Mizzou
University of Missouri

BSEd in Secondary Education with Emphasis in Mathematics Education

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 mathematics. 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 Mathematics provides you with research-based methods of teaching mathematics.

Major Program Requirements

Students must complete all university (https://catalog.missouri.edu/academicdegreerequirements/universityrequirements/), general education (https://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 (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

Educational Technology (minimum 2 credit hours)

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	

Mid-Level Experiences

LTC 4571	Introduction to Teaching Mathematics in Middle and Secondary Schools	3
LTC 4574	Intro. Teaching Math in Middle and Secondary School Field Experience	1
LTC 4560	Reading and Writing in the Content Areas	3
LTC 4050	Classroom Communities: Managing Collaboration for Learning	3
or SPC_ED 4310	Behavioral and Classroom Management	
LTC 4581	Teaching Mathematics in Middle and Secondary Schools: Focus on Algebra and Technology	3
LTC 4584	Teaching Math in Middle and Secondary Schools: Algebra and Technology 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 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.)	
LTC 4590	Teach.Math in Sec.Schools: Focus on Geometry, Probability and Statistics	3
LTC 4594	Teach Math in Sec Sch: Focus on Geometry/Probability	1
LTC 4460	Teaching English to Speakers of Other Languages	3
or LTC 4460H	Teaching English to Speakers of Other Languages - Honors	
LTC 4060	Teachers as Leaders: Policy, Ethics, and Advocacy	1

Content Area

MATH 1500	Analytic Geometry and Calculus I	5
or MATH 1500H	Analytic Geometry and Calculus I - Honors	
MATH 1700	Calculus II	5
or MATH 1700H	Calculus II - Honors	
MATH 2300	Calculus III	3
or MATH 2300H	Calculus III - Honors	

MATH 2320	Discrete Mathematical Structures (Recommended)	3	LTC 4594		1
or MATH 3000	Introduction to Advanced Mathematics		LTC 4460		3
MATH 4060	Connecting Geometry to Middle and Secondary Schools (Recommended)	3	LTC 4060		1
or MATH 4100	Differential Equations		Math Elective (MATH 4100, 4330, 4150, 4400)		3
MATH 4140	Matrix Theory	3	MATH 4510		3
MATH 4510	Higher Algebra	3	Elective		3
MATH 4350	Introduction to Non-Euclidean Geometry	3	**12**		**17**
STAT 4050	Connecting Statistics to Middle and Secondary Schools (Recommended)	3			
or STAT 4710	Introduction to Mathematical Statistics		**Total Credits: 120**		
INFOTC 1040	Introduction to Problem Solving and Programming	3			
or CMP_SC 1050	Algorithm Design and Programming I				
Math Elective (Choose one)		3			
MATH 4100	Differential Equations				
MATH 4330	Theory of Numbers				
MATH 4150	History of Mathematics				
MATH 4400	Introduction to Topology				

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 1500	5	ENGLSH 1000	3
Humanities	3	Humanities	3
American History or Government	3	MATH 1700	5
Elective	2	Elective	3
	14		**15**
Second Year			
Fall	**CR**	**Spring**	**CR**
LTC 2040 (Fall or Spring)	3	ESC_PS 2010 or H_D_FS 3430 (Fall or Spring)	3
MATH 2300	3	LTC 2044 (Fall or Spring)	2
Writing Intensive	3	Educational Technology Course	1
Humanities	3	Lab Science	3
INFOTC 1040	3	Social or Behavioral Science	3
		MATH 2320	3
	15		**15**
Third Year			
Fall	**CR**	**Spring**	**CR**
LTC 4571	3	LTC 4581	3
LTC 4574	1	LTC 4584	1
LTC 4560	3	LTC 4565	3
SPC_ED 4020	3	LTC 4050	3
MATH 4350	3	STAT 4050	3
MATH 4140	3	MATH 4060	3
	16		**16**
Fourth Year			
Fall	**CR**	**Spring**	**CR**
LTC 4971	12	LTC 4590	3