



MIDDLE SCHOOL EDUCATION SCIENCE, GRADES 5-9

EDUCATOR PREPARATION PROGRAM NAME UNIVERSITY OF MISSOURI-KANSAS CITY	EDUCATOR PREPARATION PROGRAM CODE 116117
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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 45 semester hours)

1. Content Planning and Delivery

	Course Number	Course Title	Semester Hours
a. Curriculum and Instructional Planning	TCH-ED 385 TCH-ED 435	Teaching and Learning with Technology Special Methods of Teaching Science in Middle and High School	1 1
b. Instructional Strategies and Techniques in Content Area Specialty	TCH-ED 435 TCH-ED 495	Special Methods of Teaching Science in Middle and High Schools Seminar – Science	1 1
c. Assessment, Student Data, and Data-Based Decision-Making	TCH-ED 315	Assessment and Data Literacy	2
d. Strategies for Content Literacy	EDRD 439, or EDRD 439	Language and Literacy Across the Disciplines, or Content Area Reading And Language Development	3 (3)
e. Critical Thinking and Problem Solving	TCH-ED 385	Teaching and Learning with Technology	2
f. English Language Learning	TCH-ED 314	Cultural Diversity and Teaching English Language Learners	2

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	TCH-ED 420	Adolescent Development	3
b. Psychology/Education of the Exceptional Child	TCH-ED 404	Education of the Exceptional Child and Youth	3
c. Differentiated Learning	TCH-ED 438	Culturally Responsive Strategies for Teaching Diverse Learners	2
d. Classroom Management	TCH-ED 330, or TCH-ED 430	Analyzing Learning Environments in Urban Contexts, or Gateway to Teaching	2 (2)
e. Cultural Diversity	TCH-ED 438 TCH-ED 314 TCH-ED 330, or TCH-ED 430	Culturally Responsive Strategies for Teaching Diverse Learners Cultural Diversity and Teaching English Language Learners Analyzing Learning Environments in Urban Contexts, or Gateway to Teaching	1 1 1 (1)
f. Educational Psychology	TCH-ED 403	Educational Psychology	3

3. Schools and the Teaching Profession

	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	TCH-ED 315	Assessment and Data Literacy	1
b. Legal/Ethical Aspects of Teaching	TCH-ED 312	Legal and Ethical Aspects of Teaching	3

BIOLOGY 302L	Ecology Laboratory	(3)
BIOLOGY 303	Invertebrate Zoology	(2)
BIOLOGY 305	Marine and Freshwater Biology	(3)
BIOLOGY 308	Vertebrate Zoology	(3)
BIOLOGY 312WL	Laboratory in Developmental Biology, Genetics and Cell Biology	(3) (3)
BIOLOGY 314	Entomology	(3)
BIOLOGY 319	Global Health: New and Emerging Infectious Diseases	(3)
BIOLOGY 346	Plant Biology	(3)
BIOLOGY 405	Introduction to Evolution	(3)
CHEM 111	Physical Basis Of Chemistry	(3)
CHEM 115	Elements Of Chemistry I	(4)
CHEM 115L	Elements Of Chemistry, Laboratory I	(1)
CHEM 160	Chemistry, Society, And The Environment	(3)
CHEM 160L	Laboratory For Chemistry, Society, And The Environment	(1)
CHEM 180P	Basic Chemistry	(4)
CHEM 181P	Experimental Basic Chemistry	(4)
CHEM 206	Human Nutrition	(3)
CHEM 212LR	Experimental General Chemistry II	(1)
CHEM 212R	General Chemistry II	(4)
CHEM 320	Elementary Organic Chemistry	(4)
CHEM 320L	Experimental Organic Chemistry	(1)
CHEM 321	Organic Chemistry I	(3)
CHEM 321L	Organic Chemistry Laboratory I	(1)
CHEM 322L	Organic Chemistry Laboratory II	(1)
CHEM 322R	Organic Chemistry II	(3)
CHEM 330	Elementary Physical Chemistry	(3)
CHEM 341	Analytical Chemistry I: Quantitative Analysis	(4)
CHEM 341WI	Analytical Chemistry I: Quantitative Analysis	(4)
CHEM 345R	Instrumental Analysis	(3)
CHEM 367	Bioorganic Chemistry	(3)
CHEM 382	Inorganic And Organic Synthesis	(2)
CHEM 387	Environmental Chemistry I	(3)
ENV-SCI 210	Issues in Environmental Science	(3)
ENV-SCI 220	Ecosystem Science for Decision Makers	(3)
ENV-SCI 332CZ	Environmental Sustainability	(3)
ENV-SCI 416	Understanding and Living with Volcanoes	(3)
ENV-SCI 449	Global Water and Sustainability	(3)
GEOG 105	Introduction to the Elements of Geography	(3)
GEOG 200	World Geography I	(3)
GEOG 202	World Geography II	(3)
GEOG 203	Introduction to Geographic Information Systems	(4) (3)
GEOG 210	Systems	(3)
GEOG 215	Human Geography	(4)
GEOG 309	Introduction to Weather and Climate	(3)
GEOG 311	Urban Geography	(3)
GEOG 314	Economic Geography	(4)
GEOG 317	Principles of Geomorphology	(4)
GEOG 319	Cartography	(4)
GEOG 325	Descriptive and Synoptic Meteorology	(3)
GEOG 329	Cultural Perspectives on the Environment	(3)
GEOG 332	World Political Geography	(3)
GEOG 333	Cultural Geography	(3)
GEOG 334	Geographic Elements of Urban Planning	(3)
GEOG 335	Gender and the Environment	(3)
GEOG 340	Introduction to Waste Management	(3)
GEOG 341	Geography of the United States and Canada	(3)
GEOG 342	Geography of South America Geography of Mexico, Central America and the Caribbean	(3) (3)
GEOG 350	Geography of Europe	(3)
GEOG 360	Principles of Biogeography	(4)
GEOLOGY 220	General Geology	(3)
GEOLOGY 220L	General Geology Laboratory	(2)
GEOLOGY 312	Mineralogy	(3)
GEOLOGY 313	Evolution and the Geologic Record	(4)
GEOLOGY 314	Principles of Geomorphology	(4)
GEOLOGY 325	Sedimentology/Stratigraphy	(4)
GEOLOGY 326CZ	Archaeology of Ancient Disasters	(3)
GEOLOGY 335	Introduction to Waste Management	(3)
GEOLOGY 342	Igneous and Metamorphic Petrology	(4)
GEOLOGY 350	Earth Structures and Tectonics	(4)

