



**MATHEMATICS, GRADES 9-12**

EDUCATOR PREPARATION PROGRAM NAME  
UNIVERSITY OF MISSOURI (COLUMBIA)

EDUCATOR PREPARATION PROGRAM CODE  
116116

**INSTRUCTIONS**

Please complete Educator Preparation Program (EPP) Name & EPP Code above.

**Certification Requirements:**

- Course Number – List the course number(s) for the course(s) or groups of competencies that align with the specific section of the requirements. It is possible to have more than one course or group listed.
- Course Title – List the course title(s) for the course(s) or groups of competencies that align with the specific section of the requirements. It is possible to have more than one course or group listed.
- Semester Hours – List the number of semester hours for each specific section. It is possible to use decimals (to the nearest tenth) to indicate partial use of a course to meet a requirement. The total number of semester hours must meet or exceed the minimum required number of semester hours.

Email the completed cover sheet, curriculum matrix, and advising/program information to [DESE.MoSPETransition@dese.mo.gov](mailto:DESE.MoSPETransition@dese.mo.gov) on or before the date established in the Transition Plan.

QUESTIONS: Contact Educator Preparation, 573-751-1668 or [DESE.MoSPETransition@dese.mo.gov](mailto:DESE.MoSPETransition@dese.mo.gov)

**A. Professional Requirements (Minimum of 26 semester hours)**

**1. Content Planning and Delivery**

	Course Number	Course Title	Semester Hours
a. Curriculum and Instructional Planning	LTC 1120 LTC 4571  LTC 4581  LTC 4590	Orientation Intro to Teaching Math in Middle & Secondary Intro to Teaching Math in Secondary: Algebra Teaching Math in Sec: Geometry & Probability	1 See Below  See Below  See Below
b. Instructional Strategies and Techniques in Content Area Specialty	IS_LT 4467 LTC 4571  LTC 4581  LTC 4590	Technology to enhance Learning Intro to Teaching Math in Middle & Secondary Intro to Teaching Math in Secondary: Algebra Teaching Math in Sec: Geometry & Probability	3 1.5  1.5  1.5
c. Assessment, Student Data, and Data-Based Decision-Making	ESC_PS 2010 ED_LPA 4060	Inquiry into Learning I Inquiry into Schools, Community & Society II	1 .75
d. Strategies for Content Literacy	SPC_ED 4020 LTC 4560	Teaching the Exceptional Learner Reading & Writing in the Content Area I	.75 See Below
e. Critical Thinking and Problem Solving	LTC 4571  LTC 4581  LTC 4590	Intro to Teaching Math in Middle & Secondary Intro to Teaching Math in Secondary: Algebra Teaching Math in Sec: Geometry & Probability	1.5  1.5  1.5
f. English Language Learning	LTC 4460	Teaching English to Speakers of Other Languages	3

**2. Individual Student Needs**

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	ESC_PS 2010 LTC 2200	Inquiry into Learning I School Health & Student Wellbeing	1 1.5
b. Psychology/Education of the Exceptional Child	SPC_ED 4020	Teaching the Exceptional Learner	.75
c. Differentiated Learning	SPC_ED 4020	Teaching the Exceptional Learner	.75
d. Classroom Management	SPC_ED 4310	Behavioral Management for Exceptional Students	3
e. Cultural Diversity	LTC 2040 ED_LPA 4060 LTC 2200	Inquiry into Schools, Community & Society I Inquiry into Schools, Community & Society II School Health & Student Wellbeing	3 .75 1.5

f. Educational Psychology	ESC_PS 2010	Inquiry into Learning I	1
<b>3. Schools and the Teaching Profession</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
a. Consultation and Collaboration	ED_LPA 4060	Inquiry into Schools, Community & Society II	.75
b. Legal/Ethical Aspects of Teaching	SPC_ED 4020 ED_LPA 4060	Teaching the Exceptional Learner Inquiry into Schools, Community & Society II	.75 .75
<b>4. Secondary Literacy (Minimum of six semester hours)</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
a. Reading and Writing in the Content Area	LTC 4560	Reading & Writing in the Content Area I	3
b. Instructional Interventions for Students with Reading Deficits	LTC 4565	Reading & Writing in the Content Area II	3
<b>Professional Requirements - Total Semester Hours</b>			<b>40</b>
<b>B. Field and Clinical Experiences (Minimum of ten semester hours)</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
1. Early Field Experiences (Minimum of one semester hour with a minimum of 30 clock hours)	ESC_PS 2014 LTC 2044	Inquiry into Learning I field Inquiry into Schools, Community & Society I field	1 1
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	LTC 4574 LTC 4584 LTC 4594	Intro to Teaching Math in MS & Sec field Intro to Teaching Math in Sec: Algebra field Teaching Math in Sec: Geometry & Probability field	1 1 1
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	LTC 4971	Internship & Capstone	12
<b>Field and Clinical Experiences - Total Semester Hours</b>			<b>17</b>
<b>C. Mathematics Content Knowledge Area (Minimum of 36 semester hours)</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
1. Calculus and Analytical Geometry (nine semester hours)	MATH 1500 MATH 1700	Analytic Geometry & Calculus I Calculus II	5 5
2. Algebraic Structures (three semester hours)	MATH 4510	Higher Algebra	3
3. Geometry (three semester hours)	MATH 4060	Connecting Geometry to Middle & Secondary Schools	3
4. Computer Science (three semester hours)	INFOTC 1040	Introduction to Problem Solving and Programming	3
5. Electives from the above coursework (six semester hours)	MATH 4350 MATH 2320 OR MATH 3000	Non-Euclidean Geometry Discrete Mathematical Structures Introduction to Advanced Mathematics	3 3 3
6. Additional Mathematics coursework – Minimum of 12 semester hours to include at least three of the following areas of Mathematics:			
a. History of Mathematics (three semester hours)	MATH 4150	History of Mathematics	3
b. Structure of the Real Number System (three semester hours)	MATH 4400	Introduction to Topology	3
c. Number Theory (three semester hours)	MATH 4330	Number Theory	3
d. Completion of Calculus Sequence (three semester hours)	MATH 2300 MATH 4100	Calculus III Differential Equations	3 3
e. Probability and Statistics (three semester hours)	STAT 4050 OR STAT 4710	Connecting Stats to Middle & Secondary Schools Introduction to Mathematical Statistics	3 3
f. Computer Science (three semester hours)			
g. Linear Algebra (three semester hours)	MATH 4140	Matrix Theory	3
<b>Content Knowledge Area - Total Semester Hours</b>			<b>37-46</b>

The Department of Elementary and Secondary Education does not discriminate on the basis of race, color, religion, gender, national origin, age, or disability in its programs and activities. Inquiries related to Department programs and to the location of services, activities, and facilities that are accessible by persons with disabilities may be directed to the Jefferson State Office Building, Office of the General Counsel, Coordinator – Civil Rights Compliance (Title VI/Title IX/504/ADA/Age Act), 6<sup>th</sup> Floor, 205 Jefferson Street, P.O. Box 480, Jefferson City, MO 65102-0480; telephone number 573-526-4757 or TTY 800-735-2966 email [civilrights@dese.mo.gov](mailto:civilrights@dese.mo.gov).