



BIOLOGY, 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 and Behavior 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
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	EDUC 329	Pedagogical Theory Methods, and Practices	1
	EDUC 333 or EDUC 423	Teaching Science in the Secondary School or Classroom and Behavior Management	.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. Biology 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)	Phil 420	Philosophy of Science	3
2. Biology Coursework – Minimum of 20 semester hours which must include:			
a. Cell Biology	Bio 110 Or Bio 108 And Bio 109 Bio 210	Principles of Biology I Principles of Biology Principles of Biology Lab Molecular and Cellular Biology	4 3 1 4
b. Plant Form and Function	Bio 111	Principles of Biology II	4
c. Animal Form and Function	Bio 111	Principles of Biology II	5
	Bio 190	Essential Anatomy and Physiology	4
	Or Bio 180	Essential Anatomy and Physiology	4
	Or Bio 121	Anatomy and Physiology I	4
	And Bio 221	Anatomy and Physiology II	5
Or Bio 201	Human Anatomy	5	
And Bio 301	Human Physiology	4	
d. Genetics	Bio 305	Genetics	4
e. Evolution	Bio 110 Or Bio 108 And Bio 109 Bio 111	Principles of Biology I Principles of Biology Principles of Biology Lab Principles of Biology II	
f. Biology Electives	Bio 231	General and Medical Microbiology	5
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Chemistry	Chem 151 Or Chem 140	General Chemistry I Or General Chemistry I	5 3
b. Physics	Phys 151	Elementary College Physics I	5
	Or Phys 160	Or Elementary College Physics I	3
c. Earth Science	Geol 120	Intro to Geology	4
	Or Geol 185	Meteorology	4
	Or Geol 210/212	Earth and Space Science	3/1
	Or Geol 211	Earth and Space Science	4
d. Environmental Science	Bio 402	General Ecology	4
	Or Bio 481	Aquatic Ecology	
	Or Bio 370/EH370	Environmental Health and Safety	3
	Or Geol 300	Environmental Geology	3
	Or Phys 150	Environmental Physics	5
	Or EH 107	Environmental Science	3
Content Knowledge Area - Total Semester Hours			41-55

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