MISSOURI DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION
OFFICE OF EDUCATOR QUALITY – EDUCATOR PREPARATION

CHEMISTRY, GRADES 9-12 – POST-BACCALAUREATE

EDUCATOR PREPARATION PROGRAM NAME	EDUCATOR PREPARATION PROGRAM CODE
COLUMBIA COLLEGE	**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 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 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 or EDUC 391 and 392 or EDUC 396	Human Development or 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	.75 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
		Professional Requirements - Total Semester Hours	**32.75**
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 EDUC 563/311	Instructional Theory Techniques/Techniques of Teaching Management of the Classroom Environment/Classroom and Behavior Management Techniques	.75 1.5
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	EDUC 516/338 EDUC 365 EDUC 375	Reading and Writing Across the Curriculum/Content Reading and Writing Teaching Middle School and Secondary Science Advanced Content Methods	0 0 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
		Field and Clinical Experiences - Total Semester Hours	**12.25**
C. Chemistry Content Knowledge Area (Minimum of 35 semester hours)			
	Course Number	**Course Title**	**Semester Hours**
1. History/Philosophy of Science and Technology (Minimum of three semester hours)	HIST/PHIL 303 or BIOL/CHEM/ ENVS 105	History and Philosophy of Modern Science or Essentials of Science	3
2. Chemistry Coursework – Minimum of 20 semester hours which must include:			
a. Inorganic Chemistry	CHEM 322	Inorganic Chemistry	3
b. Analytical Chemistry	CHEM 335	Quantitative Analysis	3
c. Organic Chemistry	CHEM 310	Organic Chemistry I	3
d. Physical Chemistry	CHEM/PHYS 401	Introduction to Physical Chemistry/Chemical Physics	3
e. Biochemistry	BIOL/CHEM 420	Biochemistry I	3
f. Chemistry Electives	Choose five hours from the following: CHEM 108 CHEM 109 CHEM 110 CHEM 112 CHEM 203 CHEM 212 CHEM 230 CHEM 307 CHEM 312 CHEM 330 CHEM 395 CHEM 399 CHEM 412 CHEM 422 CHEM 425 CHEM 490 CHEM 499	Choose 5 hours from the following: Physical Science Survey Chemistry for Biological and Health-Related Sciences Chemistry I Chemistry II Chemistry of Hazardous Materials Organic Chemistry II 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 Advanced Science Internship	5
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Biology	BIOL 110	Principles of Biology I	3
b. Physics	PHYS 111	College Physics I	3
c. Earth Science	GEOL 110	Introduction to Physical Geology	3
d. Environmental Science	ENVS 115	Introduction to Environmental Science	3
		Content Knowledge Area - Total Semester Hours	**35**

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