



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

**CHEMISTRY, GRADES 9-12 – ALTERNATIVE – TEACH IN 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](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	SEC ED 4240	Curriculum & Methods of Teaching Physical Sciences	3
	TCH ED 5310	Instructional Design	3
b. Instructional Strategies and Techniques in Content Area Specialty	SEC ED 4240	Curriculum & Methods of Teaching Physical Sciences	3
c. Assessment, Student Data, and Data-Based Decision-Making	ED PSY 6030	Instruction, Learning, and Assessment	3
	SEC ED 5989	Practicum I: Site Based Experience	2
	TCH ED 5312	Teaching Reading in the Content Areas	3
d. Strategies for Content Literacy	TCH ED 5312	Teaching Reading in the Content Areas	3
e. Critical Thinking and Problem Solving	SEC ED 5989	Practicum I: Site Based Experience	2
	SEC ED 4240	Curriculum & Methods of Teaching Physical Sciences	3
	TCH ED 5310	Instructional Design	3
f. English Language Learning	TCH ED 5312	Teaching Reading in the Content Areas	3

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	ED PSY 6222	Advanced Studies in Child & Adolescent Development	3
b. Psychology/Education of the Exceptional Child	SPEC ED 6412	Psychology of Exceptional Children	3
	ED PSY 6222	Advanced Studies in Child & Adolescent Development	3
c. Differentiated Learning	SPEC ED 6412	Psychology of Exceptional Children	3
	TCH ED 5312	Teaching Reading in the Content Areas	3
d. Classroom Management	SEC ED 5989	Practicum I: Site Based Experience	2
	SEC ED 4240	Curriculum & Methods of Teaching Physical Sciences	3
	TCH ED 5311	Foundations of Education	3
e. Cultural Diversity	SEC ED 5989	Practicum I: Site Based Experience	2

f. Educational Psychology	ED PSY 6222	Advanced Studies in Child & Adolescent Development	3
<b>3. Schools and the Teaching Profession</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
a. Consultation and Collaboration	SEC ED 5989 SPEC ED 6412	Practicum I: Site Based Experience Psychology of Exceptional Children	2 3
b. Legal/Ethical Aspects of Teaching	TCH ED 5311 SPC ED 6412	Foundations of Education Psychology of Exceptional Children	3 3
<b>4. Secondary Literacy (Minimum of six semester hours)</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
a. Reading and Writing in the Content Area	TCH ED 5880	Writing in the Content Areas	3
b. Instructional Interventions for Students with Reading Deficits	TCH ED 5312	Teaching Reading in the Content Areas	3
<b>Professional Requirements - Total Semester Hours</b>			<b>26</b>
<b>B. Field and Clinical Experiences (Minimum of ten semester hours)</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
1. Early Field Experiences (Minimum of one semester hour with a minimum of 30 clock hours)	TCH ED 5000	Advanced Early Clinical Experience*	1
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	TCH ED 5001 SEC ED 5989	Advanced Midlevel Clinical Experience* Practicum I: Site Based Experience	1 1
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	SEC ED 5990	Practicum II: Site Based Experience	8
<b>Field and Clinical Experiences - Total Semester Hours</b>			<b>11</b>
<b>C. Chemistry Content Knowledge Area (Minimum of 35 semester hours) NOTE:</b> Graduate students pursuing alternative teacher certification at UMSL must meet DESE definitions of a related degree and pass the appropriate Missouri Content Area (MoCA) exam(s) in order to satisfy the admission criteria for UMSL's certification program. Degrees will be examined on a case by case basis to determine relevancy to content area and whether additional content courses are necessary. A passing score on the MoCA will be considered a primary indicator of specific content knowledge preparation. Candidate GPAs will meet the state certification requirements.			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
1. History/Philosophy of Science and Technology (Minimum of three semester hours)	*	*Satisfied by passing Missouri Content Assessment	*
2. Chemistry Coursework – Minimum of 20 semester hours which must include:			
a. Inorganic Chemistry	*	*Satisfied by passing Missouri Content Assessment	*
b. Analytical Chemistry	*	*Satisfied by passing Missouri Content Assessment	*
c. Organic Chemistry	*	*Satisfied by passing Missouri Content Assessment	*
d. Physical Chemistry	*	*Satisfied by passing Missouri Content Assessment	*
e. Biochemistry	*	*Satisfied by passing Missouri Content Assessment	*
f. Chemistry Electives	*	*Satisfied by passing Missouri Content Assessment	*
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Biology	*	*Satisfied by passing Missouri Content Assessment	*
b. Physics	*	*Satisfied by passing Missouri Content Assessment	*
c. Earth Science	*	*Satisfied by passing Missouri Content Assessment	*
d. Environmental Science	*	*Satisfied by passing Missouri Content Assessment	*
<b>Content Knowledge Area - Total Semester Hours</b>			<b>N/A</b>

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