



CHEMISTRY, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME UNIVERSITY OF MISSOURI-KANSAS CITY	EDUCATOR PREPARATION PROGRAM CODE 116117
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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	TCH-ED 385 TCH-ED 435	Teaching and Learning with Technology Special Methods of Teaching Science in Middle and High Schools	1 1
b. Instructional Strategies and Techniques in Content Area Specialty	TCH-ED 435 TCH-ED 495	Special Methods of Teaching Science in Middle and High Schools TCH-ED 495 Seminar – Science	1 1
c. Assessment, Student Data, and Data-Based Decision-Making	TCH-ED 315	Assessment and Data Literacy	2
d. Strategies for Content Literacy	EDRD 439, or EDRD 439	Language and Literacy across the Disciplines, or Content Area Reading And Language Development	3 (3)
e. Critical Thinking and Problem Solving	TCH-ED 385	Teaching and Learning with Technology	2
f. English Language Learning	TCH-ED 314	Cultural Diversity and Teaching English Language Learners	2

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	TCH-ED 420	Adolescent Development	3
b. Psychology/Education of the Exceptional Child	TCH-ED 404	Education of the Exceptional Child and Youth	3
c. Differentiated Learning	TCH-ED 438	Culturally Responsive Strategies for Teaching Diverse Learners	2
d. Classroom Management	TCH-ED 330, or TCH-ED 430	Analyzing Learning Environments in Urban Contexts, or Gateway to Teaching	2 (2)
e. Cultural Diversity	TCH-ED 438	Culturally Responsive Strategies for Teaching Diverse Learners	1
	TCH-ED 314	Cultural Diversity and Teaching English Language Learners	1
	TCH-ED 330, or TCH-ED 430	Analyzing Learning Environments in Urban Contexts, or Gateway to Teaching	1 (1)
f. Educational Psychology	TCH-ED 403	Educational Psychology	3

3. Schools and the Teaching Profession

	Course Number	Course Title	Semester Hours
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a. Consultation and Collaboration	TCH-ED 315	Assessment and Data Literacy	1
b. Legal/Ethical Aspects of Teaching	TCH-ED 312	Legal and Ethical Aspects of Teaching	3

4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	EDRD 439, or EDRD 439	Language and Literacy Across the Disciplines, or Content Area Reading and Language Development	3 (3)
b. Instructional Interventions for Students with Reading Deficits	TCH-ED 463	Literacy Intervention Across the Disciplines	3
Professional Requirements - Total Semester Hours			36

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)	TCH-ED 422	Practicum I – Middle and High School	1
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	TCH-ED 423 TCH-ED 424	Practicum II – Middle and High School Practicum III – Middle and High School	1 1
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	TCH-ED 437	Student Teaching in High School	9
Field and Clinical Experiences - Total Semester Hours			12

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)	TCH-ED 470	Philosophy and History of Science and Technology	3
2. Chemistry Coursework – Minimum of 20 semester hours which must include:			
a. Inorganic Chemistry	CHEM 451R	Inorganic Chemistry	3
b. Analytical Chemistry	CHEM 341WI	Analytical Chemistry I: Quantitative Analysis	4
c. Organic Chemistry	CHEM 321, and CHEM 321L	Organic Chemistry I, and Organic Chemistry Laboratory I	3 1
d. Physical Chemistry	CHEM 330	Elementary Physical Chemistry	3
e. Biochemistry	CHEM 367, or LS-BIOC 341	Bioorganic Chemistry, or Basic Biochemistry	3 (3)
f. Chemistry Electives	CHEM 211 CHEM 211L CHEM 212R CHEM 212LR	General Chemistry I Experimental General Chemistry I General Chemistry II Experimental General Chemistry II	3 2 3 2
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Biology	BIOLOGY 108 BIOLOGY 108L	General Biology I General Biology I Laboratory	3 1
b. Physics	PHYSICS 210	General Physics I	4
c. Earth Science	GEOLOGY 220	General Geology	3
d. Environmental Science	ENV-SCI 110R ENV-SCI 110L	Understanding the Earth Understanding the Earth Laboratory	3 2
Content Knowledge Area - Total Semester Hours			46

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