



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

PHYSICS, GRADES 9-12

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 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	TCH ED 3310 SPEC ED 3318	Introduction to Methods of Teaching* Inclusive Classrooms	3 3
b. Instructional Strategies and Techniques in Content Area Specialty	SEC ED 4240 TCH ED 4391	Curriculum & Methods of Teaching Physical Sciences Literacy for Adolescent Learners in Content Areas	3 3
c. Assessment, Student Data, and Data-Based Decision-Making	TCH ED 3310 ED PSY 3312 SEC ED 4240 SEC ED 4989	Introduction to Methods of Teaching* Psychology of Learning, Instruction, and Assessment Curriculum & Methods of Teaching Physical Sciences Practicum I: Site Based Experience	3 3 3 2
d. Strategies for Content Literacy	TCH ED 4391	Literacy for Adolescent Learners in Content Areas	3
e. Critical Thinking and Problem Solving	TCH ED 3310 ED PSY 3312 SEC ED 4240 SEC ED 4989	Introduction to Methods of Teaching* Psychology of Learning, Instruction, and Assessment Curriculum & Methods of Teaching Physical Sciences Practicum I: Site Based Experience	3 3 3 2
f. English Language Learning	TCH ED 3310 TCH ED 4391	Introduction to Methods of Teaching* Literacy for Adolescent Learners in Content Areas	3 3

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	ED PSY 2212	Child and Adolescent Development*	3
b. Psychology/Education of the Exceptional Child	ED PSY 2212 SPEC ED 3318	Child and Adolescent Development * Inclusive Classrooms	3 3
c. Differentiated Learning	TCH ED 3310	Introduction to Methods of Teaching*	3

	SPEC ED 3318 SEC ED 4240	Inclusive Classrooms Curriculum & Methods of Teaching Physical Sciences	3 3
d. Classroom Management	TCH ED 3310 SEC ED 4240 SEC ED 4989	Introduction to Methods of Teaching* Curriculum & Methods of Teaching Physical Sciences Practicum I: Site Based Experience	3 3 2
e. Cultural Diversity	ED PSY 2212 SPEC ED 3318 TCH ED 2209 TCH ED 2001 SEC ED 4989	Child and Adolescent Development* Inclusive Classrooms Foundations of Teaching in American Schools Early Clinical Experience: Schools Practicum I: Site Based Experience	3 3 2** 1 2
f. Educational Psychology	ED PSY 3312	Psychology of Learning, Instruction, and Assessment	3
3. Schools and the Teaching Profession			
	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	ED PSY 3312 TCH ED 2209 TCH ED 2001 SPEC ED 3318	Psychology of Learning, Instruction, and Assessment Foundations of Teaching in American Schools Early Clinical Experience: Schools Inclusive Classrooms	3 2** 1 3
b. Legal/Ethical Aspects of Teaching	TCH ED 2209 SPEC ED 3318	Foundations of Teaching in American Schools Inclusive Classrooms	2** 3
4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	SEC ED 4880	Writing for Teachers	3
b. Instructional Interventions for Students with Reading Deficits	TCH ED 4391	Literacy for Adolescent Learners in Content Areas	3
Professional Requirements - Total Semester Hours			26
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)	EDUC 1001	Early Clinical Experience: Community Agency	1
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	TCH ED 3001 SEC ED 4989	Mid-Level Clinical Experience: Diverse Learners 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 4990	Practicum II: Site Based Experience	12
Field and Clinical Experiences - Total Semester Hours			15
C. Physics Content Knowledge Area (Minimum of 35 semester hours)			
	Course Number	Course Title	Semester Hours
1. History/Philosophy of Science and Technology (three semester hours)	PHIL 3380	Philosophy of Science	3
2. Physics Coursework – Minimum of 20 semester hours which must include:			
a. Mechanics	PHYSICS 2111	Physics: Mechanics and Heat	5
b. Electricity and Magnetism	PHYSICS 2112	Physics: Electricity, Magnetism, & Optics	5
c. Heat, Sound, and Light	PHYSICS 2111	Physics: Mechanics and Heat	5

	PHYSICS 2112	Physics: Electricity, Magnetism, & Optics	5
d. Atomic or Modern Physics	PHYSICS 3231	Introduction to Modern Physics I	3
e. Physics Electives	PHYSICS 3200	Mathematical Methods Of Theoretical Physics	3
	PHYSICS 4347	Introduction to Biophysics	4
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Chemistry	CHEM 1111	Introductory Chemistry I	5
b. Biology	BIOL 1831	Introductory Biology II: From Molecules To Organisms	5
c. Earth Science	GEOL 1001 or GEOL 1001A or ASTRON 1011	General Geology w/ Lab or General Geology w/o Lab or Planets and Life in the Universe	3-4
d. Environmental Science	BIOL 1821 or BIOL 1202 or CHEM 1011	Introductory Biology I: Organisms and the Environment or Environmental Biology or Chemistry in the Environment	3-5
Content Knowledge Area - Total Semester Hours			39-42

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@dese.mo.gov.

* Course title change will be reflected in future Bulletin. See attachment for revised course description.

**Credit hour change will be reflected in future Bulletin.