



MATHEMATICS SPECIALIST, GRADES 1-6

EDUCATOR PREPARATION PROGRAM NAME UNIVERSITY OF MISSOURI (COLUMBIA)	EDUCATOR PREPARATION PROGRAM CODE 116116
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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

General Requirements

Valid Missouri Teaching Certification

Two-Years of Mathematics Teaching Experience

A. Professional Requirements (Minimum of 24 semester hours)

1. Mathematical Content Knowledge

	Course Number	Course Title	Semester Hours
a. Mathematics Knowledge-Concepts, structures, skills, and processes of school mathematics from an advanced perspective including number/operation; geometry/measurement; algebra; and probability and statistics	LTC 8871	Teaching and Learning Number and Operations from an Advanced Perspective	1.2
	LTC 8872	Teaching and Learning Rational Numbers from an Advanced Perspective	1.2
	LTC 8873	Teaching and Learning Geometry and Measurement from an Advanced Perspective	1.2
	LTC 8874	Teaching and Learning Algebraic Reasoning from an Advanced Perspective	1.2
	LTC 8876	Teaching Data Analysis and Mathematical Modeling	1.2
b. Specialized Mathematics Knowledge of Teaching-Mathematics that relates to helping student understand school mathematics, often referred to as Mathematics Knowledge for Teaching (MKT)	LTC 8881	Internship — Number and Operations in Elementary Schools	See below
	LTC 8882	Internship — Rational Number in Elementary Schools	
	LTC 8883	Internship — Geometry and Measurement in Elementary Schools	
	LTC 8884	Internship — Algebraic Reasoning in Elementary Schools	

2. Pedagogical Content Knowledge (PCK) for Mathematics

	Course Number	Course Title	Semester Hours
a. Understanding how students and adults learn mathematics	LTC 8871	Teaching and Learning Number and Operations from an Advanced Perspective	.6
	LTC 8872	Teaching and Learning Rational Numbers from an Advanced Perspective	.6
	LTC 8873	Teaching and Learning Geometry and Measurement from an Advanced Perspective	.6
	LTC 8874	Teaching and Learning Algebraic Reasoning from an Advanced Perspective	.6
	LTC 8876	Teaching Data Analysis and Mathematical Modeling	.6

b. Effective teaching strategies for supporting mathematics learning	LTC 8871	Teaching and Learning Number and Operations from an Advanced Perspective	.6
	LTC 8872	Teaching and Learning Rational Numbers from an Advanced Perspective	.6
	LTC 8873	Teaching and Learning Geometry and Measurement from an Advanced Perspective	.6
	LTC 8874	Teaching and Learning Algebraic Reasoning from an Advanced Perspective	.6
	LTC 8876	Teaching Data Analysis and Mathematical Modeling	.6
c. Curriculum trajectories, materials, standards and methods for aligning curriculum systems	LTC 8871	Teaching and Learning Number and Operations from an Advanced Perspective	.6
	LTC 8872	Teaching and Learning Rational Numbers from an Advanced Perspective	.6
	LTC 8873	Teaching and Learning Geometry and Measurement from an Advanced Perspective	.6
	LTC 8874	Teaching and Learning Algebraic Reasoning from an Advanced Perspective	.6
	LTC 8876	Teaching Data Analysis and Mathematical Modeling	.6
d. Evaluation of mathematical abilities and achievement including formal and informal diagnostic procedures and in prescriptive instruction	LTC 8881	Internship — Number and Operations in Elementary Schools	See below
	LTC 8882	Internship — Rational Number in Elementary Schools	
	LTC 8883	Internship — Geometry and Measurement in Elementary Schools	
	LTC 8884	Internship — Algebraic Reasoning in Elementary Schools	
3. Foundations of Leadership			
	Course Number	Course Title	Semester Hours
a. Effective communication strategies within and outside school	LTC 8877	Foundations of Mathematics Leadership in Elementary Schools	.5
	LTC 8878	Mathematical Leadership for Elementary Schools Advanced	.75
b. Professional development expertise ability to plan, develop, implement and evaluate learning environments for teachers	LTC 8877	Foundations of Mathematics Leadership in Elementary Schools	.5
	LTC 8878	Mathematical Leadership for Elementary Schools Advanced	.75
c. Ability to establish and nurture professional communities of learners-students, parents, and educators	LTC 8877	Foundations of Mathematics Leadership in Elementary Schools	.5
	LTC 8878	Mathematical Leadership for Elementary Schools Advanced	.75
d. Informed about and contribute to policy and professional organization work related to teaching and learning mathematics	LTC 8877	Foundations of Mathematics Leadership in Elementary Schools	.5
	LTC 8878	Mathematical Leadership for Elementary Schools Advanced	.75
4. Culminating Clinical Experience (Three semester hours of experience working with a full range of students and educators in various professional development settings)			
	Course Number	Course Title	Semester Hours
	LTC 8881	Internship - Number and Operations in Elementary Schools	1
	LTC 8883	Internship – Geometry and Measurement in Elementary Schools	1
	LTC 8882	Internship – Rational Numbers and Proportional Relationships in Elementary Schools	1
	LTC 8884	Internship – Algebraic Reasoning in Elementary Schools	1
Professional Requirements - Total Semester Hours			24

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