



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

EARTH SCIENCE, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME Missouri University of Science & Technology	EDUCATOR PREPARATION PROGRAM CODE 116119
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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	EDUC 3280	Teaching Methods & Skills in Content Areas	3
b. Instructional Strategies and Techniques in Content Area Specialty	EDUC 3280	Teaching Methods & Skills in Content Areas	
c. Assessment, Student Data, and Data-Based Decision-Making	EDUC 3340	Assessment of Student Learning	3
d. Strategies for Content Literacy	EDUC 3216 English 3170	Instructional Literacy in Content Area Teaching & Supervising Reading & Writing	3 3
e. Critical Thinking and Problem Solving	EDUC 3280 EDUC 3216 EDUC 1174 English 3170 EDUC 3340	Teaching Methods & Skills in Content Areas Instructional Literacy in Content Area Learner-Centered Classroom Mgt Teaching & Supervising Reading & Writing Assessment of Student Learning	
f. English Language Learning	EDUC 3280 EDUC 1040 EDUC 3216 EDUC 1104 EDUC 2102 or Psych 2300 (co-listed) English 3170	Teaching Methods & Skills in Content Areas Perspectives in Education Instructional Literacy in Content Area Teacher Field Experience Educational Psychology Teaching & Supervising Read & Writing	2

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	Psych 3310	Developmental Psychology	3
b. Psychology/Education of the Exceptional Child	Psych 4310 or EDUC 4310 or 2130 (co-listed)	Psychology of the Exceptional Child	3
c. Differentiated Learning	EDUC 3280 EDUC 3216	Teaching Methods & Skills in Content Areas Instructional Literacy in Content Area	
d. Classroom Management	EDUC 1174	Learner-Centered Classroom Mgt	2

e. Cultural Diversity	EDUC 4298 EDUC 1040 EDUC 3216 EDUC 2102 or Psych 2300 (co-listed) EDUC 3280	Student Teaching Seminar Perspectives in Education Instructional Literacy in Content Area Educational Psych Teaching Methods & Skills in Content Areas	1
f. Educational Psychology	EDUC 2102 or Psych 2300 (co-listed)	Educational Psych	3
3. Schools and the Teaching Profession			
	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	EDUC 3280 EDUC 3216 EDUC 1174 EDUC 1040 EDUC 2102/Psych 2300 (co-listed)	Teaching Methods & Skills in Content Areas Teaching Reading in Content Area Learner-Centered Classroom Mgt Perspectives in Education Educational Psychology	
b. Legal/Ethical Aspects of Teaching	EDUC 3280 EDUC 3216 EDUC 1174 EDUC 1040	Teaching Methods & Skills in Content Areas Instructional Literacy in Content Area Learner-Centered Classroom Mgt Perspectives in Education	
4. Secondary Literacy (Minimum of 6 semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	EDUC 3216 English 3170	Instructional Literacy in Content Area Teaching & Supervising Reading & Writing	
b. Instructional Interventions for Students with Reading Deficits	EDUC 3216 EDUC 3280 English 3170 EDUC 4298	Instructional Literacy in Content Area Teaching Methods & Skills in Content Areas Teaching & Supervising Reading & Writing Student Teaching Seminar	
Professional Requirements - Total Semester Hours			26
B. Field and Clinical Experiences (Minimum of 10 semester hours)			
	Course Number	Course Title	Semester Hours
1. Early Field Experiences (Minimum of 1 semester hour with a minimum of 30 clock hours)	EDUC 1104	Teacher Field Experience	1
2. Mid-Level Field Experiences (Minimum of 1 semester hour with a minimum of 45 clock hours)	EDUC 1164	Aiding Elem, Middle & Sec Schools	2
3. Culminating Clinical Experiences (Minimum of 8 semester hours with a minimum of 12 weeks in 1 placement)	EDUC 4299	Student Teaching	12
Field and Clinical Experiences - Total Semester Hours			15
C. Earth Science Content Knowledge Area (Minimum of 35 semester hours)			
	Course Number	Course Title	Semester Hours
1. History/Philosophy of Science and Technology (3 semester hours)	History 3530 or EDUC 3001 or PHILOS 4345	History of Science Diversity and Equity in STEM Education: Yesterday, Today, and Tomorrow Philosophy of Science	3
2. Earth Science Coursework – Minimum of 20 semester hours which must include			
a. Astronomy	Physics 1505 & 1509	Astronomy & lab	3, 1
b. Meteorology	Geo Eng 2536	Basic Weather & lab	2,1
c. Geology/Physical Geography	Geo 2611 or Geo 1110	Physical Mineralogy & Petrology or Physical and Environmental Geology	3
d. Earth Science Electives	Geo Eng 1150 Geo 1120 and 1129 Env Eng 2601	Physical & Env Geo & lab Evolution of The Earth & lab Fundamentals of Env Eng,	2,1 3,1 3
3. Additional Science Coursework – Minimum of 12 semester hours which must include			
a. Chemistry	Chem 1310	Gen Chem 1	4
b. Biology	Bio 1223 & 1229	Bio Diversity w/lab	3,1

c. Physics	Physics 1145 Or 1135	College Physics or Physics I	3 or 4
d. Environmental Science	Bio 1173	Intro to Environmental Sciences	3
Content Knowledge Area - Total Semester Hours			37

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), 6th 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@dee.mo.gov.