



PHYSICS, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME MISSOURI SOUTHERN STATE UNIVERSITY	EDUCATOR PREPARATION PROGRAM CODE 143143
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INSTRUCTIONS

Please complete Educator Preparation Program (EPP) Name & EPP Code above. The EPP Code may be located at <https://dese.mo.gov/sites/default/files/EPP-Code-Name.pdf>

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 329 EDUC 333	Pedagogical Theory, Methods, and Practices Teaching Science in the Secondary School	3 2.5
b. Instructional Strategies and Techniques in Content Area Specialty	EDUC 321 EDUC 333	Microteaching Teaching Science in the Secondary School	1
c. Assessment, Student Data, and Data-Based Decision-Making	EDUC 329 EDUC 333	Pedagogical Theory, Methods, and Practices Teaching Science in the Secondary School	
d. Strategies for Content Literacy	EDUC 422	Content Area Literacy I: Secondary/ Middle	
e. Critical Thinking and Problem Solving	EDUC 329 EDUC 333	Pedagogical Theory, Methods, and Practices Teaching Science in the Secondary School	
f. English Language Learning	EDUC 380 or EDUC 480	Second Language Acquisition or Instructional Techniques for Teaching English Language Learners	3
2. Individual Student Needs			
	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	PSY 310	Educational Psychology	
b. Psychology/Education of the Exceptional Child	EDUC 302	The Exceptional Child	2
c. Differentiated Learning	EDUC 329 EDUC 333	Pedagogical Theory, Methods, and Practices Teaching Science in the Secondary School	
d. Classroom Management	EDUC 423	Classroom Management	2.5
e. Cultural Diversity	EDUC 280	Education in a Global Society	2
f. Educational Psychology	PSY 310	Educational Psychology	3
3. Schools and the Teaching Profession			
	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	EDUC 432	Critical Issues in Education	2
b. Legal/Ethical Aspects of Teaching	EDUC 432	Critical Issues in Education	
4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	EDUC 422	Content Area Literacy I: Secondary/ Middle	3
b. Instructional Interventions for Students with Reading Deficits	EDUC 424	Content Area Literacy II: Secondary/ Middle	3
Professional Requirements - Total Semester Hours			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)	EDUC 280	Education in a Global Society	1.0
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	EDUC 329 EDUC 333 or EDUC 423	Pedagogical Theory Methods, and Practices Teaching Science in the Secondary School or Classroom and Behavior Management	1.0 .5
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	EDUC 462	Student Teaching- Secondary	10
Field and Clinical Experiences - Total Semester Hours			12.5
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 420	Philosophy of Science	3
2. Physics Coursework – Minimum of 20 semester hours which must include:			
a. Mechanics	PHYS 250 And PHYS 260 Or PHYS 270	General Physics I General Physics II General Physics I	2 3 4
b. Electricity and Magnetism	PHYS 401	Electricity and Magnetism	4
c. Health, Sound, and Light	PHYS 260 Or PHYS 290	General Physics II General Physics II	4
d. Atomic or Modern Physics	PHYS 301	Modern Physics	4
e. Physics Electives	PHYS 322 PHYS 452	Classical Mechanics Quantum Mechanics	3 3
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Chemistry	CHEM 151 Or CHEM 140	General Chemistry I General Chemistry I	5 3
b. Biology	BIO 101 Or BIO 102 Or BIO 108 Or BIO 110 Or BIO 180 Or BIO 190 Or BIO 121	General Biology with Lab General Biology Principles of Biology I Principles of Biology I Essential Anatomy and Physiology Essential Anatomy and Physiology Human Anatomy and Physiology I	4 3 3 4 3
c. Earth Science	GEOL 120 Or GEOL 185 Or GEOL 210/212 Or GEOL 211	Introduction to Geology Introduction to Meteorology Earth and Space Science Earth and Space Science	4
d. Environmental Science	Bio 402 Or Bio 481 Or Bio 370/EH370 Or Geol 300 Or Phys 150 Or EH 107	General Ecology Aquatic Ecology Environmental Health and Safety Environmental Geology Environmental Physics Environmental Science	4 3 3 5 3
Content Knowledge Area - Total Semester Hours			38+

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