



**MATHEMATICS, GRADES 9-12 – POST-BACCALAUREATE**

EDUCATOR PREPARATION PROGRAM NAME – COLUMBIA COLLEGE

EDUCATOR PREPARATION PROGRAM CODE – 515712

**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	EDUC 505/300 EDUC 360	Instructional Theory Techniques/Techniques of Teaching Teaching Mathematics in Middle and Secondary Schools	.75 1.5
b. Instructional Strategies and Techniques in Content Area Specialty	EDUC 505/300 EDUC 360	Instructional Theory Techniques/Techniques of Teaching Teaching Mathematics in Middle and Secondary Schools	.75 1.5
c. Assessment, Student Data, and Data-Based Decision-Making	EDUC 580/322	Methods of Effective Academic Evaluation/Educational Measurement and Assessment	3
d. Strategies for Content Literacy	EDUC 516/338	Reading and Writing Across the Curriculum/Content Reading and Writing	0
e. Critical Thinking and Problem Solving	EDUC 505/300 EDUC 375	Instructional Theory of Techniques/Techniques of Teaching Advanced Content Methods	.75 1
f. English Language Learning	EDUC 542/198/600	Law, Ethics, and Education/Field Experience I/Education Seminar for Teacher Candidates	0

**2. Individual Student Needs**

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	EDUC 550/391 and 392/EDUC 396	Human Development/Child Psychology and Adolescent Psychology or Child and Adolescent Development	3
b. Psychology/Education of the Exceptional Child	EDUC 525/390	Educating Exceptional Individuals/Education and Psychology of the Exceptional Child	1.5
c. Differentiated Learning	EDUC 375 EDUC 525/390	Advanced Content Methods Educating Exceptional Individuals/Education and Psychology of the Exceptional Child	1 0
d. Classroom Management	EDUC 563/311	Management of the Classroom Environment/Classroom and Behavior Management Techniques	1.5
e. Cultural Diversity	EDUC 555/SOCI 270	Development, Gender, and Cultural Differences/Minority Cultures and Relations	3
f. Educational Psychology	EDUC 560/230	Theories of Learning/Educational Psychology	3

**3. Schools and the Teaching Profession**

	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	EDUC 525/390	Educating Exceptional Individuals/Education and Psychology of the Exceptional Child	1.5
b. Legal/Ethical Aspects of Teaching	EDUC 542/200	Law, Ethics, and Education	3

4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	EDUC 516/338	Reading and Writing Across the Curriculum/Content Reading and Writing	3
b. Instructional Interventions for Students with Reading Deficits	EDUC 578/376	Adolescent Literacy Theory and Techniques/Adolescent Literacy	3
<b>Professional Requirements - Total Semester Hours</b>			<b>32.75</b>
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)	EDUC 505/300	Instructional Theory Techniques/Techniques of Teaching	.75
	EDUC 563/311	Management of the Classroom Environment/Classroom and Behavior Management Techniques	1.5
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	EDUC 516/338	Reading and Writing Across the Curriculum/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 eight semester hours with a minimum of 12 weeks in one placement)	EDUC 698/422	Graduate Student Teaching/Student Teaching in the Secondary School	9
<b>Field and Clinical Experiences - Total Semester Hours</b>			<b>12.25</b>
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 201	Calculus and Analytical Geometry I	5
	MATH 222	Calculus and Analytical Geometry II	5
2. Algebraic Structures (three semester hours)	MATH 150	College Algebra	3
3. Geometry (three semester hours)	MATH 331	Foundations of Geometry	3
4. Computer Science (three semester hours)	CISS 176 or CISS 145	Introduction to Computer Science or Introduction to Python Programming	3
5. Electives from the above coursework (six 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 three of the following areas of Mathematics:			
a. History of Mathematics (three semester hours)	MATH 330	History of Mathematics	3
b. Structure of the Real Number System (three semester hours)	MATH/EDUC 102	Teaching and Learning Elementary Mathematics from an Advanced Perspective	3
c. Number Theory (three semester hours)	MATH 305	Number Theory	3
d. Completion of Calculus Sequence (three semester hours)	MATH 300	Multivariate Calculus	3
e. Probability and Statistics (three semester hours)	MATH 250 or MATH 338	Statistics I or Mathematical Statistics and Probability	3
f. Computer Science (three semester hours)	CISS 240	Introduction to Programming	3
g. Linear Algebra (three semester hours)	MATH 303	Linear Algebra	3
<b>Content Knowledge Area - Total Semester Hours</b>			<b>37</b>

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