



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

**BIOLOGY, GRADES 9-12**

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| EDUCATOR PREPARATION PROGRAM NAME<br><b>WESTMINSTER COLLEGE</b> | EDUCATOR PREPARATION PROGRAM CODE<br><b>049495</b> |
|---|--|

**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.MoSPETtransition@dese.mo.gov](mailto:DESE.MoSPETtransition@dese.mo.gov) on or before the date established in the Transition Plan.

QUESTIONS: Contact Educator Preparation, 573-751-1668 or [DESE.MoSPETtransition@dese.mo.gov](mailto:DESE.MoSPETtransition@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 101<br>EDU 436<br>EDU 306<br>EDU 425                       | Introduction to Teaching<br>Teaching Science MS/Sec.<br>Teaching Reading<br>Secondary School Teaching   | 1<br>3<br>3<br>3           |
| b. Instructional Strategies and Techniques in Content Area Specialty | EDU 436<br>EDU 306<br>EDU 425<br>EDU 290                       | Teaching Science MS/Sec.<br>Teaching Reading<br>Secondary School Teaching<br>Foundations of Education   | 3<br>3<br>3<br>3           |
| c. Assessment, Student Data, and Data-Based Decision-Making          | EDU 436<br>EDU 306<br>EDU 425<br>EDU 290<br>EDU 393<br>EDU 490 | Teaching Science MS/Sec.<br>Teaching Reading<br>Secondary School Teaching<br>Foundations of Education<br>Education Practicum 2<br>Education Seminar | 3<br>3<br>3<br>3<br>2<br>3 |
| d. Strategies for Content Literacy                                   | EDU 436<br>EDU 306<br>EDU 425<br>EDU 392                       | Teaching Science MS/Sec.<br>Teaching Reading<br>Secondary School Teaching<br>Reading and Writing in the Content Area                                | 3<br>3<br>3<br>3           |
| e. Critical Thinking and Problem Solving                             | EDU 436<br>EDU 306<br>EDU 425<br>EDU 393<br>EDU 490            | Teaching Science MS/Sec.<br>Teaching Reading<br>Secondary School Teaching<br>Education Practicum 2<br>Education Seminar                             | 3<br>3<br>3<br>2<br>3      |
| f. English Language Learning   | EDU 385  | Diversity in Education  | 3                          |

2. Individual Student Needs

|  | Course Number                 | Course Title  | Semester Hours |
|--|-------------------------------|---|----------------|
| a. Psychological Development of the Child and Adolescent | EDU 230                       | Child and Adolescent Growth and Development   | 3              |
| b. Psychology/Education of the Exceptional Child         | EDU 231                       | Education of the Exceptional Individual   | 3              |
| c. Differentiated Learning                               | EDU 231<br>EDU 392<br>EDU 490 | Education of the Exceptional Individual<br>Reading and Writing in the Content Area<br>Education Seminar | 3<br>3<br>3    |
| d. Classroom Management                                  | EDU 453                       | Classroom Organization and Management   | 3              |
| e. Cultural Diversity                                    | EDU 385                       | Diversity in Education  | 3              |
| f. Educational Psychology                                | EDU 221                       | Education Psychology  | 3              |

3. Schools and the Teaching Profession

|                                      | Course Number | Course Title             | Semester Hours |
|--------------------------------------|---------------|--------------------------|----------------|
| a. Consultation and Collaboration    | EDU 290       | Foundations of Education | 3              |
| b. Legal/Ethical Aspects of Teaching | EDU 290       | Foundations of Education | 3              |

| <b>4. Secondary Literacy (Minimum of six semester hours)</b>  |   |  |   |
|---|---|--|---|
|   | <b>Course Number</b>  | <b>Course Title</b>  | <b>Semester Hours</b>                     |
| a. Reading and Writing in the Content Area  | EDU 392   | Reading and Writing in the Content Area  | 3   |
| b. Instructional Interventions for Students with Reading Deficits   | EDU 306   | Teaching Reading   | 3   |
| <b>Professional Requirements - Total Semester Hours</b>   |   |  | <b>36</b>                                 |
| <b>B. Field and Clinical Experiences (Minimum of ten semester hours)</b>  |   |  |   |
|   | <b>Course Number</b>  | <b>Course Title</b>  | <b>Semester Hours</b>                     |
| 1. Early Field Experiences (Minimum of one semester hour with a minimum of 30 clock hours)                        | EDU 291   | Education Practicum 1  | 2   |
| 2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)                    | EDU 393   | Education Practicum 2  | 2   |
| 3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement) | EDU 497   | Student Teaching: Secondary  | 12  |
| <b>Field and Clinical Experiences - Total Semester Hours</b>  |   |  | <b>16</b>                                 |
| <b>C. Biology Content Knowledge Area (Minimum of 35 semester hours)</b>   |   |  |   |
|   | <b>Course Number</b>  | <b>Course Title</b>  | <b>Semester Hours</b>                     |
| 1. History/Philosophy of Science and Technology (Minimum of three semester hours)                                 | NSC 305   | History of Science   | 3   |
| 2. Biology Coursework – Minimum of 20 semester hours which must include:  |   |  |   |
| a. Cell Biology   | BIO 325   | Molecular Cell Biology   | 4   |
| b. Plant Form and Function  | BIO 114/115<br>BIO 124/125  | Biological Processes w/lab<br>Biodiversity w/lab   | 4<br>4                                    |
| c. Animal Form and Function   | BIO 114/115<br>BIO 124/125  | Biological Processes w/lab<br>Biodiversity w/lab   | 4<br>4                                    |
| d. Genetics   | BIO 301   | Genetics   | 4   |
| e. Evolution  | BIO 201   | Introduction to Evolution  | 3   |
| f. Biology Electives  | BIO 203<br>or BIO 204<br>or BIO 205<br>or BIO 208<br>or BIO 315<br>or BIO 318<br>or BIO 322<br>or BIO 345<br>or BIO 370 | Human Anatomy<br>Animal Behavior<br>Ecology and Field Biology<br>Functional Plant Morphology<br>Entomology<br>Ornithology<br>Vertebrate Biology<br>Forest Resources and Management<br>Physiology | 4<br>4<br>4<br>4<br>4<br>4<br>4<br>4<br>4 |
| 3. Additional Science Coursework – Minimum of 12 semester hours which must include:                               |   |  |   |
| a. Chemistry  | CHEM 114/115  | Chem 1 w/Lab   | 4   |
| b. Physics  | PHY 105   | Introduction to Physics  | 3   |
| c. Earth Science  | GEO 108<br>or GEO 110<br>or GEO 116   | Introduction to Physical Geology<br>Earth Systems<br>Environmental Geology   | 4   |
| d. Environmental Science  | ENV 105   | Introduction to Environmental Science  | 3   |
| <b>Content Knowledge Area - Total Semester Hours</b>  |   |  | <b>48</b>                                 |

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), 6<sup>th</sup> 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](mailto:civilrights@dese.mo.gov).