



**GENERAL SCIENCE, GRADES 9-12 – POST-BACCALAUREATE**

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](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 365	Instructional Theory Techniques/Techniques of Teaching Teaching Middle School and Secondary Science	.75 1.5
b. Instructional Strategies and Techniques in Content Area Specialty	EDUC 505/300 EDUC 365	Instructional Theory Techniques/Techniques of Teaching Teaching Middle School and Secondary Science	.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 365	Teaching Middle School and Secondary Science	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. General Science Content Knowledge Area (Minimum of 35 semester hours)			
	Course Number	Course Title	Semester Hours
1. History/Philosophy of Science and Technology (three semester hours)	HIST/PHIL 303	History and Philosophy of Modern Science	3
2. Science Coursework – Minimum of 32 semester hours which must include:			
a. Chemistry	CHEM 109 or CHEM 110 CHEM 110L	Chemistry for Biological and Health-Related Sciences or Chemistry I Introductory Chemistry Laboratory	3 2
b. Biology	BIOL 110 BIOL 110L	Principles of Biology I Principles of Biology Laboratory	3 2
c. Physics	PHYS 111 PHYS 111L	College Physics I Physics I Laboratory	3 2
d. Earth Science	GEOL 110 GEOL 110L	Introduction to Physical Geology Introduction to Physical Geology Laboratory	3 2
e. Astronomy	ASTR 108	Introduction to Astronomy	3
f. Environmental Science	ENVS 115 ENVS 115L	Introduction to Environmental Science Introduction to Environmental Science Laboratory	3 2
g. Science Electives	Choose 4 hours from the following (if not already used above): CHEM 108 CHEM 110 CHEM 112 CHEM 203 CHEM 230 CHEM 307 CHEM 312 CHEM 330 CHEM 395 CHEM 399 CHEM 412 CHEM 422 CHEM 425 CHEM 490 BIOL 108 BIOL 112 BIOL 221 BIOL 222 BIOL 223 BIOL 230 BIOL 300 BIOL 309 BIOL 312 BIOL 319 BIOL 320	Physical Science Survey Chemistry I Chemistry II Chemistry of Hazardous Materials Environmental Toxicology and Chemistry Analytical Chemistry II Organic Chemistry II Environmental Chemistry Research Design in the Sciences Science Internship Advanced Experimental Chemistry Biochemistry II Forensic Chemistry I Senior Seminar Human Biology Principles of Biology II Clinical Microbiology Conservation Biology Anatomy Medical Terminology Evolution Animal Behavior Microbiology Soils Ecology	4

	BIOL 324	Statistics for the Behavioral and Natural Sciences	
	BIOL 326	Physiology	
	BIOL 330	Exercise Physiology	
	BIOL 342	Genetics	
	BIOL 343	Botany	
	BIOL 353	Zoology	
	BIOL 360	Kinesiology	
	BIOL 371	Neuroscience	
	BIOL 372	Sensation and Perception	
	BIOL 380	Developmental Biology	
	BIOL 391	Molecular Biology	
	BIOL 395	Research Design in the Sciences	
	BIOL 410	Molecular Biotechnology	
	BIOL 415	Immunology	
	BIOL 420	Biochemistry I	
	BIOL 422	Biochemistry II	
	BIOL 472	Psychopharmacology	
	BIOL 490	Senior Seminar	
	BIOL 499	Advanced Science Internship	
	PHYS 108	Physical Science Survey	
	PHYS 112	College Physics II	
	PHYS 211	Calculus-Based Physics I	
	PHYS 212	Calculus-Based Physics II	
	PHYS 401	Introduction to Physical Chemistry/Chemistry Physics	
	ENVS 220	Introduction to Atmospheric Science	
	ENVS 222	Conservation Biology	
	ENVS 223	Environmental Disasters	
	ENVS 230	Environmental Toxicology and Chemistry	
	ENVS 233/333/433	Topics	
	ENVS 251	Resource Management	
	ENVS 272	An Introduction to Environmental Literature	
	ENVS 300	Evolution	
	ENVS 310	Environmental and Resource Economics	
	ENVS 312	Environmental Politics	
	ENVS 319	Soils	
	ENVS 320	Ecology	
	ENVS 332	Environmental Ethics	
	ENVS 343	Botany	
	ENVS 352	American Environmental History	
	ENVS 353	Zoology	
	ENVS 395	Research Design in the Sciences	
	ENVS 490	Senior Seminar	
<b>Content Knowledge Area - Total Semester Hours</b>			<b>35</b>

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