BSEd in Secondary Education with Emphasis in Biology

Degree Program Description

The Bachelor of Science in Education in Secondary Education prepares students to work with children from ninth through twelfth grade in public, private, and alternative school systems. You may consider a degree in education if you enjoy working with children and/or adolescents, want to strengthen the future through education, and want to make a difference in the lives of others. MU Students work closely with mentors, practicing teachers, administrators, and university faculty to develop the knowledge and skills to enhance learning outcomes for children and youth. The coursework through the College of Education & Human Development focuses on teachers' roles in facilitating learning at all levels of development and considers the influences of cultural, political, historical, and economic factors on students, teachers, and schools. Upon successfully completing the initial teacher certification process, the state grants you certification in secondary biology. Practical and rewarding clinical training in schools and agencies begins sophomore year and continues each semester culminating in a senior-level teaching internship, enhancing teaching skills and confidence. Coursework within Secondary Biology provides you with experience in the methods of teaching biology in supporting learners in the development of scientific literacy. This includes consideration of the nature of science, methods for teaching science, strategies for assessing science learning, and pathways for developing into a professional biology educator.

Major Program Requirements

Students must complete all university (http://catalog.missouri.edu/academicdegreerequirements/universityrequirements/), general education (http://catalog.missouri.edu/academicdegreerequirements/generaleducationrequirements/), and content requirements, in addition to degree requirements. Please meet with an Academic Advisor to discuss degree requirements and to create a semester plan.

Teacher Education programs in the College of Education & Human Development are accredited by the Missouri Department of Elementary and Secondary Education (DESE (https://dese.mo.gov/)). Curriculum changes mandated to earn teacher certification may become effective at any point during your academic program. Therefore, it is extremely important that you DO NOT SELF ADVISE.

Early Experiences		
LTC 1100	Orientation	1
or SPC_ED 1100	Orientation: Special Education	
LTC 2200	School Health and Student Wellbeing	3
ESC_PS 2010	Inquiry Into Learning I	3
ESC_PS 2014	Inquiry into Learning I - Field Experience	1
LTC 2040	Inquiring into Schools, Community and Society I	3
or LTC 2040H	Inquiring into Schools, Community and Society I - Honors	
LTC 2044	Inquiry into Schools, Community and Society: Field	1
IS_LT 2467	Inquiry into Empowering Learners with Technology	3
Mid-Level Experiences		
LTC 4631	Teach.Sci.Second.Sch.:Phil.,Hist., Sci.Inq.,Curr., Assm., & Teach I	4
LTC 4634	Teaching Middle and Secondary Science I Field	1
LTC 4560	Reading and Writing in the Content Areas	3
LTC 4460	Teaching English to Speakers of Other Languages	3
or LTC 4460H	Teaching English to Speakers of Other Languages - Honors	
LTC 4641	Teaching Middle and Secondary Science II	3
LTC 4644	Teaching Middle and Secondary Science II Field	1
SPC_ED 4020	Teaching the Exceptional Learner	3
LTC 4565	Reading and Writing in the Content Areas II	3
Advanced-Level Experiences		
LTC 4651	Teach.Sci.Second.Sch.:Phil.,Hist.,Sci.Inq.,Curr.,Assm., & Tech III	3
LTC 4654	Teach Sci MS/Sec Sch: Phil,Hist,Sci Inq,Curr,Assm & Tech III Fld	1
SPC_ED 4310	Behavioral and Classroom Management	3
ED_LPA 4060	Inquiring into Schools, Community and Society II	3
LTC 4971	Internship and Capstone Seminar	12
LTC 4971H	Internship and Capstone Seminar - Honors (Honors students can choose to enroll in 6 credit hours of LTC 4971H and 6 credit hours of LTC 4971 to fulfill 12 credit hour requirement for Internship and Capstone Seminar.)	
Content Area		
BIO_SC 1500	Introduction to Biological Systems with Laboratory	5
or BIO_SC 1500H	Introduction to Biological Systems with Laboratory Honors	
or BIO_SC 1010 & BIO_SC 1020	General Principles and Concepts of Biology and General Biology Laboratory	
or BIO_SC 1030	General Principles and Concepts of Biology with Laboratory	
BIO_SC 1200	General Botany with Laboratory	5
BIO_SC 2200	General Genetics	4
or BIO_SC 2200H	General Genetics - Honors	
BIO_SC 2300	Introduction to Cell Biology	4
or BIO_SC 2300H	Introduction to Cell Biology- Honors	
BIO_SC 3400	Evolution and Ecology	3-8
or BIO_SC 3650 & BIO_SC 4600	General Ecology and Evolution	
BIO_SC 3700	Human Physiology	5
or MPP 3202	Elements of Physiology	
or MPP 3202H	Elements of Physiology - Honors	
Additional Required Science Courses (12 credit hours minimum, at least 1 course from each area*)		**12**
Physics		
PHYSCS 1050	Concepts in Cosmology	3

