



**BIOLOGY, GRADES 9-12**

EDUCATOR PREPARATION PROGRAM NAME <b>TRUMAN STATE UNIVERSITY</b>	EDUCATOR PREPARATION PROGRAM CODE <b>122122</b>
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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](mailto: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](mailto: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	ED 393 STEM 608 G ED 609 G ED 632 G	Clinical Experiences in Teaching Management of Instruction Internship Instructional Strategies	3 3
b. Instructional Strategies and Techniques in Content Area Specialty	STEM 608 G ED 603 G	Management of Instruction Content Academic Literacy	3
c. Assessment, Student Data, and Data-Based Decision-Making	ED 601 G ED 632 G	Measurement and Evaluation Research/Applied Educational Psychology	3 4
d. Strategies for Content Literacy	ED 603 G	Content Academic Literacy	
e. Critical Thinking and Problem Solving	ED 389 ED 393 ENG 190 STEM 608 G	Foundations of Education Clinical Experiences in Teaching Writing as Critical Thinking Management of Instruction	3
f. English Language Learning	ED 603 G	Content Academic Literacy	
2. Individual Student Needs			
	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	ED 593 ED 605 G	Psychological Foundations of Education Psychology of Exceptional Children	3
b. Psychology/Education of the Exceptional Child	ED 605 G	Psychology of Exceptional Children	3
c. Differentiated Learning	ED 393 ED 593 STEM 608 G ED 609 G ED 632 G	Clinical Experiences in Teaching Psychological Foundations of Education Management of Instruction Internship Research/Applied Education Psychology	
d. Classroom Management	ED 393 ED 593 STEM 608 G	Clinical Experiences in Teaching Psychological Foundations of Education Management of Instruction	
e. Cultural Diversity	ED 388 ED 389 ED 393 ED 593 ED 603 G STEM 608 G	Exploratory Field Experiences Foundations of Education Clinical Experiences in Teaching Psychological Foundations of Education Content Academic Literacy Management of Instruction	

f. Educational Psychology	ED 593 ED 632 G	Psychological Foundations of Education Research/Applied Education Psychology	
<b>3. Schools and the Teaching Profession</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
a. Consultation and Collaboration	ED 393 STEM 608 G	Clinical Experiences in Teaching Management of Instruction	
b. Legal/Ethical Aspects of Teaching	ED 389 ED 593	Foundations of Education Psychological Foundations of Education	3

<b>4. Secondary Literacy (Minimum of six semester hours)</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
a. Reading and Writing in the Content Area	ED 603 G	Content Academic Literacy	
b. Instructional Interventions for Students with Reading Deficits	ED 624 G	Instructional Interventions for Secondary Students with Reading Deficiencies	3
<b>Professional Requirements - Total Semester Hours</b>			<b>31</b>

<b>B. Field and Clinical Experiences (Minimum of ten semester hours)</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
1. Early Field Experiences (Minimum of one semester hour with a minimum of 30 clock hours)	ED 388	Exploratory Field Experiences	1
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	ED 394 STEM 608 G	Experiences in Classroom Teaching Management of Instruction	1
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	ED 609 G	Internship	8-17
<b>Field and Clinical Experiences - Total Semester Hours</b>			<b>10-17</b>

<b>C. Biology Content Knowledge Area (Minimum of 35 semester hours)</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
1. History/Philosophy of Science and Technology (Minimum of three semester hours)	HIST 393 <u>or</u> HIST 394	History of Science I History of Science II	3
	<b>AND</b> NASC 501 (G)	Philosophy of Science	3
2. Biology Coursework – Minimum of 20 semester hours which must include:			
a. Cell Biology	BIOL 200	Cell Biology	4
b. Plant Form and Function	BIOL 107	Introductory Biology I	4
c. Animal Form and Function	BIOL 108	Introductory Biology II	4
d. Genetics	BIOL 300	Genetics	4
e. Evolution	BIOL 503 (G)	Evolutionary Biology	4

f. Biology Electives	BIOL 204 BIOL 265 BIOL 302 BIOL 304 BIOL 309 BIOL 312 BIOL 313 BIOL 314 BIOL 315 BIOL 316 BIOL 318 BIOL 320 BIOL 321 BIOL 345 BIOL 362 BIOL 364 BIOL 365 BIOL 370 BIOL 404 BIOL 502 (G) BIOL 504 (G) BIOL 506 (G) BIOL 508 (G) BIOL 509 (G) BIOL 510 (G) BIOL 511 (G) BIOL 512 (G) BIOL 513 (G) BIOL 514 (G) BIOL 515 (G) BIOL 516 (G) BIOL 517 (G) BIOL 518 (G) BIOL 520 (G) BIOL 530 (G) BIOL 535 (G) BIOL 540 (G) BIOL 550 (G) BIOL 551 (G) BIOL 552 (G)	Introductory Microbiology Reproductive Biology Comparative Anatomy General Microbiology Histology Local Flora Plant Anatomy Plant Taxonomy Physiology Entomology Mycology <i>Homo sapiens</i> a biological perspective Foundations of Genetics Introduction to Mathematical Biology Embryology and Developmental Biology Invertebrate Zoology Human Anatomy Introduction Bioinformatics Medical Microbiology Biometry Herpetology Ornithology Advanced Plant Taxonomy Comparative Plant Morphology Ecology Comparative Animal Physiology Cell Physiology Microbial Genetics Applications in Conservation Biology Animal Behavior Ichthyology Mammalogy Advanced Topics Immunology Advanced Cell Biology Electron Microscopy Cancer Biology Endocrinology Genetics of Human Disorders Molecular Genetics	4 3 5 4 4 3 4 4 4 4 4 4 4 4 3 4 4 4 3 4 4 4 3 4 4 3 4 3 4 4 4 4 4 3 3 4 4 4 3 4 4 4 3 4 4
			15 hours required
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Chemistry	CHEM 130 CHEM 131  CHEM 320 <u>or</u> CHEM 329 CHEM 331	Chemical Principles I Chemical Principles II  Foundations of Organic chemistry <u>or</u> Organic Chemistry I Organic Chemistry II	4 (required) 4 (required)  4 <u>or</u> 4 4 (required)
b. Physics	PHYS 185 PHYS 186	College Physics I College Physics II	4 4
c. Earth Science	PHYS 131 <u>or</u> PHYS 245 <u>or</u> NASC 140	Introduction to Astronomy <u>or</u> Meteorology <u>or</u> Physical Geology	4
d. Environmental Science	BIOL 301	Introduction to Ecology	4
<b>Content Knowledge Area - Total Semester Hours</b>			<b>66-70</b>

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