



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

EARTH SCIENCE, GRADES 9-12

| | |
|---|--|
| EDUCATOR PREPARATION PROGRAM NAME MISSOURI STATE UNIVERSITY | EDUCATOR PREPARATION PROGRAM CODE 119119 |
|---|--|

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 Gale Hairston, 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 | SEC302 | General Methods of Instruction in the Middle and Secondary Schools | 1(3) |
| b. Instructional Strategies and Techniques in Content Area Specialty | SCI314 | Techniques and Technology in Science Laboratory Teaching | 1(3) |
| | SCI414 | Teaching of Secondary School Natural Science | 1(3) |
| c. Assessment, Student Data, and Data-Based Decision-Making | SCI314 | Techniques and Technology in Science Laboratory Teaching | 1(3) |
| | SCI414 | Teaching of Secondary School Natural Science | 0(3) |
| d. Strategies for Content Literacy | RDG474 or RDG710 | Reading and Writing in the Content Fields, Content Area Literacy | 0(3) |
| e. Critical Thinking and Problem Solving | SEC302 | General Methods of Instruction in the Middle and Secondary Schools | .5(3) |
| | EDC350 | School and Society | 1.5(3) |
| f. English Language Learning | RDG474 or RDG710 | Reading and Writing in the Content Fields, Content Area Literacy | 0(3) |
| | RDG574 or RDG640 | Analysis and Correction of Difficulties in Literacy | 0(3) |

2. Individual Student Needs

| | Course Number | Course Title | Semester Hours |
|--|------------------|---|----------------|
| a. Psychological Development of the Child and Adolescent | PSY360 or PSY710 | Educational Psychology, Psychology of Education | 1.5(3) |
| b. Psychology/Education of the Exceptional Child | SPE340 or SPE715 | Educational Alternatives for Exceptional Students, Foundations in Special Education | 2-3 |
| c. Differentiated Learning | SEC302 | General Methods of Instruction in the Middle and Secondary Schools | .5(3) |
| | RDG474 or RDG710 | Reading and Writing in the Content Fields, Content Area Literacy | 0(3) |
| | RDG574 or RDG640 | Analysis and Correction of Difficulties in Literacy | 0(3) |
| d. Classroom Management | SCI314 | Techniques and Technology in Science Laboratory Teaching | 1(3) |
| | SCI414 | Teaching of Secondary School Natural Science | 1(3) |
| e. Cultural Diversity | EDC345 | Introduction to Multicultural Education and Diversity | 3 |
| f. Educational Psychology | PSY360 or PSY710 | Educational Psychology, Psychology of Education | 1.5(3) |

3. Schools and the Teaching Profession

| | Course Number | Course Title | Semester Hours |
|--------------------------------------|----------------------------|--|------------------------|
| a. Consultation and Collaboration | RDG474 or RDG710 | Reading and Writing in the Content Fields, Content Area Literacy | 0(3) |
| b. Legal/Ethical Aspects of Teaching | EDC350 SCI493 SCI494 | School and Society Supervised Teaching Supervised Teaching | 1.5(3) 1(6) 1(6) |

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-

| 4. Secondary Literacy (Minimum of six semester hours) | | | |
|---|------------------|--|----------------|
| | Course Number | Course Title | Semester Hours |
| a. Reading and Writing in the Content Area | RDG474 or RDG710 | Reading and Writing in the Content Fields, Content Area Literacy | 3 |
| b. Instructional Interventions for Students with Reading Deficits | RDG574 or RDG640 | Analysis and Correction of Difficulties in Literacy | 3 |
| Professional Requirements - Total Semester Hours | | | 26-27 |

| 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) | SEC302 | General Methods of Instruction in the Middle and Secondary Schools | 1(3) |
| 2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours) | SCI314 | Techniques and Technology in Science Laboratory Teaching | 0(3) |
| | SCI414 | Teaching of Secondary School Natural Science | 1(3) |
| 3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement) | SCI493 | Supervised Teaching | 5(6) |
| | SCI494 | Supervised Teaching | 5(6) |
| Field and Clinical Experiences - Total Semester Hours | | | 12 |

| C. Earth Science Content Knowledge Area (Minimum of 35 semester hours) | | | |
|---|---------------|--|-------------------|
| | Course Number | Course Title | Semester Hours |
| 1. History/Philosophy of Science and Technology (three semester hours) | SCI505 | Intellectual Foundations of Science and Technology | 3 |
| 2. Earth Science Coursework – Minimum of 20 semester hours which must include: | | | |
| a. Astronomy | AST115 | Basic Astronomy/Lab | 4 |
| b. Meteorology | GRY135 | Principles of Weather and Climate | 4 |
| c. Geology/Physical Geography | GLG110 | Principles of Geology | 4 |
| d. Earth Science Electives | GLG314 | Historical Geology | 5 |
| | GLG318 | Physical Oceanography | 3 |
| | GLG412 | Field Geology of the Mid-Continent Region | 4 |
| | GRY348 | Geomorphology | 3 |
| | GLG171 | Environmental Geology | 3 |
| 3. Additional Science Coursework – Minimum of 12 semester hours which must include: | | | |
| a. Chemistry | CHM116/117 | Fundamentals of Chemistry/Lab | 5 |
| b. Biology | BIO101/111 | Biology in Your World/Lab | 4 |
| c. Physics | PHY100 | Survey of Physics/Lab | 4 |
| d. Environmental Science | GRY351 | Conservation of Natural Resources | 3 |
| Content Knowledge Area - Total Semester Hours | | | BSED/PB=49 |