



CHEMISTRY, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME MISSOURI STATE UNIVERSITY	EDUCATOR PREPARATION PROGRAM CODE 119119
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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	SEC302	General Methods of Instruction in the Middle and Secondary Schools	1(3)
b. Instructional Strategies and Techniques in Content Area Specialty	SCI314	Techniques and Technology in Science Laboratory Teaching	1(3)
	SCI414	Teaching of Secondary School Natural Science	1(3)
c. Assessment, Student Data, and Data-Based Decision-Making	SCI314	Techniques and Technology in Science Laboratory Teaching	1(3)
	SCI414	Teaching of Secondary School Natural Science	0(3)
d. Strategies for Content Literacy	RDG474 or RDG 710	Reading and Writing in the Content Fields, Content Area Literacy	0(3)
e. Critical Thinking and Problem Solving	SEC302	General Methods of Instruction in the Middle and Secondary Schools	.5(3)
	EDC350	School and Society	1.5(3)
f. English Language Learning	RDG474 or RDG710	Reading and Writing in the Content Fields, Content Area Literacy	0(3)
	RDG640 or	Analysis and Correction of Difficulties in Literacy	0(3)
	RDG574/624	Analysis and Correction of Difficulties in Adolescent Literacy	0(3)

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	PSY360 or PSY710	Educational Psychology, Psychology of Education	1.5(3)
b. Psychology/Education of the Exceptional Child	SPE340 or SPE715	Educational Alternatives for Exceptional Students, Foundations in Special Education	2-3
c. Differentiated Learning	SEC302	General Methods of Instruction in the Middle and Secondary Schools	.5(3)
	RDG474 or RDG710	Reading and Writing in the Content Fields, Content Area Literacy	0(3)
	RDG640 or	Analysis and Correction of Difficulties in Literacy	0(3)
	RDG574/624	Analysis and Correction of Difficulties in Adolescent Literacy	0(3)
d. Classroom Management	SCI314	Techniques and Technology in Science Laboratory Teaching	1(3)
	SCI414	Teaching of Secondary School Natural Science	1(3)
e. Cultural Diversity	EDC345	Introduction to Multicultural Education and Diversity	3

f. Educational Psychology	PSY360 or PSY710	Educational Psychology, Psychology of Education	1.5(3)
3. Schools and the Teaching Profession			
	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	RDG474 or RDG710	Reading and Writing in the Content Fields, Content Area Literacy	0(3)
b. Legal/Ethical Aspects of Teaching	EDC350 SCI493 SCI494	School and Society Supervised Teaching Supervised Teaching	1.5(3) 1(6) 1(6)
4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	RDG474 or RDG710	Reading and Writing in the Content Fields, Content Area Literacy	3
b. Instructional Interventions for Students with Reading Deficits	RDG640 or RDG574/624	Analysis and Correction of Difficulties in Literacy Analysis and Correction of Difficulties in Adolescent Literacy	3 3
Professional Requirements - Total Semester Hours			26-27
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)	SEC302	General Methods of Instruction in the Middle and Secondary Schools	1(3)
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	SCI314	Techniques and Technology in Science Laboratory Teaching	0(3)
	SCI414	Teaching of Secondary School Natural Science	1(3)
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	SCI493 SCI494	Supervised Teaching Supervised Teaching	5(6) 5(6)
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)	SCI505	Intellectual Foundations of Science and Technology	3
2. Chemistry Coursework – Minimum of 20 semester hours which must include:			
a. Inorganic Chemistry	CHM375	Inorganic Chemistry	3
b. Analytical Chemistry	CHM302	Introduction to Analytical Chemistry	5
c. Organic Chemistry	CHM201/202 or CHM342 and CHM343	Essentials of Organic Chemistry/Lab Organic Chemistry I and Organic Chemistry II	5 5
	or CHM342 and CHM344	Organic Chemistry I and Organic Chemistry II	5 3
d. Physical Chemistry	CHM505	Fundamentals of Physical Chemistry	4
e. Biochemistry	CHM352	Introduction to Biochemistry	3
f. Chemistry Electives	CHM160/161	General Chemistry I/Lab	5
	CHM170/171	General Chemistry II/Lab	4
	CHM435	Investigations in Chemistry for Teachers	1
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Biology	BIO121	General Biology I	4
b. Physics	PHY123 and PHY124	Introduction to Physics I Introduction to Physics II	4 4
c. Earth Science	GLG110	Choose one (1) Principles of Geology	4
	GLG171	Environmental Geology	3
d. Environmental Science	CHM460	Environmental Chemistry : Water and Land	3
Content Knowledge Area - Total Semester Hours			BSED/PB=51-57

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