



**CHEMISTRY, 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](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 300 EDUC 365	Techniques of Teaching Teaching Middle School and Secondary Science	.75 1.5
b. Instructional Strategies and Techniques in Content Area Specialty	EDUC 300 EDUC 365	Techniques of Teaching Teaching Middle School and Secondary Science	.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 198 or EDUC 400	Field Experience I or Senior Seminar	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	EDIC 390	Education and Psychology of the Exceptional Child	1
c. Differentiated Learning	EDUC 375 EDUC 390	Advanced Content Methods Education and Psychology of the Exceptional Child	.75 1
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 six 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
<b>Professional Requirements - Total Semester Hours</b>			<b>34.25</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 100 EDUC 198 EDUC 298 EDUC 300 EDUC 311	Introduction to Education Field Experience I Field Experience II Techniques of Teaching Classroom and Behavior Management Techniques	1.5 1 1 .75 1.5
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	EDUC 338 EDUC 365  EDUC 375	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 422	Student Teaching in the Secondary School	12
<b>Field and Clinical Experiences - Total Semester Hours</b>			<b>18.75</b>
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	History and Philosophy of Modern 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 306	Analytical Chemistry I	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
<b>Content Knowledge Area - Total Semester Hours</b>			<b>35</b>

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