



CHEMISTRY, GRADES 9-12 - ALTERNATIVE

| | |
|--|---|
| EDUCATOR PREPARATION PROGRAM NAME UNIVERSITY OF MISSOURI (COLUMBIA) | EDUCATOR PREPARATION PROGRAM CODE 116116 |
|--|---|

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 | LTC 4631/7631 | Teach.Sci.Second.Sch.:Phil.,Hist., Sci.Inq.,Curr., Assm., & Teach I | 1.0 |
| | LTC 4641/7641 | Teaching Middle and Secondary Science II | 0.75 |
| b. Instructional Strategies and Techniques in Content Area Specialty | LTC 4631/7631 | Teach.Sci.Second.Sch.:Phil.,Hist., Sci.Inq.,Curr., Assm., & Teach I | 0.75 |
| | LTC 4641/7641 | Teaching Middle and Secondary Science II | 0.75 |
| c. Assessment, Student Data, and Data-Based Decision-Making | LTC 4631/7631 | Teach.Sci.Second.Sch.:Phil.,Hist., Sci.Inq.,Curr., Assm., & Teach I | 0.5 |
| | LTC 4641/7641 | Teaching Middle and Secondary Science II | 0.75 |
| | SPC_ED 4020/7020 | Teaching the Exceptional Learner | 0.5 |
| d. Strategies for Content Literacy | LTC 4631/7631 | Teach.Sci.Second.Sch.:Phil.,Hist., Sci.Inq.,Curr., Assm., & Teach I | 1.0 |
| | LTC 4560/7560 Or LTC 8642 | Reading and Writing in Content Areas Or Teaching Writing and Reading in Content Areas | See below |
| | | | |
| e. Critical Thinking and Problem Solving | LTC 4631/7631 | Teach.Sci.Second.Sch.:Phil.,Hist., Sci.Inq.,Curr., Assm., & Teach I | 0.75 |
| | LTC 4641/7641 | Teaching Middle and Secondary Science II | 0.75 |
| f. English Language Learning | LTC 4460/7460 | Teaching English to Speakers of Other Languages | 3 |
| 2. Individual Student Needs | | | |
| | Course Number | Course Title | Semester Hours |
| a. Psychological Development of the Child and Adolescent | ESC_PS 2010/7000 OR ESC_PS 7160 | Foundation of Teacher Prep I OR Developmental Aspects of Human Learning | 1.5 |
| b. Psychology/Education of the Exceptional Child | SPC_ED 4020/7020 | Teaching the Exceptional Learner | 0.75 |
| c. Differentiated Learning | SPC_ED 4020/7020 | Teaching the Exceptional Learner | 0.75 |
| d. Classroom Management | SPC_ED 4020/7020 | Teaching the Exceptional Learner | 0.25 |
| | SPC_ED 4310/7310 OR SPC_ED 8440: | Behavioral Management for Exceptional Students OR Advanced Behavior Management: Applied Behavior Analysis | 3 3 |
| | | | |
| e. Cultural Diversity | LTC 2040/7040 | Inquiry into Schools, Community & Society I | 1 |

| | | | |
|---|-------------------------------------|---|-----------------------|
| f. Educational Psychology | ESC_PS 2010/7000 OR ESC_PS 7160 | Foundation of Teacher Prep I OR Developmental Aspects of Human Learning | 1.5 |
| 3. Schools and the Teaching Profession | | | |
| | Course Number | Course Title | Semester Hours |
| a. Consultation and Collaboration | LTC 2040/7040 SPC_ED 4020/7020 | Inquiry into Schools, Community & Society I Teaching the Exceptional Learner | 1 0.25 |
| b. Legal/Ethical Aspects of Teaching | LTC 2040/7040 SPC_ED 4020/7020 | Inquiry into Schools, Community & Society I Teaching the Exceptional Learner | 1 0.5 |
| 4. Secondary Literacy (Minimum of six semester hours) | | | |
| | Course Number | Course Title | Semester Hours |
| a. Reading and Writing in the Content Area | LTC 4560/7560 Or LTC 8642 | Reading and Writing in Content Areas Or Teaching Writing and Reading in Content Areas | 3 3 |
| b. Instructional Interventions for Students with Reading Deficits | LTC 4565/7565 | Reading & Writing in the Content Area II | 3 |
| Professional Requirements - Total Semester Hours | | | 28 |
| 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) | ESC_PS 2014 Or LTC 2044 field | Inquiry into Learning I field Or Inquiry into Schools Communities Societies field | 1 1 |
| 2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours) | LTC 8942 | Advanced Internship in Curriculum and Instruction | 1 |
| 3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement) | LTC 8942 | Advanced Internship in Curriculum and Instruction OR Two years of teaching experience while on a provisional certificate | 8 |
| Field and Clinical Experiences - Total Semester Hours | | | 10 |
| C. Chemistry Content Knowledge Area (Minimum of 35 semester hours) | | | |
| All candidates must possess a Bachelor's degree in a related content area and pass the designated Missouri Content Assessment | | | |
| | Course Number | Course Title | Semester Hours |
| 1. History/Philosophy of Science and Technology (Minimum of three semester hours) | | | |
| 2. Chemistry Coursework – Minimum of 20 semester hours which must include: | | | |
| a. Inorganic Chemistry | | | |
| b. Analytical Chemistry | | | |
| c. Organic Chemistry | | | |
| d. Physical Chemistry | | | |
| e. Biochemistry | | | |
| f. Chemistry Electives | | | |
| 3. Additional Science Coursework – Minimum of 12 semester hours which must include: | | | |
| a. Biology | | | |
| b. Physics | | | |
| c. Earth Science | | | |
| d. Environmental Science | | | |
| Content Knowledge Area - Total Semester Hours | | | |

The Department of Elementary and Secondary Education does not discriminate on the basis of race, color, religion, gender, national origin, age, or disability in its programs and activities. Inquiries related to Department programs and to the location of services, activities, and facilities that are accessible by persons with disabilities may be directed to the Jefferson State Office Building, Office of the General Counsel, Coordinator – Civil Rights Compliance (Title VI/Title IX/504/ADA/Age Act), 6th Floor, 205 Jefferson Street, P.O. Box 480, Jefferson City, MO 65102-0480; telephone number 573-526-4757 or TTY 800-735-2966 email civilrights@dese.mo.gov.