



CHEMISTRY, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME MISSOURI WESTERN STATE UNIVERSITY	EDUCATOR PREPARATION PROGRAM CODE 160160
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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	EDU 304	Applied Methods & Management	1
b. Instructional Strategies and Techniques in Content Area Specialty	CHE 465	Chemistry Teaching: Methods & Techniques	3
c. Assessment, Student Data, and Data-Based Decision-Making	EDU 225 EDU 404	Educational Psychology Seminar in Secondary Elementary Education & Human Relations	.5 .5
d. Strategies for Content Literacy	EDU 311	Secondary Reading Techniques	Hours Listed Below
e. Critical Thinking and Problem Solving	EDU 202 EDU 303 EDU 409	Introduction to Education Experience in Teaching II Secondary Student Teaching III	1 .5 .5
f. English Language Learning	EDU 202 EDU 304 EDU 404	Introduction to Education Applied Methods and Management Seminar in Secondary Elementary Education & Human Relations	1 .5 .5

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	PSY 140 OR PSY 240 OR PSY 319	Psychological Development of Children & Adolescents for Educators Life-span Developmental Psychology Child/Adolescent Psychology	3
b. Psychology/Education of the Exceptional Child	EDU 315	Psychology & Education of the Exceptional Child	2
c. Differentiated Learning	EDU 315	Psychology & Education of the Exceptional Child	1
d. Classroom Management	EDU 304	Applied Methods & Management	1
e. Cultural Diversity	EDU 225 EDU 304 EDU 404	Educational Psychology Applied Methods and Management Seminar in Secondary Elementary Education & Human Relations	.5 .5 .5
f. Educational Psychology	EDU 225	Educational Psychology	2

3. Schools and the Teaching Profession

	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	EDU 404	Seminar in Secondary Education & Human Relations	1

b. Legal/Ethical Aspects of Teaching	EDU 202 EDU 404	Introduction to Education Seminar in Secondary Education & Human Relations	1 .5
4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	EDU 311	Secondary Reading Techniques	3
b. Instructional Interventions for Students with Reading Deficits	EDU 430	Teaching Students with Reading Deficits	3
Professional Requirements - Total Semester Hours			28
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)	EDU 203	Participation in Teaching I	1
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	EDU 303	Experience in Teaching II	1.5
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	EDU 409	Secondary Student Teaching III	8.5
Field and Clinical Experiences - Total Semester Hours			11
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)	CHE 308	History & Philosophy of the Natural Sciences	3
2. Chemistry Coursework – Minimum of 20 semester hours which must include:			
a. Inorganic Chemistry	CHE 111 CHE 120	General Chemistry General Chemistry II with Qualitative Analysis	5 5
b. Analytical Chemistry	CHE 321	Quantitative Analysis	4
c. Organic Chemistry	CHE 310 CHE 311	Organic Chemistry I Organic Chemistry Laboratory I	3 2
d. Physical Chemistry	CHE 340 OR CHE 381 OR CHE 383	Physical Chemistry for the Biological Sciences OR Physical Chemistry: Quantum Mechanics OR Physical Chemistry: Thermodynamics & Kinetics	3-4
e. Biochemistry	CHE 370	Biochemistry I	4
f. Chemistry Electives	CHE 495	Seminar in Chemistry	2
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Biology	BIO 106	Principles of Cell Biology	4
b. Physics	PHY 110 PHY 111	College Physics I College Physics II	4 4
c. Earth Science	ESC 111 OR ESC 120	Physical Geology OR Meteorology	4
d. Environmental Science	CHE 380	Environmental Chemistry & Chemical Management	3
Content Knowledge Area - Total Semester Hours			50-51

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