Biology Education

Bachelor of Science in Education (BSED)

The B.S. Ed. in Biology Education prepares highly qualified teachers of biology once all degree requirements and assessments are passed. Students have an exceptional program of professional preparation including field experiences, theory and pedagogy courses. The major in biology is well rounded helping teachers develop a strong foundation of biological knowledge. Once initial certification is obtained, additional areas of science may be added by passing the Missouri Content Assessment exams, as of present. Science teachers are in high demand across most of the United States and particularly in Missouri. Because of this there are forgiveness programs for different types of Federal loans in return for teaching science in a high needs school district (most in Missouri). In addition, students may be eligible to participate in the TEACH grant program which can pay up to $16,000 in college costs over four years and has a similar loan forgiveness program. Be sure to consult the financial aid office for details.

Biology Education students will...
- have substantial and increasingly challenging experiences in schools before student teaching
- learn up-to-date techniques for teaching in the sciences
- know how to differentiate instruction so all students succeed
- develop a strong knowledge of biology
- be prepared to integrate technology in teaching

Career Planning
Career preparation is part of the mission of Southeast. 100% of programs offer our students an internship, study-abroad program, clinical opportunity, student teaching or research internship.

98% of students who searched for teaching positions entered the field within two years of graduation. Most have secured positions by graduation.

The Office of Career Services in Academic Hall 057 can provide students with professional career counseling and coaching, resume critiques, practice interviews, job search strategies, career events, networking opportunities, and more.

Graduate Schools of Recent Graduates
- Southeast Missouri State – MNS in biology or science education; University of Missouri- Ph.D.; University of Miami, Ohio – Ph.D.

Employment Opportunities of Recent Graduates
- Cape Girardeau, Jackson, Oran, Kelly, Arcadia Valley, Farmington, Fredericktown, Sikeston, Dexter, Ste. Genevieve, Cuba, Sullivan, Scott County Central, Puxico, Ellington, Florida, Herculaneum, Perryville, Richland, St. Louis area, Windsor, Caledonia, Advance, Desoto, Kansas City, Rockwood, North City, South Iron County, California, Charleston, Portageville, St. Vincent’s, Cape Career Center, Shawnee, Anna-Jonesboro.

Admission Requirements
- 42 course hours completed
- 2.75 cumulative GPA
- Missouri Educator Profile (MEP) results on file with the Office of the Associate Dean of the College of Education
- Score of 220 or higher on all sections of the Missouri General Education Assessment (MoGEA)
- The following course requirements met
  - A grade of C or above in PY222 Development of the Adolescent
  - A grade of B or above in ED280 Introduction to Education as a Profession

Additional Information
The state of Missouri has high expectations for future educators. Students matriculating into education programs must meet the following standards to be recommended for licensure following degree completion.

Students graduating spring 2017 or later must maintain a 3.0 GPA in both content and pedagogy courses. In addition students must pass the Missouri Content Assessment Exam and the Missouri Pre-Service Teacher Assessment for recommendation for licensure. Students must also fulfill other assessments such as the Missouri Educator Profile and be cleared through a FBI background check.

Special Options with Secondary Education
Southeast offers a Master of Arts in Secondary Education: Educational Studies or Educational Technology.

Transfer and Dual Credit Students
If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at semo.edu/transfercredit.
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This is a guide based on the 2018-2019 Undergraduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on several factors such as dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use Degree Works to monitor their individual progress.

**CURRICULUM CHECKLIST**

“Critical Courses” are italicized and bolded. Data shows that students who have completed this course in the first two years and have earned the noted grade are most likely to complete this program of study.

**Education Courses - 47 Hours Required**

A grade of ’C’ or better is required in education courses, with the exception of ED280 which requires a grade of ’B’ or better.

- **ED280** Introduction to Teaching (3)
- **EX390** Psychology and Education of the Exceptional Child (3)
- **PY222** Development of the Adolescent (3)
- **SE307** Content Literacy Methods for Middle and High School (3)
- **SE320** Techniques of Teaching Science (3)
- **SE350** Pedagogy 1: Principles of Effective Teaching (3)
- **SE365** Field II (3)
- **SE365** Pedagogy II: Secondary School (4)
- **SE380** Advanced Field (3)
- **SE385** Pedagogy 3: Advanced Methods of Middle and Secondary Teaching (3)
- **SE390** Instructional Interventions for Middle and Secondary Students with Special Literacy Needs (3)
- **SE465** Student Teaching (12)

**Biology Education – 44-54 Hour Major - No Minor Required**

Required Courses:

- **BI 163** Evolution & Ecology (4)
- **BI 173** Cell & Organismal Biology (4)
- **BI 283** Genetics (4)
- **BI 310** General Microbiology (4)
- **BI 332** General Ecology (3)
- **BI 336** Career Develop in Biology (1)
- **BI 405** Engineering in Science Education (1)
- **MA 116** Precalculus A (3)
- **UI 318** Earth Science: Proc Approach (3)
- **UI 422** Scientific Reasoning (3)

**BIOLOGY EDUCATION OPTION:**

- **BS 105** Environmental Biology (3)
  - **PH 106** Physical Concepts (3)
  - **PH 120** Introductory Physics I (5)
  - **PH 121** Introductory Physics II (5)
  - **CH 181** Basic Principles of Chemistry (5)
  - **CH 185** General Chemistry (5)
  - **CH 186** Foundations of Inorganic Chemistry (3)

**University Studies Requirements** – some requirements may be fulfilled by coursework in major program

- Social and Behavioral Sciences – 3 hours
- Constitution requirement – 3 hours
- US History requirement – 3 hours
- Written Communication – 6 hours
- Oral Communication – 3 hours
- Natural Sciences – 7 hours (from two disciplines, one to include a lab)
- Mathematics – 3 hours
- Humanities & Fine Arts – 9 hours (from at least two disciplines)
- Additional requirements – 5 hours (to include UI100 for native students)

**SAMPLE FOUR-YEAR PLAN**

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- Milestone: Maintain 2.75 cumulative GPA

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- Milestone: Maintain 2.75 cumulative GPA, 42 hours completed; completed MEP; Passing score MoGEA

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- Milestone: Passing score Mo Content Exam; GPA in major 3.0

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- Milestone: Prior to last semester: Passing score Mo Content Exam, 2.75 cumulative GPA, 3.0 GPA in content; 3.0 GPA in pedagogy; all content and professional education coursework complete.

A “Milestone” signifies a significant stage for a student in the completion of a degree.

**Degree requirements for all students:** a minimum of 120 credit hours, completion of University Studies program, completion of 39 senior division hours (300-599), Writing Proficiency Exam (WP003), and completion of the Measure of Academic Proficiency and Progress (MAPP) at the senior level. Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.