



**CHEMISTRY, 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 415	- Curriculum and Instruction in Science	3 (.3)
b. Instructional Strategies and Techniques in Content Area Specialty	ED 415	- Curriculum and Instruction in Science	(.2)
c. Assessment, Student Data, and Data-Based Decision-Making	ED 415	- Curriculum and Instruction in Science	(.1)
	ED 408	- Education & Psych. of Exceptional Children	(.1)
	ED 4821	- Teaching-Learning Process in Secondary School	(.1)
d. Strategies for Content Literacy	ED 415	- Curriculum and Instruction in Science	(.1)
	ED 5681	- Reading in the Content Areas	(.5)
e. Critical Thinking and Problem Solving	ED 415	- Curriculum and Instruction in Science	(.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 415	- Curriculum and Instruction in Science	(.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)		(.2)
	ED 4052 AND	- Educational Psychology: Focus on Teaching and Learning in Schools	
	ED 313B	- Education, Childhood, Adolescence and Society	3 (.8)
	OR		
	(These 3 courses)		
	ED 4052	- (same as above)	
	PSYCH 321	- Developmental Psychology	3
	PSYCH 325	- Psychology of Adolescence	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 415	- Curriculum and Instruction in Science	(.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)
<b>Professional Requirements - Total Semester Hours</b>			<b>26</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 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
<b>Field and Clinical Experiences - Total Semester Hours</b>			<b>10</b>
<b>C. Chemistry 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)	PHIL 321G	- Philosophy of Science	3
2. Chemistry Coursework – Minimum of 20 semester hours which must include:			
a. Inorganic Chemistry	(All courses in block are required)  CHEM 111A CHEM 112A CHEM 151 CHEM 152	(All courses in block are required)  - General Chemistry I - General Chemistry II - General Chemistry Lab I - General Chemistry Lab II	  3 3 2 2
b. Analytical Chemistry	CHEM 262	- Organic Chemistry II with Lab	4
c. Organic Chemistry	CHEM 261	- Organic Chemistry I with Lab	4
d. Physical Chemistry	CHEM 401	- Physical Chemistry I	3
e. Biochemistry	CHEM 481	- General Biochemistry I	3

f. Chemistry Electives	CHEM 358 CHEM 402 CHEM 435 CHEM 445 CHEM 453 CHEM 461 CHEM 464 CHEM 470 CHEM 475 CHEM 482	- Organic Chemistry Laboratory II - Physical Chemistry II - Nuclear and Radiochemistry Lab - Instrumental Methods: Physical Chemistry - Bioorganic Chemistry - Inorganic Chemistry - Inorganic Biochemistry - Inorganic Chemistry Laboratory - Chemical Biology - General Biochemistry II	4 3 3 3 3 3 3 3 3 3
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Biology	BIOL 2960	- Principles of Biology I	4
b. Physics	(One course in block)  PHYSICS 197 PHYSICS 198 PHYSICS 117A PHYSICS 118A	(One course in block)  - Physics I - Physics II - General Physics I - General Physics II	  4 4 4 4
c. Earth Science	EPSC 201	- Earth and the Environment	4
d. Environmental Science	(One course in block)  BIOL 2950 BIOL 381	(One course in block)  - Introduction to Environmental Biology - Introduction to Ecology	  3 3
<b>Content Knowledge Area – Total Semester Hours</b>			<b>35</b>

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