



CHEMISTRY, GRADES 9-12 - MAT

EDUCATOR PREPARATION PROGRAM NAME
LINDENWOOD UNIVERSITY

EDUCATOR PREPARATION PROGRAM CODE
018759

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 | EDU 52110 | Middle School/High School Classroom Teaching and Technology | 3 |
| b. Instructional Strategies and Techniques in Content Area Specialty | EDU 53530 | Secondary Methods of Teaching Science | 3 |
| c. Assessment, Student Data, and Data-Based Decision-Making | EDU 58404 | Advanced Measurement and Evaluation to Enhance Learning | 3 |
| d. Strategies for Content Literacy | EDU 58700 | Reading/Writing Across the Curriculum | 3 |
| | OR | OR | |
| | EDU 50700 | Reading in the Content Area | 3 |
| | OR | OR | |
| | EDU 50710 | Content Literacy for Diverse Learners | 3 |
| e. Critical Thinking and Problem Solving | OR | OR | |
| | EDU 50705 | Methods of Teaching Reading in the Content Area | 3 |
| | | | |
| f. English Language Learning | EDU 52110 | Middle School/High School Classroom Teaching and Technology | 3 |
| | EDU 54310 | Middle School/High School Differentiation and Classroom Management | 3 |

2. Individual Student Needs

| | Course Number | Course Title | Semester Hours |
|--|----------------------|--|-----------------------|
| a. Psychological Development of the Child and Adolescent | EDU 50200 | Psychology of Teaching and Learning | 3 |
| b. Psychology/Education of the Exceptional Child | EDU 54100 | Education of the Exceptional Child | 3 |
| c. Differentiated Learning | EDU 52110 | Middle School/High School Classroom Teaching and Technology | 3 |
| | EDU 54310 | Middle School/High School Differentiation and Classroom Management | 3 |
| d. Classroom Management | EDU 52110 | Middle School/High School Classroom Teaching and Technology | 3 |
| | EDU 54310 | Middle School/High School Differentiation and Classroom Management | 3 |
| e. Cultural Diversity | EDU 50000 | Foundations of K-12 Education | 3 |
| | EDU 50710 | Content Literacy for Diverse Learners | 3 |
| f. Educational Psychology | EDU 50200 | Psychology of Teaching and Learning | 3 |

| 3. Schools and the Teaching Profession | | | | | | | |
|---|---|--|----------------|---|------------------------|---------------------------|---|
| | Course Number | Course Title | Semester Hours | | | | |
| a. Consultation and Collaboration | EDU 52110 | Middle School/High School Classroom Teaching and Technology | 3 | | | | |
| | EDU 54310 | Middle School/High School Differentiation and Classroom Management | 3 | | | | |
| | EDU 58404 | Advanced Measurement and Evaluation to Enhance Learning | 3 | | | | |
| b. Legal/Ethical Aspects of Teaching | EDU 50000 | Foundations of K-12 Education | 3 | | | | |
| | EDU 52110 | Middle School/High School Classroom Teaching and Technology | 3 | | | | |
| | EDU 58404 | Advanced Measurement and Evaluation to Enhance Learning | 3 | | | | |
| 4. Secondary Literacy (Minimum of six semester hours) | | | | | | | |
| | Course Number | Course Title | Semester Hours | | | | |
| a. Reading and Writing in the Content Area | EDU 58700 | Reading/Writing Across the Curriculum | 3 | | | | |
| b. Instructional Interventions for Students with Reading Deficits | EDU 50710 | Content Literacy for Diverse Learners | 3 | | | | |
| Professional Requirements - Total Semester Hours | | | 27 | | | | |
| 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) | EDU 50000 | Foundations of K-12 Education | (1) | | | | |
| 2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours) | EDU 54310 | Middle School/High School Differentiation and Classroom Management | (1) | | | | |
| 3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement) | EDU 60599 | Field Experience: Student Teaching | 12 | | | | |
| Field and Clinical Experiences - Total Semester Hours | | | 12 | | | | |
| 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) | PHL 26500 or SCI 21200 | Philosophy of Science | 3 | | | | |
| | | History of Science | 3 | | | | |
| 2. Chemistry Coursework – Minimum of 20 semester hours which must include: | | | | | | | |
| | | | | a. Inorganic Chemistry | CHM 44000 | Inorganic Chemistry | 4 |
| | | | | b. Analytical Chemistry | CHM 35500 | Analytical Chemistry | 4 |
| | | | | c. Organic Chemistry | CHM 36100 | Organic Chemistry I | 4 |
| | | | | d. Physical Chemistry | CHM 23200 CHM 24200 | General Chemistry III | 3 |
| | | | | | | General Chemistry III Lab | 1 |
| | | | | e. Biochemistry | CHM 36200 | Organic Chemistry II | 4 |
| | | | | f. Chemistry Electives | CHM 23100 CHM 24100 | General Chemistry II | 3 |
| | | | | | | General Chemistry II Lab | 1 |
| | | | | 3. Additional Science Coursework – Minimum of 12 semester hours which must include: | | | |
| a. Biology | One of the following: BSC 10000 BSC 10700 BSC 10800 BSC 11000 BSC 11200 BSC 24000 BSC 24400 BSC 24800 | Concepts in Biology | 4 | | | | |
| | | Human Biology | 4 | | | | |
| | | Biology of the Human Body | 4 | | | | |
| | | Principles in Biology | 4 | | | | |
| | | Environmental Biology | 4 | | | | |
| | | Introduction to Biological Diversity | 4 | | | | |
| | | Intro to Cellular and Molecular Biology | 4 | | | | |
| | | Intro to Ecology and Evolution | 4 | | | | |
| b. Physics | PHY 25100 or PHY 30100 | Introductory Physics I General Physics I | 4 4 | | | | |
| c. Earth Science | ESC 10000 or ESC 10500 or GEO 11500 | Physical Geology with Lab | 4 | | | | |
| | | Survey of Geology Physical Geography | 3 4 | | | | |
| d. Environmental Science | BSC 24800 | Introduction to Ecology and Evolution | 4 | | | | |
| Content Knowledge Area - Total Semester Hours | | | 35 | | | | |

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