

# BSEd in Middle School Education with Emphasis in Science

## Degree Program Description

The Bachelor of Science in Education in Middle School Education prepares students to work with children from fifth through ninth 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 middle school science. 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 Middle School Science will teach you ways to support the development of science learning of middle school students. This includes consideration of the nature of science, methods for teaching science, strategies for assessing science learning, and pathways for developing into a professional science educator.

## Major Program Requirements

Students must complete all university (<https://catalog.missouri.edu/academicdegree/requirements/universityrequirements/>), general education (<https://catalog.missouri.edu/academicdegree/requirements/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.**

### Degree Requirements Sample Program

#### Early Experiences

LTC 1100	Orientation (Recommended)	1
or SPC_ED 1100	Orientation: Special Education	
ESC_PS 2010	Inquiry Into Learning I	3
or H_D_FS 3430	Adolescence and Young Adulthood	
LTC 2040	Inquiring into Schools, Community and Society I	3
or LTC 2040H	Inquiring into Schools, Community and Society I - Honors	
LTC 2044	Early Field Experience for Teacher Education	2

<b>Educational Technology (minimum 2 credit hours)</b>		<b>2</b>
IS_LT 2467	Inquiry into Empowering Learners with Technology (IS_LT 2467 3 credit hours, IS_LT 2300 1 credit hour)	1-3
or IS_LT 2300	Inquiry into Transforming Learning with Technology	
Choose one course		
IS_LT 2305	Blended Learning in the K12 Classroom	1
IS_LT 2310	Technologies for Game-Inspired Teaching and Learning	1
IS_LT 2315	Advancing Equity in K12 Classrooms Through Artificial Intelligence	1
IS_LT 4099	Making and Education	2
IS_LT 4310	Seminar in Information Science and Learning Technologies (Topic: Accessible Learning and Information Environments)	2
IS_LT 4355	Web Design and Development	3
IS_LT 4361	Introduction to Digital Media	3
IS_LT 4373	Exploring Moodle	1
IS_LT 4374	Exploring Canvas	1
IS_LT 4386	Microlearning	1
<b>Mid-Level Experiences</b>		
LTC 4340	Middle School Science I	4
LTC 4344	Middle School Science Field I	1
LTC 4460	Teaching English to Speakers of Other Languages	3
or LTC 4460H	Teaching English to Speakers of Other Languages - Honors	
LTC 4560	Reading and Writing in the Content Areas	3
LTC 4350	Middle School Science II	3
LTC 4354	Middle School Science Field Experience	1
LTC 4565	Reading and Writing in the Content Areas II	3
SPC_ED 4020	Teaching the Exceptional Learner	3
<b>Advanced-Level Experiences</b>		
LTC 4355	Middle School Science Methods III	3
LTC 4654	Teach Sci MS/Sec Sch: Phil,Hist,Sci Inq,Curr,Assm & Tech III Fld	1
LTC 4410	Teaching, Engaging and Assessing Middle-Level Students	3
LTC 4060	Teachers as Leaders: Policy, Ethics, and Advocacy	1
LTC 4050	Classroom Communities: Managing Collaboration for Learning	3
or SPC_ED 4310	Behavioral and Classroom Management	
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.)	
<b>Content Area</b>		
CHEM 1400 & CHEM 1401	College Chemistry I and College Chemistry I Laboratory	4
or CHEM 1400H & CHEM 1401H	College Chemistry I - Honors and College Chemistry I Laboratory - Honors	

CHEM 1410 & CHEM 1411 or CHEM 1410H & CHEM 1411H	College Chemistry II and College Chemistry II Laboratory College Chemistry II - Honors and College Chemistry II Laboratory - Honors	4
PHYSICS 1210 or PHYSICS 2750	College Physics I University Physics I	4-5
PHYSICS 1200	Everyday Wonders: Explaining How Ordinary Things Work	4
GEOL 1100 or GEOL 1200 or GEOL 1100H or GEOL 1200H	Introduction to the Earth with Laboratory Environmental Geology with Laboratory Introduction to the Earth with Laboratory - Honors Environmental Geology with Laboratory - Honors	4
ATM_SC 1050 or ATM_SC 1050H	Introductory Meteorology Introductory Meteorology - Honors	3
BIO_SC 1500  or BIO_SC 1500H  or BIO_SC 1010 & BIO_SC 1020  or BIO_SC 1030	Introduction to Biological Systems with Laboratory (Recommended ) <sup>(BIO_SC 1030: Transfer students only)</sup> Introduction to Biological Systems with Laboratory Honors General Principles and Concepts of Biology and General Biology Laboratory General Principles and Concepts of Biology with Laboratory	3-5
ENV_SC 1100 or ENV_SC 1100H or NAT_R 1070	Introduction to Environmental Science Introduction to Environmental Science - Honors Ecology and Conservation of Natural Resources	3

PHYSICS 1200	4	PHYSICS 1210	4
		Elective	1
<b>15</b>		<b>15</b>	

Fourth Year			
Fall	CR	Spring	CR
LTC 4355		3 LTC 4971	12
LTC 4654	1		
LTC 4410	3		
LTC 4050	3		
LTC 4060	1		
ENV_SC 1100 or NAT_R 1070	3		
<b>14</b>		<b>12</b>	

**Total Credits: 120**

## 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 Educational Technology Course	1
MATH 1100		3 Educational Technology Course	1
Humanities		3 ENGLISH 1000	3
American History or Government		3 BIO_SC 1500	5
ATM_SC 1050		3 Humanities	3
Elective		3 Elective	3
<b>16</b>		<b>16</b>	

Second Year			
Fall	CR	Spring	CR
ESC_PS 2010 or H_D_FS 3430 (Fall or Spring)		3 LTC 2040 (Fall or Spring)	3
Writing Intensive		3 LTC 2044	2
Social or Behavioral Science		3 Humanities	3
CHEM 1400		3 GEOL 1200 or 1100	4
CHEM 1401		1 CHEM 1410	3
Elective		3 CHEM 1411	1
<b>16</b>		<b>16</b>	

Third Year			
Fall	CR	Spring	CR
LTC 4340		4 LTC 4350	3
LTC 4344		1 LTC 4354	1
LTC 4460		3 LTC 4565	3
LTC 4560		3 SPC_ED 4020	3