



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

CHEMISTRY, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME UNIVERSITY OF MISSOURI – ST. LOUIS	EDUCATOR PREPARATION PROGRAM CODE 116118
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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 3310	Introduction to Methods of Teaching*	3
	SPEC ED 3318	Inclusive Classrooms	3
b. Instructional Strategies and Techniques in Content Area Specialty	SEC ED 4240	Curriculum & Methods of Teaching Physical Sciences	3
	TCH ED 4391	Literacy for Adolescent Learners in Content Areas	3
c. Assessment, Student Data, and Data-Based Decision-Making	TCH ED 3310	Introduction to Methods of Teaching*	3
	ED PSY 3312	Psychology of Learning, Instruction, and Assessment	3
	SEC ED 4240	Curriculum & Methods of Teaching Physical Sciences	3
	SEC ED 4989	Practicum I: Site Based Experience	2
d. Strategies for Content Literacy	TCH ED 4391	Literacy for Adolescent Learners in Content Areas	3
e. Critical Thinking and Problem Solving	TCH ED 3310	Introduction to Methods of Teaching*	3
	ED PSY 3312	Psychology of Learning, Instruction, and Assessment	3
	SEC ED 4240	Curriculum & Methods of Teaching Physical Sciences	3
	SEC ED 4989	Practicum I: Site Based Experience	2
f. English Language Learning	TCH ED 3310	Introduction to Methods of Teaching*	3
	TCH ED 4391	Literacy for Adolescent Learners in Content Areas	3

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	ED PSY 2212	Child and Adolescent Development*	3

b. Psychology/Education of the Exceptional Child	ED PSY 2212	Child and Adolescent Development *	3
	SPEC ED 3318	Inclusive Classrooms	3
c. Differentiated Learning	TCH ED 3310	Introduction to Methods of Teaching*	3
	SPEC ED 3318	Inclusive Classrooms	3
	SEC ED 4240	Curriculum & Methods of Teaching Physical Sciences	3
d. Classroom Management	TCH ED 3310	Introduction to Methods of Teaching*	3
	SEC ED 4240	Curriculum & Methods of Teaching Physical Sciences	3
	SEC ED 4989	Practicum I: Site Based Experience	2
e. Cultural Diversity	ED PSY 2212	Child and Adolescent Development*	3
	SPEC ED 3318	Inclusive Classrooms	3
	TCH ED 2209	Foundations of Teaching in American Schools	2**
	TCH ED 2001	Early Clinical Experience: Schools	1
	SEC ED 4989	Practicum I: Site Based Experience	2
f. Educational Psychology	ED PSY 3312	Psychology of Learning, Instruction, and Assessment	3
3. Schools and the Teaching Profession			
	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	ED PSY 3312	Psychology of Learning, Instruction, and Assessment	3
	TCH ED 2209	Foundations of Teaching in American Schools	2**
	TCH ED 2001	Early Clinical Experience: Schools	1
	SPEC ED 3318	Inclusive Classrooms	3
b. Legal/Ethical Aspects of Teaching	TCH ED 2209	Foundations of Teaching in American Schools	2**
	SPEC ED 3318	Inclusive Classrooms	3

4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	SEC ED 4880	Writing for Teachers	3
b. Instructional Interventions for Students with Reading Deficits	TCH ED 4391	Literacy for Adolescent Learners in Content Areas	3
Professional Requirements - Total Semester Hours			26

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 1001	Early Clinical Experience: Community Agency	1
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	TCH ED 3001	Mid-Level Clinical Experience: Diverse Learners	1
	SEC ED 4989	Practicum I: Site Based Experience	1
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	SEC ED 4990	Practicum II: Site Based Experience	12

Field and Clinical Experiences - Total Semester Hours			15
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)	PHIL 3380	Philosophy of Science	3
2. Chemistry Coursework – Minimum of 20 semester hours which must include:			
a. Inorganic Chemistry	CHEM 1111	Introductory Chemistry I	5
b. Analytical Chemistry	CHEM 1121	Introductory Chemistry II	5
c. Organic Chemistry	CHEM 2612	Organic Chemistry I	3
d. Physical Chemistry	CHEM 3302 or CHEM 3312	Physical Chemistry for the Life Sciences or Physical Chemistry I (additional math required)	3
e. Biochemistry	CHEM 4712	Biochemistry	3
f. Chemistry Electives	CHEM 2223 or CHEM 2622 or CHEM 2633	Quantitative Analysis or Organic Chemistry II or Organic Chemistry Laboratory	2-3
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Biology	BIOL 1831	Introductory Biology II: From Molecules to Organisms	5
b. Physics	PHYSICS 1011 or PHYSICS 2111	Basic Physics 1 (4) or Physics: Mechanics and Heat (additional math required) (5)	4-5
c. Earth Science	GEOL 1001 or GEOL 1001A	General Geology w/ Lab or General Geology w/o Lab	3-4
d. Environmental Science	BIOL 1821 or BIOL 1202 or CHEM 1011	Intro Biology I: Organisms & the Environment (5) or Environmental Biology (3) or Chemistry in the Environment (3)	3-5
Content Knowledge Area - Total Semester Hours			45-49

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* Course title change will be reflected in future Bulletin. See attachment for revised course description.

**Credit hour change will be reflected in future Bulletin.