	GEOLOGY 370R	Hydrogeology	(3)
	LS-BIOC 304	Biochemistry and Nutrition	(4)
	LS-BIOC 341	Basic Biochemistry	(3)
	LS-BIOC 360	Biochemistry	(3)
	LS-BIOC 360L	Laboratory in Biochemistry and Molecular Biology	(3)
	LS-BIOC 360WL	Laboratory in Biochemistry and Molecular Biology	(3)
	LS-MCRB 112	Microbiology and Living	(3)
	LS-MCRB 121	Human Biology III (Microbiology)	(3)
	LS-MCRB 121L	Human Biology III (Microbiology) Lab	(1)
	LS-MCRB 313	Microbiology	(3)
	LS-MCRB 313L	Laboratory in Microbiology	(3)
	LS-MCRB 313WL	Laboratory in Microbiology	(3)
	PHY-SCI 110	Foundations Of Physical Sciences I	(4)
	PHY-SCI 110L	Foundations Of Physical Sciences, Laboratory I	(1)
	PHY-SCI 130	Physics of Sports	(3)
	PHY-SCI 140	How Things Work	(3)
	PHY-SCI 140L	How Things Work Laboratory	(1)
	PHY-SCI 150	Astronomy: Motions of the Cosmos	(3)
	PHY-SCI 153L	Introductory Astronomy Laboratory	(2)
	PHY-SCI 155	Astronomy: Starlight and Star Stuff	(3)
	PHYSICS 130	Physics of Sports	(3)
	PHYSICS 131L	Backyard Physics	(1)
	PHYSICS 140	How Things Work	(3)
	PHYSICS 140L	How Things Work Laboratory	(1)
	PHYSICS 150	Astronomy: Motions of the Cosmos	(3)
	PHYSICS 153L	Introductory Astronomy Laboratory	(2)
	PHYSICS 155	Astronomy: Starlight and Star Stuff	(3)
	PHYSICS 171	Physics for Future Presidents	(3)
	PHYSICS 210	General Physics I	(4)
	PHYSICS 220	General Physics II	(4)
	PHYSICS 240	Physics For Scientists and Engineers I	(5)
	PHYSICS 250	Physics For Scientists and Engineers II	(5)
	PHYSICS 310	Mechanics I	(3)
	PHYSICS 311	Mechanics II	(3)
g.	Social Science		
h.	Speech/Theatre		
Professional Requirements - Total Semester Hours			63 – 65
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)	TCH-ED 422 Practicum I – Middle and High School	1
2.	Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	TCH-ED 423 TCH-ED 424 Practicum II – Middle and High School Practicum III – Middle and High School	1 1
3.	Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	TCH-ED 461 Student Teaching in the Middle School	9
Field and Clinical Experiences - Total Semester Hours			12

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