



PHYSICS, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME NORTHWEST MISSOURI STATE UNIVERSITY	EDUCATOR PREPARATION PROGRAM CODE 118118
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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	62-114 62-218	Introduction to Curriculum and Instruction Designing Integrated Curriculum (Part II)	
b. Instructional Strategies and Techniques in Content Area Specialty	62-215 62-218 28-580	Designing Integrated Curriculum (Part I) Designing Integrated Curriculum (Part II) Methods in Secondary School Science	3
c. Assessment, Student Data, and Data-Based Decision-Making	62-115 28-580	Principles of Assessment Methods in Secondary School Science	1
d. Strategies for Content Literacy	62-230	Adolescent Literacy	
e. Critical Thinking and Problem Solving	62-114 62-118 62-119 62-321	Introduction to Curriculum and Instruction Teaching is Communication Professional Learning Community III Designing Intervention	1 .5
f. English Language Learning	62-117 62-118 61-569 62-321	Inclusive Classrooms and Positive Learning Environments Teaching is Communication Multiculturalism in Education Designing Intervention	1.5
2. Individual Student Needs			
	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	08-322	Adolescent Psychology	2
b. Psychology/Education of the Exceptional Child	62-117	Inclusive Classrooms and Positive Learning Environments	1
	62-118	Teaching is Communication	1
	62-119	Professional Learning Communities III	1
	62-321	Designing Intervention and Assessment	
c. Differentiated Learning	62-119 62-321	Professional Learning Community II Designing Intervention	.5
d. Classroom Management	62-117	Inclusive Classrooms and Positive Learning Environments	
	62-118	Teaching is Communication	
	62-119	Professional Learning Communities III	
	61-270	Classroom Management Strategies	

e. Cultural Diversity	62-114 62-117 62-118 61-569	Introduction to Curriculum and Instruction Inclusive Classrooms and Positive Learning Environments Teaching is Communication Multiculturalism in Education	1.5
f. Educational Psychology	08-299	Educational Psychology	3
3. Schools and the Teaching Profession			
	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	62-115 62-117 62-118 62-119 61/62-325 61-432	Principles of Assessment Inclusive Classrooms and Positive Learning Environments Teaching is Communication Professional Learning Community III Professional Learning Communities VI Professional Education Capstone	1
b. Legal/Ethical Aspects of Teaching	62-115 62-118 62-119 61-432	Principles of Assessment Teaching is Communication Professional Learning Community III Professional Education Capstone	1
4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	62-119 62-215 62-217 62-230 62-218 62-219	Professional Learning Community III Designing Integrated Curriculum (Part I) Professional Learning Community IV Adolescent Literacy Designing Integrated Curriculum (Part II) Professional Learning Communities V	1 1 1 1 1
b. Instructional Interventions for Students with Reading Deficits	62-322 or 62-323 61/62-325	Theory and Technique of Literacy Assessment and Intervention Professional Learning Communities VI	1 1
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)	62-218 62-114 62-115 62-215 62-230 61-270 62-117 62-118 62-119	Designing Integrated Curriculum in Middle and Secondary School Introduction to Curriculum & Instruction Principles of Assessment Designing Integrated Middle and Secondary Curriculum 1 Adolescent Literacy Classroom Management Strategies Inclusive Classrooms and Positive Learning Environments Teaching is Communication Professional Learning Community III	1
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	61-431	Secondary School Practicum	1
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	61-472	Directed Teaching in Secondary School	8
Field and Clinical Experiences - Total Semester Hours			10
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)	28-550	History of Science and Technology	3
2. Physics Coursework – Minimum of 20 semester hours which must include:			
a. Mechanics	25-120/121	Fundamentals Of Classical Physics I & Laboratory	5
b. Electricity and Magnetism	25-230	Fundamentals Of Classical Physics II	4

c. Heat, Sound, and Light	25-231	Fundamentals Of Classical Physics II Laboratory	1
d. Atomic or Modern Physics	25-350/351	Introduction to Modern Physics and Laboratory	4
e. Physics Electives		Electives from courses numbered above 300 (6 hrs)	
	25-320/321	Classical Mechanics I & Laboratory	4
	25-322	Statics	3
	25-330/331	Electricity and Magnetism I	4
	25-332	Electronics & Laboratory	4
	25-352	Modern Physics II	3
	25-360	Quantum Mechanics	3
	25-450/451	Computational Physics and Laboratory	4
	25-489	Laboratory	1-3
	25-499	Physics Practicum	1-3
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Chemistry	24-114/115	General Chemistry I and Laboratory	4
b. Biology	04-106/107 Or 04-102/103	Principles of Biology or General Biology and Laboratory	4 or 4
c. Earth Science	27-114/115 27-110/111 Or 61-554-83	General Earth Science and Lab or General Geology or Dynamic Earth Systems	4 or 4 or 3
d. Environmental Science	04-420 04-376 or 27-360 or 61-554-92	Environmental Issues OR Basic Ecology or Environmental Geology or Water Environmental Science	4 or 4 or 4 or 3
Content Knowledge Area - Total Semester Hours			37

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