



MATHEMATICS, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME Columbia College	EDUCATOR PREPARATION PROGRAM CODE 515712
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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	EDUC 300 EDUC 360	Techniques of Teaching Teaching Mathematics in Middle and Secondary Schools	.75 1.5
b. Instructional Strategies and Techniques in Content Area Specialty	EDUC 300 EDUC 360	Techniques of Teaching Teaching Mathematics in Middle and Secondary Schools	.75 1.5
c. Assessment, Student Data, and Data-Based Decision-Making	EDUC 322	Educational Measurement and Assessment	3
d. Strategies for Content Literacy	EDUC 338	Content Reading and Writing	0
e. Critical Thinking and Problem Solving	EDUC 300 EDUC 375	Techniques of Teaching Advanced Content Methods	.75 1
f. English Language Learning	EDUC 220 Or EDUC 400	Methods of Teaching English Learners Senior Seminar	3 0

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	EDUC 391 and 230 or EDUC 392 and 230 or EDUC 396	Child Psychology and Educational Psychology or Adolescent Psychology and Educational Psychology or Child and Adolescent Development	3
b. Psychology/Education of the Exceptional Child	EDUC 390	Education and Psychology of the Exceptional Child	1.5
c. Differentiated Learning	EDUC 375 EDUC 390	Advanced Content Methods Education and Psychology of the Exceptional Child	1 0
d. Classroom Management	EDUC 311	Classroom and Behavior Management Techniques	1.5
e. Cultural Diversity	SOCI 270	Minority Cultures and Relations	3
f. Educational Psychology	EDUC 230	Educational Psychology	3

3. Schools and the Teaching Profession

	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	EDUC 100 EDUC 390	Introduction to Education Education and Psychology of the Exceptional Child	1.5 1.5
b. Legal/Ethical Aspects of Teaching	EDUC 200	Law, Ethics, and Education	3

4. Secondary Literacy (Minimum of 6 semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	EDUC 338	Content Reading and Writing	3
b. Instructional Interventions for Students with Reading Deficits	EDUC 376	Adolescent Literacy	3
Professional Requirements - Total Semester Hours			34.25 – 37.25
B. Field and Clinical Experiences (Minimum of 10 semester hours)			
	Course Number	Course Title	Semester Hours
1. Early Field Experiences (Minimum of 1 semester hour with a minimum of 30 clock hours)	EDUC 100	Introduction to Education	1.5
	EDUC 298	Field Experience	1
	EDUC 300	Techniques of Teaching	.75
	EDUC 311	Classroom and Behavior Management Techniques	1.5
2. Mid-Level Field Experiences (Minimum of 1 semester hour with a minimum of 45 clock hours)	EDUC 338	Content Reading and Writing	0
	EDUC 360	Teaching Mathematics in Middle and Secondary Schools	0
	EDUC 375	Advanced Content Methods	1
3. Culminating Clinical Experiences (Minimum of 8 semester hours with a minimum of 12 weeks in 1 placement)	EDUC 422 Or EDUC 425	Student Teaching in the Secondary School Or Undergraduate Student Teaching	12
Field and Clinical Experiences - Total Semester Hours			17.75
C. Mathematics Content Knowledge Area (Minimum of 36 semester hours)			
	Course Number	Course Title	Semester Hours
1. Calculus and Analytical Geometry (9 semester hours)	MATH 201	Calculus and Analytical Geometry I	5
	MATH 222	Calculus and Analytical Geometry II	5
2. Algebraic Structures (3 semester hours)	MATH 150 or MATH 303 or MATH 304	College Algebra or Linear Algebra (<i>if not used below</i>) or Introduction to Abstract Algebra	3
3. Geometry (3 semester hours)	MATH 331	Foundations of Geometry	3
4. Computer Science (3 semester hours)	CISS 176 or CISS 145	Introduction to Computer Science or Introduction to Python Programming	3
5. Electives from the above coursework (6 semester hours)	Choose 6 hours from the following: MATH 155 (recommended) MATH 165 (recommended) MATH 180 MATH 215 MATH 226 MATH 235 MATH 304 MATH 380	Choose 6 hours from the following: Algebraic Reasoning for Elementary and Middle School Teachers Geometric Reasoning for Elementary and Middle School Teachers Precalculus Differential Calculus Integral Calculus I Integral Calculus II Introduction to Abstract Algebra Advanced Calculus	6
6. Additional Mathematics coursework – Minimum of 12 semester hours to include at least 3 of the following areas of Mathematics			
a. History of Mathematics (3 semester hours)	MATH 330	History of Mathematics	3
b. Structure of the Real Number System (3 semester hours)	MATH/EDUC 102	Teaching and Learning Elementary Mathematics from an Advanced Perspective	3
c. Number Theory (3 semester hours)	MATH 305	Number Theory	3
d. Completion of Calculus Sequence (3 semester hours)	MATH 300	Multivariate Calculus	3
e. Probability and Statistics (3 semester hours)	MATH 250 or MATH 338 or MATH 340	Statistics I or Mathematical Statistics and Probability or Introduction to Probability Theory	3
f. Computer Science (3 semester hours)	CISS 240	Introduction to Programming	3
g. Linear Algebra (3 semester hours)	MATH 303	Linear Algebra	3
Content Knowledge Area - Total Semester Hours			37

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