



MATHEMATICS, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME UNIVERSITY OF MISSOURI-KANSAS CITY	EDUCATOR PREPARATION PROGRAM CODE 116117
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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 on or before the date established in the Transition Plan.

QUESTIONS: Contact Educator Preparation, 573-751-1668 or 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	TCH-ED 385 TCH-ED 433	Teaching and Learning with Technology Special Methods of Teaching Mathematics in Middle and High Schools	1 1
b. Instructional Strategies and Techniques in Content Area Specialty	TCH-ED 433 TCH-ED 493	Special Methods of Teaching Mathematics in Middle and High Schools Seminar – Mathematics	1 1
c. Assessment, Student Data, and Data-Based Decision-Making	TCH-ED 315	Assessment and Data Literacy	2
d. Strategies for Content Literacy	EDRD 439, or EDRD 439	Language and Literacy across the Disciplines, or Content Area Reading And Language Development	3 (3)
e. Critical Thinking and Problem Solving	TCH-ED 385	Teaching and Learning with Technology	2
f. English Language Learning	TCH-ED 314	Cultural Diversity and Teaching English Language Learners	2

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	TCH-ED 420	Adolescent Development	3
b. Psychology/Education of the Exceptional Child	TCH-ED 404	Education of the Exceptional Child and Youth	3
c. Differentiated Learning	TCH-ED 438	Culturally Responsive Strategies for Teaching Diverse Learners	2
d. Classroom Management	TCH-ED 330, or TCH-ED 430	Analyzing Learning Environments in Urban Contexts, or Gateway to Teaching	2 (2)
e. Cultural Diversity	TCH-ED 438 TCH-ED 314 TCH-ED 330, or TCH-ED 430	Culturally Responsive Strategies for Teaching Diverse Learners Cultural Diversity and Teaching English Language Learners Analyzing Learning Environments in Urban Contexts, or Gateway to Teaching	1 1 1 (1)
f. Educational Psychology	TCH-ED 403	Educational Psychology	3

3. Schools and the Teaching Profession

	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	TCH-ED 315	Assessment and Data Literacy	1

b. Legal/Ethical Aspects of Teaching	TCH-ED 312	Legal and Ethical Aspects of Teaching	3
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4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	EDRD 439, or EDRD 439	Language and Literacy Across the Disciplines, or Content Area Reading And Language Development	3 (3)
b. Instructional Interventions for Students with Reading Deficits	TCH-ED 463	Literacy Intervention Across the Disciplines	3
Professional Requirements - Total Semester Hours			36

B. Field and Clinical Experiences (Minimum of ten semester hours)			
	Course Number	Course Title	Semester Hours
1. Early Field Experiences (Minimum of one semester hour with a minimum of 30 clock hours)	TCH-ED 422	Practicum I – Middle and High School	1
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	TCH-ED 423 TCH-ED 424	Practicum II – Middle and High School Practicum III – Middle and High School	1 1
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	TCH-ED 437	Student Teaching in High School	9
Field and Clinical Experiences - Total Semester Hours			12

C. Mathematics Content Knowledge Area (Minimum of 36 semester hours)			
	Course Number	Course Title	Semester Hours
1. Calculus and Analytical Geometry (nine semester hours)	MATH 210, and MATH 220, and MATH 250	Calculus I, and Calculus II, and Calculus III	4 4 4
	<u>OR</u>	<u>OR</u>	<u>OR</u>
	MATH 210, and MATH 220, and MATH 250	Calculus I, and Calculus II, and Calculus III	4 4 1 (of 4)
2. Algebraic Structures (three semester hours)	MATH 300	Linear Algebra I	3
3. Geometry (three semester hours)	MATH 424, or MATH 444	Mathematics for Secondary Teachers: Geometry Modern Geometries	3
4. Computer Science (three semester hours)	COMP-SCI 101, or COMP-SCI 111, or COMP-SCI 119	Problem Solving and Programming I, or Introduction to Computing, or Discrete Structures I	3
5. Electives from the above coursework (six semester hours)	MATH 301 EDUC 402R	On Solid Ground: Sets and Proof Algebraic Thinking for Teachers	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 464WI	History of Mathematics	(3)
b. Structure of the Real Number System (three semester hours)	MATH 204	Mathematics for Teachers: Mathematical Immersion	(3)
c. Number Theory (three semester hours)			
d. Completion of Calculus Sequence (three semester hours)	MATH 244, and/or MATH 345, and/or MATH 402	Mathematics for Teachers: Calculus Ordinary Differential Equations Advanced Analysis I	(3) (4) (3)
	<u>OR</u>	<u>OR</u>	<u>OR</u>
	MATH 250	Calculus III	(3 of 4)
e. Probability and Statistics (three semester hours)	STAT 235	Elementary Statistics	(3)
f. Computer Science (three semester hours)			
g. Linear Algebra (three semester hours)	MATH 410, and/or MATH 420	Modern Algebra Linear Algebra II	(3) (3)
Content Knowledge Area - Total Semester Hours			36 – 39

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