



MISSOURI DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION
OFFICE OF EDUCATOR QUALITY – EDUCATOR PREPARATION

CHEMISTRY, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME
ROCKHURST UNIVERSITY

EDUCATOR PREPARATION PROGRAM CODE
501839

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 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	ED 4030 ED 4260 ED 4500	Technology in Education Teaching Middle and Secondary School Science Curriculum Methods and Assessment for Secondary School	3
b. Instructional Strategies and Techniques in Content Area Specialty	ED 4030 ED 4260 ED 4500	Technology in Education Teaching Middle and Secondary School Science Curriculum Methods and Assessment for Secondary School	3
c. Assessment, Student Data, and Data-Based Decision-Making	ED 4260 ED 4500	Teaching Middle and Secondary School Science Curriculum, Methods, and Assessment in Secondary Education	3
d. Strategies for Content Literacy	ED 4020	Fundamentals of Literacy Learning	3
e. Critical Thinking and Problem Solving	ED 4020 ED 4030 ED 4260	Fundamentals of Literacy Learning Technology in Education Teaching Middle and Secondary School Science	3
f. English Language Learning	ED 4020 ED 4030 ED 4260 ED 4450	Fundamentals of Literacy Learning Technology in Education Teaching Middle and Secondary School Science Foundations of Special Education	3

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	ED 4300	Child and Adolescent Development in Education	3
b. Psychology/Education of the Exceptional Child	ED 4450	Foundations of Special Education	3
c. Differentiated Learning	ED 4020 ED 4030 ED 4260 ED 4450 ED 4900	Fundamentals of Literacy Learning Technology in Education Teaching Middle and Secondary School Science Foundations of Special Education Student Teaching Seminar	3
d. Classroom Management	ED 3620 Or ED 4620 OR ED 4260	Foundations of Classroom Management Foundations of Classroom Management Teaching Middle and Secondary Science	2 2 3
e. Cultural Diversity	ED 1320 ED 4010 ED 4260 ED 4450	Multicultural Clinical Experience Foundations of Education Teaching Middle and Secondary School Science Foundations of Special Education	3 2 3 3
f. Educational Psychology	ED 4300	Child and Adolescent Development in Education	3

3. Schools and the Teaching Profession			
	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	ED 4010	Foundations of Education	2
	ED 4450	Foundations of Special Education	3
	ED 4900	Student Teaching Seminar	3
b. Legal/Ethical Aspects of Teaching	ED 4010	Foundations of Education	2
	ED 4450	Foundations of Special Education	3
	ED 4900	Student Teaching Seminar	3
Professional Requirements - Total Semester Hours			
			31
4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	ED 4020	Fundamentals of Literacy Learning	3
b. Instructional Interventions for Students with Reading Deficits	ED 4700	Methods of Diagnosing and Instruction for Remedial Reading	3
Professional Requirements - Total Semester Hours			
			31
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)	ED 1320	Multicultural Clinical Experiences	1
	ED 4260	Teaching Middle and Secondary Science	30 clock hours
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	ED 3620	Foundations of Classroom Management	1
	ED 4030	Technology in Education	50 clock hours
	ED 4450	Foundations of Special Education	
	ED 4500	Curriculum, Methods, Assmnt in Sec Education	
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	ED 4850	Student Teaching in the Secondary School	9
Field and Clinical Experiences - Total Semester Hours			
			11
C. Chemistry Content Knowledge Area (Minimum of 35 semester hours)			
	Course Number	Course Title	Semester Hours
1. History/Philosophy of Science and Technology (Minimum of three semester hours)	PL 3850	Philosophy of Science	3
2. Chemistry Coursework – Minimum of 20 semester hours which must include:			
a. Inorganic Chemistry	CH 4620	Inorganic Chemistry	3
b. Analytical Chemistry; 4 credit hour course	CH 3450	Analytical Chemistry	4
c. Organic Chemistry; must choose 1 course and 1 lab to equal 4 credit hours	CH 2710	Choose 4 credit hours from: Organic Chemistry I	3
	CH 2720	Organic Chemistry Laboratory I	1
	CH 2730	Organic Chemistry II	3
	CH 2740	Organic Chemistry Laboratory II	1
d. Physical Chemistry	CH 3510	Choose 4 credit hours from: Physical Chemistry I	3
	CH 3530	Physical Chemistry II	3
	CH 3560	Physical Chemistry Laboratory	1
e. Biochemistry	CH 3310	Choose 4 credit hours from: General Biochemistry I	3
	CH 3320	Biochemistry Laboratory	1
	CH 3330	General Biochemistry II	3
	CH 3340	Biochemistry Laboratory II	1
f. Chemistry Electives:	CH 1050	Choose 12 credit hours from: Principles of General Chemistry	
	CH 1060	Principles of General Chemistry Laboratory	3
	CH 2610	General Chemistry I	1
	CH 2630	General Chemistry II	4
	CH 2650	Honors General Chemistry and Laboratory	4
	CH 2650	Nuclear Chemistry	5
	CH 3650	Research Projects, Introductory	2-3
	CH 3990	Instrumental Analysis I	1-3
	CH 4430	Instrumental Analysis II	1
	CH 4450	Advanced Organic Chemistry	3
	CH 4810	Advanced Physical Chemistry	1-3
	CH 4820	Advanced Biochemistry	1-3
	CH 4840	Chemical Literature and Seminar	1-3
	CH 4960	Research Projects, Advanced	1
	CH 4990		1-3

3. Additional Science Coursework Minimum of 12 semester hours which must include:		Choose 12 hours from chemistry, physics, earth science, and environmental science. May not use a course to fulfill more than one requirement	
a. Biology;	BL 1150 BL 1151 BL 1250 BL 1251 BL 1260 BL 1261 BL 1300 BL 1301 BL 2929 BL 3030 BL 3031 BL 3040 BL 3041 BL 3100 BL 3101 BL 3200 BL 3201 BL 3230 BL 3350 BL 3351 BL 3400 BL 3401 BL 3610 BL 3611 BL 3620 BL 3621 BL 3640 BL 3650 BL 3700 BL 3701 BL 3900 BL 3920 BL 3990 BL 4200 BL 4600 BL 4700 BL 4800 BL 4810 BL 4811 BL 4940 BL 4990	Choose one 3 credit hours from: Contemporary Biology for Non-Majors 3 Contemporary Biology for Non-Majors Lab 1 General Biology I 3 General Biology I Laboratory 1 General Biology I, Honors 3 General Biology I Lab, Honors 1 General Biology II 3 General Biology II Laboratory 1 Cellular Basis for Human Anat Physiology 3 Human Anatomy and Physiology I 3 Human Anatomy and Physiology I Lab 1 Human Anatomy and Physiology II 3 Human Anatomy and Physiology II Lab 1 Microbiology 3 Microbiology Laboratory 1 Invertebrate Zoology 2 Invertebrate Zoology Laboratory 1 Animal Behavior 3 Plant Biology 3 Plant Biology Laboratory 1 Comparative Vertebrate Anatomy 3 Comparative Vertebrate Anatomy Laboratory 1 Genetics 3 Genetics Laboratory 1 Cell Biology 3 Cell Biology Laboratory 1 Bioinformatics 3 Molecular Biology 2 General Physiology 3 General Physiology Laboratory 1 Biology Field Trip 2 Biology Field Trip Abroad 3 Research Projects, Introductory 1-3 Parasitology: Global Issues and Perspect 3 Biotechnology 2 Principles of Immunology 2 Evolution 3 Ecology 3 Ecology Laboratory 1 Advanced Principles of Biology 1 Research Projects, Advanced 1-3	

