



**MATHEMATICS, GRADES 9-12**

EDUCATOR PREPARATION PROGRAM NAME <b>WASHINGTON UNIVERSITY</b>	EDUCATOR PREPARATION PROGRAM CODE <b>300342</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 417	- Curriculum and Instruction in Math	3 (.2)
b. Instructional Strategies and Techniques in Content Area Specialty	ED 417	- Curriculum and Instruction in Math	(.3)
c. Assessment, Student Data, and Data-Based Decision-Making	ED 417	- Curriculum and Instruction in Math	(.1)
	ED 408	- Education & Psych. of Exceptional Children	(.1)
	ED 4821	- Teaching-Learning Process in Secondary School	(.1)
d. Strategies for Content Literacy	ED 417	- Curriculum and Instruction in Math	(.1)
	ED 5681	- Reading in the Content Areas	(.5)
e. Critical Thinking and Problem Solving	ED 417	- Curriculum and Instruction in Math	(.1)
	ED 4821	- Teaching-Learning Process in Secondary School	(.2)
f. English Language Learning	ED 5253	- Instructional Interventions in Reading for Adolescents & English Language Learners	(.5)
	ED 417	- Curriculum and Instruction in Math	(.1)
	ED 4821	- Teaching-Learning Process in Secondary School	(.1)
	ED 408	- Education & Psych. of Exceptional Children	(.1)
	ED 4843	- Field Experience Seminar	(.1)

**2. Individual Student Needs**

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	(These two courses) ED 4052 AND ED 313B	- Educational Psychology: Focus on Teaching and Learning in Schools	(.2)
		- Education, Childhood, Adolescence and Society	3 (.8)
	OR		
	(These 3 courses) ED 4052 PSYCH 321 PSYCH 325	- (same as above) - Developmental Psychology - Psychology of Adolescence	3 3
b. Psychology/Education of the Exceptional Child	ED 408	- Education & Psychology of Exceptional Children	3 (.5)
c. Differentiated Learning	ED 4052	- Educational Psychology: Focus on Teaching and Learning in Schools	(.1)
	ED 417	- Curriculum and Instruction in Math	(.1)
	ED 4821	- Teaching-Learning Process in Secondary School	(.1)
	ED 408	- Education & Psych. of Exceptional Children	(.1)
	ED 4843	- Field Experience Seminar	(.2)

d. Classroom Management	ED 4052 ED 408 ED 4821 ED 4843	- Educational Psychology: Focus on Teaching and Learning in Schools - Education & Psych. of Exceptional Children - Teaching-Learning Process in Secondary School - Field Experience Seminar	(.1) 3 (.1) (.2) (.2)
e. Cultural Diversity	ED 313B ED 4052  ED 4821 ED 4843  (one course) ED 301C ED 453B ED 459F ED 481	- Education, Childhood, Adolescence and Society - Educational Psychology: Focus on Teaching and Learning in Schools - Teaching-Learning Process in Secondary School - Field Experience Seminar  (one of the following courses) - American School - Sociology of Education - Philosophies of Education - History of Education	(.2) (.1)  (.1) (.1)  3
f. Educational Psychology	ED 4052	- Educational Psychology: Focus on Teaching and Learning in Schools	3 (.5)

<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 4843 ED 4821	- Field Experience Seminar - Teaching-Learning Process in Secondary School	2 (.2) (.1)
b. Legal/Ethical Aspects of Teaching	ED 4843 ED 4821 ED 408	- Field Experience Seminar - Teaching-Learning Process in Secondary School - Education & Psych. of Exceptional Children	(.2) (.1) (.1)

<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 5681	- Reading in the Content Areas	3 (.5)
b. Instructional Interventions for Students with Reading Deficits	ED 5253	- Instructional Interventions in Reading for Adolescents & English Language Learners	3 (.5)

**Professional Requirements - Total Semester Hours 26**

<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 4052	- Educational Psychology: Focus on Teaching and Learning in Schools	1
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	ED 4843	- Field Experience Seminar	1
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	ED 492	- Student Teaching in Secondary School	8

**Field and Clinical Experiences - Total Semester Hours 10**

<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)	(Three courses from this block or higher level courses from block 6d) Math 131 Math 132 Math 233	(Three courses from this block or higher level courses from block 6d) - Calculus I - Calculus II - Calculus III	3 3 3
2. Algebraic Structures (three semester hours)	(One course in block) Math 309 Math 331 Math 430	(One course in block) - Matrix Algebra - Algebraic Systems - Modern Algebra	3 3 3
3. Geometry (three semester hours)	Math 302	- Elementary Geometry from Advanced View	3
4. Computer Science (three semester hours)	CSE 131	- Computer Science I	3
5. Electives related to or expanding the above content areas (additional six semester hours)	(Two courses in block or block C2) Math 310 Math 350 Math 370 Math 371 Math 403C Math 404C	(Two courses in this block or in combination with block C2) - Foundations for Higher Mathematics - Topics in Applied Mathematics - Introduction to Combinatorics - Graph Theory - Mathematical Logic I - Mathematical Logic II	3 3 3 3 3 3

	Math 407 Math 416	- An Introduction to Differential Geometry - Complex Variables	3 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)	(One course in block) Math 4111 Math 4171 Math 418 Math 4181	(One course in block) - Introduction to Analysis - Topology I - Introduction to Topology and Modern Analysis - Topology II	3 3 3 3
c. Number Theory (three semester hours)	(One course in block) Math 220 Math 3351 Math 4351	(One course in block) - Finite Mathematics - Elementary Theory of Numbers - Number Theory and Cryptography	3 3 3
d. Completion of Calculus Sequence (three semester hours)	(One course in block not used in block C1) Math 217 Math 318  Math 308 Math 312  Math 415 Math 416 Math 407	(One course in block not used in block C1)  - Differential Equations - Introduction to Calculus of Several Variables - Mathematics for the Physical Sciences - Differential Equations and Dynamical Systems - Partial Differential Equations - Complex Variables - An Introduction to Differential Geometry	3 3  3 3  3 3 3
e. Probability and Statistics (three semester hours)	(One course in block) Math 3200  Math 322 Math 408 Math 420 Math 434 Math 439 Math 493 Math 494	(One course in block)  - Elementary to Intermediate Statistics and Data Analysis - Biostatistics - Nonparametric Statistics - Experimental Design - Survival Analysis - Linear Statistical Models - Probability - Mathematical Statistics	3  3 3 3 3 3 3 3
f. Computer Science (three semester hours)	(One course in block) CSE 132 Math 449	(One course in block) - Computer Science II - Numerical Applied Mathematics	3 3
g. Linear Algebra (three semester hours)	Math 429	- Linear Algebra	3
<b>Content Knowledge Area - Total Semester Hours</b>			<b>36</b>

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