



CHEMISTRY, GRADES 9-12

EDUCATOR PREPARATION PROGRAM NAME LINCOLN UNIVERSITY	EDUCATOR PREPARATION PROGRAM CODE 117117
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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	EDU 316	Techniques in Teaching	3
b. Instructional Strategies and Techniques in Content Area Specialty	EDU 417S	Methods, Materials, and Observations in Teaching Science	2
c. Assessment, Student Data, and Data-Based Decision-Making	EDU 325	Assessment and Data Driven Decision Making	3
d. Strategies for Content Literacy	EDU 420	Teaching Reading in the Content Areas	3
e. Critical Thinking and Problem Solving	EDU 316	Techniques in Teaching	3
f. English Language Learning	SE 350	Language Acquisition/ELL	3

2. Individual Student Needs

	Course Number	Course Title	Semester Hours
a. Psychological Development of the Child and Adolescent	EDU 322	Psychology of Child & Adolescent Development – Secondary	3
b. Psychology/Education of the Exceptional Child	SE 221	Education of the Exceptional Child	3
c. Differentiated Learning	EDU 317	Differentiated Instruction	3
d. Classroom Management	EDU 435	Classroom Management	3
e. Cultural Diversity	EDU 260	Education and Cultural Diversity	3
f. Educational Psychology	EDU204	Educational Psychology	3

3. Schools and the Teaching Profession

	Course Number	Course Title	Semester Hours
a. Consultation and Collaboration	EDU 475	Collaboration and Consultation in Educational Settings	2

b. Legal/Ethical Aspects of Teaching	EDU 251	Professional Educator Legal & Ethical Issues	3
4. Secondary Literacy (Minimum of six semester hours)			
	Course Number	Course Title	Semester Hours
a. Reading and Writing in the Content Area	EDU 420	Teaching Reading in the Content Areas	3
b. Instructional Interventions for Students with Reading Deficits	EDU 429	Instructional Interventions for Students with Reading Deficits	3
Professional Requirements - Total Semester Hours			36
B. Field and Clinical Experiences (Minimum of 10 semester hours)			
	Course Number	Course Title	Semester Hours
1. Early Field Experiences (Minimum of one semester hour with a minimum of 30 clock hours)	EDU 202	Observations	1
2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)	EDU 304	Practicum 7-12	2
3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement)	EDU 477 or EDU 474	Student Teaching in Secondary School or Student Teaching Grades 9-12	10
Field and Clinical Experiences - Total Semester Hours			13
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)	EDU 443	History and Philosophy of Science and Technology	3
2. Chemistry Coursework – Minimum of 20 semester hours which must include:			
a. Inorganic Chemistry	CHM 101 CHM 102 CHM 405	General Chemistry I General Chemistry II Inorganic Chemistry	4 4 4
b. Analytical Chemistry	CHM 202	Quantitative Analysis	4
c. Organic Chemistry	CHM 301 CHM 303	Organic Chemistry I Organic Chemistry Lab I	3 1
d. Physical Chemistry	CHM 401 CHM 403	Physical Chemistry I Physical Chemistry I Laboratory	3 1
e. Biochemistry	CHM 306 CHM 307	Biological Chemistry Biological Chemistry Laboratory	3 1
f. Chemistry Electives	CHM 302 CHM 304 CHM 402 CHM 404	Organic Chemistry II Organic Chemistry Lab II Physical Chemistry II Physical Chemistry II Laboratory	3 1 3 1
3. Additional Science Coursework – Minimum of 12 semester hours which must include:			
a. Biology	BIO 103 BIO 104L	Principles of Biology Principles of Biology Laboratory	3 1
b. Physics	PHY 101	College Physics I	4
c. Earth Science	PHY 103 PHY 104L	Earth Science Earth Science Laboratory	3 1
d. Environmental Science	ENV 103 ENV 103L	Introduction to Environmental Science Introduction to Environmental Science Lab	3 1
Content Knowledge Area - Total Semester Hours			55

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