



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

**BIOLOGY, GRADES 9-12 - ALTERNATIVE**

|                                                           |                                             |
|-----------------------------------------------------------|---------------------------------------------|
| EDUCATOR PREPARATION PROGRAM NAME<br>MARYVILLE UNIVERSITY | EDUCATOR PREPARATION PROGRAM CODE<br>041639 |
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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](mailto: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](mailto: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                             | EDUC 241                 | Fundamentals of Secondary Schools                                        | 1              |
| b. Instructional Strategies and Techniques in Content Area Specialty | EDUC 441/542             | Teaching Science Methods: Secondary                                      | 2              |
| c. Assessment, Student Data, and Data-Based Decision-Making          | EDUC 241                 | Fundamentals of Secondary School                                         | .5             |
| d. Strategies for Content Literacy                                   | EDUC 321                 | Literacy Across the Academic Disciplines                                 | .5             |
| e. Critical Thinking and Problem Solving                             | EDUC 241                 | Fundamentals of Secondary School                                         | .5             |
| f. English Language Learning                                         | EDUC 241<br>EDUC 441/542 | Fundamentals of Secondary Schools<br>Teaching Science Methods: Secondary | .5<br>.5       |

**2. Individual Student Needs**

|                                                          | Course Number                                                         | Course Title                                                                                   | Semester Hours |
|----------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------|
| a. Psychological Development of the Child and Adolescent | Two of the following:<br>EDUC 309/509,<br>EDUC 313/513 or<br>PSYC 254 | Child Dev. & Learning,<br>Adol. Dev. & Learning or<br>Human Development through the Lifespan   | 1.5<br>1.5     |
| b. Psychology/Education of the Exceptional Child         | EDUC 352/552                                                          | Ed. Psych. of the Exceptional Child                                                            | 2              |
| c. Differentiated Learning                               | EDUC 201<br>EDUC 352/552<br>EDUC 441/542                              | School & Society<br>Ed. Psych. of the Exceptional Child<br>Teaching Science Methods: Secondary | .5<br>1<br>.5  |
| d. Classroom Management                                  | EDUC 315/515                                                          | Ed. Developmental Psych: Learn & Mgt.                                                          | 2              |
| e. Cultural Diversity                                    | EDUC 201                                                              | School and Society                                                                             | 1              |
| f. Educational Psychology                                | EDUC 315/515<br>EDUC 313/513                                          | Ed. Developmental Psych: Learn & Mgt.<br>Adolescent Development and Learning                   | 1<br>1         |

**3. Schools and the Teaching Profession**

|                                      | Course Number        | Course Title                             | Semester Hours |
|--------------------------------------|----------------------|------------------------------------------|----------------|
| a. Consultation and Collaboration    | EDUC 201<br>EDUC 404 | School & Society<br>Professional Seminar | .5<br>1        |
| b. Legal/Ethical Aspects of Teaching | EDUC 201<br>EDUC 404 | School & Society<br>Professional Seminar | .5<br>1        |

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).

| 4. Secondary Literacy (Minimum of six semester hours)                                                             |                                                                                                |                                                                                                                                                                                           |                |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                                                                                                   | Course Number                                                                                  | Course Title                                                                                                                                                                              | Semester Hours |
| a. Reading and Writing in the Content Area                                                                        | EDUC 321/521                                                                                   | Literacy Across the Academic Disciplines                                                                                                                                                  | 3              |
| b. Instructional Interventions for Students with Reading Deficits                                                 | EDUC 361/561                                                                                   | Instructional Interventions in Reading                                                                                                                                                    | 3              |
| <b>Professional Requirements - Total Semester Hours</b>                                                           |                                                                                                |                                                                                                                                                                                           | <b>26.5</b>    |
| 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)                        | EDUC 200 or<br>EDUC 240                                                                        | Practicum in School & Society or<br>Practicum in Fundamentals of Secondary Schools                                                                                                        | 1              |
| 2. Mid-Level Field Experiences (Minimum of one semester hour with a minimum of 45 clock hours)                    | EDUC 320,<br>EDUC 360 or<br>EDUC 440                                                           | Practicum in Literacy Across the Academic Disciplines, Practicum in Instr. Interventions in Reading or Setting up School Experience plus Practicum in Teaching Science Methods: Secondary | 1              |
| 3. Culminating Clinical Experiences (Minimum of eight semester hours with a minimum of 12 weeks in one placement) | EDUC 400 or<br><br>EDUC 401                                                                    | Student Teaching or<br><br>Culminating Practicum (requires employment in the area of certification on a provisional certificate)                                                          | 8 or<br><br>4  |
| <b>Field and Clinical Experiences - Total Semester Hours</b>                                                      |                                                                                                |                                                                                                                                                                                           | <b>6 or 10</b> |
| C. Biology 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)                                 | A Bachelor's Degree in a related content area and a passing score on the MoCA will be required |                                                                                                                                                                                           |                |
| 2. Biology Coursework – Minimum of 20 semester hours which must include:                                          |                                                                                                |                                                                                                                                                                                           |                |
| a. Cell Biology                                                                                                   |                                                                                                |                                                                                                                                                                                           |                |
| b. Plant Form and Function                                                                                        |                                                                                                |                                                                                                                                                                                           |                |
| c. Animal Form and Function                                                                                       |                                                                                                |                                                                                                                                                                                           |                |
| d. Genetics                                                                                                       |                                                                                                |                                                                                                                                                                                           |                |
| e. Evolution                                                                                                      |                                                                                                |                                                                                                                                                                                           |                |
| f. Biology Electives                                                                                              |                                                                                                |                                                                                                                                                                                           |                |
| 3. Additional Science Coursework – Minimum of 12 semester hours which must include:                               |                                                                                                |                                                                                                                                                                                           |                |
| a. Chemistry                                                                                                      |                                                                                                |                                                                                                                                                                                           |                |
| b. Physics                                                                                                        |                                                                                                |                                                                                                                                                                                           |                |
| c. Earth Science                                                                                                  |                                                                                                |                                                                                                                                                                                           |                |
| d. Environmental Science                                                                                          |                                                                                                |                                                                                                                                                                                           |                |
| <b>Content Knowledge Area - Total Semester Hours</b>                                                              |                                                                                                |                                                                                                                                                                                           |                |