PHYSCS 1200	Everyday Wonders: Explaining How Ordinary Things Work	4
PHYSCS 1210	College Physics I	4-5
or PHYSCS 2750	University Physics I	
or PHYSCS 2750H	University Physics I - Honors	
PHYSCS 2200	Life and the Universe	3
PHYSCS 3200	Physics of Space Explorations	3
***Chemistry (must complete all 8 credit hours listed below)**		**8**
CHEM 1400 & CHEM 1401	College Chemistry I and College Chemistry I Laboratory	4
or CHEM 1400H & CHEM 1401	College Chemistry I - Honors and College Chemistry I Laboratory	
CHEM 1410 & CHEM 1411	College Chemistry II and College Chemistry II Laboratory	4
or CHEM 1400H & CHEM 1411	College Chemistry I - Honors and College Chemistry II Laboratory	
Earth Science/Environmental Science		
ENV_SC 1100	Introduction to Environmental Science	3
ENV_SC 4024	Foundations of Environmental Education	3
GEOL 1050	Planet Earth	3
GEOL 1200	Environmental Geology with Laboratory	4
or GEOL 1200H	Environmental Geology with Laboratory - Honors	
or GEOL 1100	Introduction to the Earth with Laboratory	
or GEOL 1100H	Introduction to the Earth with Laboratory - Honors	

Semester Plan

Below is a sample plan of study, semester by semester. A student's actual plan may vary based on course choices and where options are available.

First Year				
Fall	**CR**	**Spring**		**CR**
LTC 1100	1	LTC 2200		3
MATH 1100	3	ENGLSH 1000		3
BIO_SC 1500	5	American History or Government		3
Humanities	3	BIO_SC 2200		4
Social or Behavioral Science	3	CHEM 1400		3
		CHEM 1401		1
	15			**17**
Second Year				
Fall	**CR**	**Spring**		**CR**
ESC_PS 2010 or LTC 2040 (Social Science)	3	ESC_PS 2010 or LTC 2040 (Social Science)		3
ESC_PS 2014 or LTC 2044	1	ESC_PS 2014 or LTC 2044		1
Writing Intensive & Humanities	3	IS_LT 2467		3
BIO_SC 2300	4	BIO_SC 3400		3
CHEM 1410	3	Humanities		3
CHEM 1411	1	Additional Required Science Course: Physics		3-5
	15			**16-18**
Third Year				
Fall	**CR**	**Spring**		**CR**
LTC 4631	4	LTC 4641		3
LTC 4634	1	LTC 4644		1
SPC_ED 4020	3	LTC 4460		3
LTC 4560	3	LTC 4565		3
BIO_SC 1200	5	Additional Required Science Course: Earth Science/ Environmental Science		3-4
		Elective if needed for 120 credit hour total minimum		1
	16			**14-15**
Fourth Year				
Fall	**CR**	**Spring**		**CR**
LTC 4651	3	LTC 4971		12
LTC 4654	1			
ED_LPA 4060	3			
SPC_ED 4310	3			
BIO_SC 3700	5			
	15			**12**

Total Credits: 120-123