History and Philosophy of the Natural Sciences	3
BIO 380	Biology Teaching: Materials and Methods	3
BIO 390	Microbiology	4
CHE 111	General Chemistry I	5
CHE 120	General Chemistry II with Qualitative Analysis	5
CHE 310	Organic Chemistry I	3
CHE 311	Organic Chemistry Laboratory I	2
CHE 321	Quantitative Analysis	4
CHE 370	Biochemistry I	4
PHY 110	College Physics I	4
PHY 111	College Physics II	4
ESC 111	Physical Geology	4
ESC 120	Meteorology	4
MAT 111	Introductory Statistics	3
	or MAT 111E Introductory Statistics	
Select one course from each of the following areas:		6-8
<b>A. Organismal Diversity</b>		
BIO 307	Plant Morphology	
BIO 318	Ornithology	
BIO 350	Plant Systematics	
BIO 351	Local Flora	
BIO 415	Invertebrate Biology	
BIO 416	Vertebrate Biology	
BIO 418	Mammalogy	

BIO 455	Entomology	
<b>B. Physiology</b>		
BIO 311	Animal Physiology	
BIO 440	Plant Physiology	
<b>Education Professional Sequence</b>		
Students must complete the Professional Sequence ( <a href="http://catalog.missouriwestern.edu/undergraduate/professional-studies/education/secondary-education/">http://catalog.missouriwestern.edu/undergraduate/professional-studies/education/secondary-education/</a> )		36

## Program Graduation Requirements

1. Earn an overall GPA of at least 2.75, a major GPA of 3.0 and a minimum 3.0 GPA in Education coursework.

## University Graduation Requirements

1. Earn a minimum of 120 credit hours (100 level and higher, maximum of 6 CED credit hours applicable).
2. Earn a minimum of 30 credit hours in upper-division courses. Lower-division transfer courses accepted as meeting upper-division departmental course requirements cannot be used to fulfill this requirement.
3. Earn 30 of the last 45 credit hours at MWSU in institutional coursework (exclusive of credit by examination).
4. Participate in required departmental and campus wide assessments.
5. Fulfill the Missouri Constitution requirement.
6. Successfully pass the Missouri Higher Education Civics Achievement exam.