



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

**UNIFIED SCIENCE: EARTH SCIENCE, GRADES 9-12**

EDUCATOR PREPARATION PROGRAM NAME <b>MISSOURI STATE UNIVERSITY</b>	EDUCATOR PREPARATION PROGRAM CODE <b>119119</b>
---	--

**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](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**

	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
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 RDG710	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)
	RDG574 or RDG640	Analysis and Correction of Difficulties in Literacy	0(3)

**2. Individual Student Needs**

	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
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)
	RDG574 or RDG640	Analysis and Correction of Difficulties in 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**

	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
--	----------------------	---------------------	-----------------------

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	RDG574 or RDG640	Analysis and Correction of Difficulties in Literacy	3
<b>Professional Requirements - Total Semester Hours</b>			<b>26-27</b>
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)
<b>Field and Clinical Experiences - Total Semester Hours</b>			<b>12</b>

C. Unified Science: Earth Science Content Knowledge Area (Minimum of 50 semester hours)			
	Course Number	Course Title	Semester Hours
1. History/Philosophy of Science and Technology (three semester hours)	SCI505	Intellectual Foundations of Science and Technology	3
2. Biology – six semester hours which must include:			
a. Zoology with lab	BIO121	General Biology I	4
b. Botany with lab	BIO122	General Biology II	4
3. Chemistry with labs (six semester hours)	CHM160/161 CHM170/171	General Chemistry I/Lab General Chemistry II/Lab	5 4
4. Physics with labs (six semester hours)	PHY123 and PHY12 or PHY203 and PHY204	Introduction to Physics I	4
		Introduction to Physics II	4
		Foundations of Physics I Foundations of Physics II	5 5
5. Earth Science – six (6) semester hours which must include:			
a. Geology	GLG110	Principles of Geology	4
b. Meteorology	GRY135	Principles of Weather and Climate	2(4)
6. Environmental Science (three semester hours)	GRY351	Conservation of Natural Resources	3
7. Additional Earth Science coursework – twenty (20) semester hours which must include:			
a. Geology	GRY348 GLG412	Geomorphology Field Geology of the Mid-Continent Region	3 4
b. Astronomy	AST115	Basic Astronomy/Lab	4
c. Meteorology	GRY135	Principles of Weather and Climate	2(4)
d. Paleontology	GLG314	Historical Geology	4
e. Oceanography	GLG318	Physical Oceanography	3
<b>Content Knowledge Area - Total Semester Hours</b>			<b>BSED/PB = 57-59</b>

The Department of Elementary and Secondary Education does not discriminate on the basis of race, color, religion, gender, national origin, age, or disability in its programs and activities. Inquiries related to Department programs and to the location of services, activities, and facilities that are accessible by persons with disabilities may be directed to the Jefferson State Office Building, Office of the General Counsel, Coordinator – Civil Rights Compliance (Title VI/Title IX/504/ADA/Age Act), 6<sup>th</sup> Floor, 205 Jefferson Street, P.O. Box 480, Jefferson City, MO 65102-0480; telephone number 573-526-4757 or TTY 800-735-2966 email [civilrights@desse.mo.gov](mailto:civilrights@desse.mo.gov).