



MATHEMATICS, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME MISSOURI STATE UNIVERSITY	EDUCATOR PREPARATION PROGRAM CODE 119119
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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	SEC302	General Methods of Instruction in the Middle and Secondary Schools	1(3)
b. Instructional Strategies and Techniques in Content Area Specialty	MTH409 MTH411	Teaching and Learning of Mathematics I Teaching and Learning of Mathematics III	2(3) 3
c. Assessment, Student Data, and Data-Based Decision-Making	MTH409 MTH410	Teaching and Learning of Mathematics I Teaching and Learning of Mathematics II	1(3) 1(3)
d. Strategies for Content Literacy	RDG474 or RDG710	Reading and Writing in the Content Fields Content Area Literacy	0(3)
e. Critical Thinking and Problem Solving	SEC302 EDC350	General Methods of Instruction in the Middle and Secondary Schools School and Society	.5(3) 1.5(3)
f. English Language Learning	RDG474 or RDG710 RDG574 or RDG640	Reading and Writing in the Content Fields Content Area Literacy Analysis and Correction of Difficulties in Literacy	0(3) 0(3)

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	PSY360 or PSY710	Educational Psychology Psychology of Education	1.5(3)
b. Psychology/Education of the Exceptional Child	SPE340 or SPE715	Educational Alternative for Exceptional Students Foundations in Special Education	2-3
c. Differentiated Learning	SEC302 RDG474 or RDG710 RDG574 or RDG640	General Methods of Instruction in the Middle and Secondary Schools Reading and Writing in the Content Fields Content Area Literacy Analysis and Correction of Difficulties in Literacy	.5(3) 0(3) 0(3)
d. Classroom Management	MTH410	Teaching and Learning of Mathematics I	1(3)
e. Cultural Diversity	EDC345	Introduction to Multicultural Education and Diversity	3
f. Educational Psychology	PSY360 or PSY710	Educational Psychology, Psychology of Education	1.5(3)

3. Schools and the Teaching Profession

	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	RDG474 or RDG710	Reading and Writing in the Content Fields Content Area Literacy	0(3)

b. Legal/Ethical Aspects of Teaching	EDC350	School and Society	1.5(3)
	MTH493	Supervised Teaching (Secondary Mathematics)	0(6)
	MTH494	Supervised Teaching (Secondary Mathematics)	0(6)

4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	RDG474 or RDG710	Reading and Writing in the Content Fields Content Area Literacy	3
b. Instructional Interventions for Students with Reading Deficits	RDG574 or RDG640	Analysis and Correction of Difficulties in Literacy	3
Professional Requirements - Total Semester Hours			27-28

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)	SEC302	General Methods of Instruction in the Middle and Secondary Schools	1(3)
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	MTH410	Teaching and Learning of Mathematics II	1(3)
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	MTH493	Supervised Teaching (Secondary Mathematics)	6
	MTH494	Supervised Teaching (Secondary Mathematics)	6
Field and Clinical Experiences - Total Semester Hours			14

C. Mathematics Content Knowledge Area (Minimum of 36 semester hours)			
	Course Number	Course Title	Semester Hours
1. Calculus and Analytical Geometry (nine semester hours)	MTH261	Analytic Geometry and Calculus I	5
	MTH280	Analytic Geometry and Calculus II	5
2. Algebraic Structures (three semester hours)	MTH315	Algebraic Structures	3
3. Geometry (three semester hours)	MTH460	College Geometry	3
4. Computer Science (three semester hours)	Choose one	Choose one (1)	
	CSC121	Introduction to Basic Programming	3
	CSC125	Introduction to C++ Programming	4
	CSC130	The World of Computer Science	3
5. Electives from the above coursework (six semester hours)	Choose two	Choose two (2)	
	MTH503	Advanced Calculus I	3
	MTH567	Introduction to Non-Euclidean Geometry	3
	MTH510	High School Mathematics from an Advanced Perspective	3
	*MTH532	Introduction to Abstract Algebra	3
6. Additional Mathematics coursework – Minimum of 12 semester hours to include at least three of the following areas of Mathematics: This is the section where the following areas are “suggested.”			
a. History of Mathematics (three semester hours)	MTH575	History of Mathematics	3
b. Structure of the Real Number System (three semester hours)	*MTH532	Introduction to Abstract Algebra	3
c. Number Theory (three semester hours)	MTH536	Theory of Numbers	3
d. Completion of Calculus Sequence (three semester hours)	MTH302	Multivariate Calculus	3
e. Probability and Statistics (three semester hours)	Choose one	Choose one (1)	
	MTH345	Statistics for Science and Engineers	3
	MTH540	Statistical Theory I	3
	MTH340	Statistical Methods	3
	MTH343	Foundations of Probability and Statistics for Teachers	3
f. Computer Science (three semester hours)	n/a		
g. Linear Algebra (three semester hours)	MTH333	Linear Algebra I	3
*MTH 532 cannot be counted in both C.5. and C.6.b. Content Knowledge Area-Total Semester Hours			BSED=40-41

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