



**MATHEMATICS, GRADES 9-12**

EDUCATOR PREPARATION PROGRAM NAME NORTHWEST MISSOURI STATE UNIVERSITY	EDUCATOR PREPARATION PROGRAM CODE 118118
--	---

**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](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	17-580 61-145 or 44-130 or 62-130	Methods in Secondary School Mathematics Information and Educational Technology/Digital Literacy or Computers & Information Technology/Digital Literacy or Educational Computing & Technology/Digital Literacy	.5 1
b. Instructional Strategies and Techniques in Content Area Specialty	17-580	Methods in Secondary School Mathematics	1.5
c. Assessment, Student Data, and Data-Based Decision-Making	17-580 61-145 or 44-130 or 62-130	Methods in Secondary School Mathematics Information and Educational Technology/Digital Literacy or Computers & Information Technology/Digital Literacy or Educational Computing & Technology/Digital Literacy	.5 1
d. Strategies for Content Literacy	17-580 62-353	Methods in Secondary School Mathematics Reading in Content Areas	.5
e. Critical Thinking and Problem Solving	61-145 or 44-130 or 62-130  29-102	Information and Educational Technology/Digital Literacy or Computers & Information Technology/Digital Literacy or Educational Computing & Technology/Digital Literacy  Fundamentals of Oral Communication	1   3
f. English Language Learning	61-260 61-461 61-569 61-521 61-472	Practicum I School and Society Multiculturalism Classroom Management Seminar Directed Student Teaching	1 .5 1
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	62-371	Introduction to Special Education	1
c. Differentiated Learning	62-371 61-569	Introduction to Special Education Multiculturalism	1 1
d. Classroom Management	61-520	Techniques of Classroom Management and Discipline	1

e. Cultural Diversity	61-569	Multiculturalism	1
f. Educational Psychology	08-299/08-303	Education Psychology	3
<b>3. Schools and the Teaching Profession</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
a. Consultation and Collaboration	61-520	Techniques of Classroom Management and Discipline	.5
b. Legal/Ethical Aspects of Teaching	61-521	Classroom Management Seminar	.5
<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	62-353	Teaching Reading in the Content Area	2
b. Instructional Interventions for Students with Reading Deficits	61-461 61-462 62-371	School and Society School and Society Seminar Introduction to Special Education	2 1 1
<b>Professional Requirements - Total Semester Hours</b>			<b>29</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)	61-260	Practicum I	1
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	61-360	Practicum II	1
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	61-472	Directed Teaching in 9-12 School	9
<b>Field and Clinical Experiences - Total Semester Hours</b>			<b>11</b>
<b>C. Mathematics Content Knowledge Area (Minimum of 36 semester hours)</b>			
	<b>Course Number</b>	<b>Course Title</b>	<b>Semester Hours</b>
1. Calculus and Analytical Geometry (nine semester hours)	17-120 17-121	Calculus I Calculus II	4 5
2. Algebraic Structures (three semester hours)	17-415 or 17-416	Modern Algebra-Rings (Introduction to Abstract Algebra) or Modern Algebra-Groups	3 or 3
3. Geometry (three semester hours)	17-351	College Geometry	3
4. Computer Science (three semester hours)	44-149 or 44-141 or 17-145	Scientific Computing or Computer Programming I or Computational Mathematics	3 or 3 or 3
5. Electives from the above coursework (six semester hours)	17-390 and either 17-215 or 17-319	Transition to Proofs (Logic of Exact Sciences) and either Discrete Mathematics Graph Theory	3 3 or 3
6. Additional Mathematics coursework – Minimum of 12 semester hours to include at least three of the following areas of Mathematics:			
a. History of Mathematics (three semester hours)			
b. Structure of the Real Number System (three semester hours)	17-421 or 17-520	Introduction to Analysis (Intermediate Analysis) and/or Applied Analysis	3 or 3
c. Number Theory (three semester hours)	17-518	Number Theory	3
d. Completion of Calculus Sequence (three semester hours)	17-321 or 17-361	Calculus III (Multivariate Calculus) or Differential Equations	4 or 3
e. Probability and Statistics (three semester hours)	17-114 or 17-230 or 17-316 or 17-318 or 17-356 or 17-366 or 17-531 or 17-535 or 17-536	General Statistics I Probability and Statistics Linear Statistical Models (I) Linear Statistical Models II Data Mining Statistical Machine Learning Applied Time Series Probability Theory Statistical Inference	3 or 3 or 3 or 3 or 3 or 3 or 2 or 3 or 3
f. Computer Science (three semester hours)	17-280	Methods in Teaching with Technology	3
g. Linear Algebra (three semester hours)	17-311 or 17-511	Linear Algebra (Elementary Linear Algebra) or Applied Linear Algebra	3 or 3
<b>Content Knowledge Area - Total Semester Hours</b>			<b>36</b>

The Department of Elementary and Secondary Education does not discriminate on the basis of race, color, religion, gender, national origin, age, or disability in its programs and activities. Inquiries related to Department programs and to the location of services, activities, and facilities that are accessible by persons with disabilities may be directed to the Jefferson State Office Building, Office of the General Counsel, Coordinator – Civil Rights Compliance (Title VI/Title IX/504/ADA/Age Act), 6<sup>th</sup> Floor, 205 Jefferson Street, P.O. Box 480, Jefferson City, MO 65102-0480; telephone number 573-526-4757 or TTY 800-735-2966 email [civilrights@dese.mo.gov](mailto:civilrights@dese.mo.gov).