Biology Education: Unified Science
Bachelor of Science in Education (BSED)

The B.S.Ed. in Unified Science-Biology prepares students who will be certified in all areas of high school science. This degree is very desirable from the school district’s point of view and is a necessity for teachers in very small districts where a single teacher may serve the entire high school. In larger districts teachers with unified science certification can be hired for more types of science positions. Southeast prepares highly qualified teachers ready for certification once all degree requirements and assessments are complete. Students have an exceptional program of professional preparation including multiple field experiences, theory and pedagogy courses. The major in biology and supporting sciences is well rounded helping teachers develop a strong foundation of knowledge.

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 visit 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. In fact, more than 90% of Southeast students participate in internships, clinical opportunities, student teaching, research assistantships, and study abroad. 98% of students who searched for teaching positions entered the field within two years of graduation. Professional career counselors are available for all students. The Office of Career Services in Academic Hall 057 can provide students with professional career counseling, resume critiques, practice interviews, job search strategies, career events, networking opportunities, and more.

Employment Opportunities and Graduate Schools of Recent Graduates
- Graduate Schools:
  - Southeast Missouri State – MNS in biology or science education
  - University of Missouri - Ph.D.
  - University of Miami, Ohio – Ph.D.
- Employment
  - Cape Girardeau and Jackson
  - Arcadia Valley
  - Farmington
  - Sikeston
  - Florida
  - Herculaneum
  - St. Louis area
  - Kansas City
  - California
  - St. Vincent’s
  - Cape Career Center
  - Shawnee
  - Most have secured positions by graduation

Admission Requirements
- Cumulative 2.75 GPA
- Pass all sections of the Missouri General Education Assessment
- Current Pass Scores for MoGEA
  - English - 186
  - Writing - 167
  - Math - 183
  - Science - 183
  - Social Studies – 183

All students must have:
- 42 hours of course credits
- Missouri Educator Profile (MEP) results on file
- ED 280 Introduction to Teaching as a Profession with a grade of “B” or above
- PY222 Development of the Adolescent with a grade of C or above

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.

- Cumulative 2.75 GPA
- GPA of 3.0 in area of content and pedagogy courses
- Pass the Missouri Content Area Exams in Biology, Chemistry, Earth Science, and Physics
- Pass the Missouri Preservice Teacher Assessment
- Fulfill the assessment of the Missouri Educator Profile
- Complete a FBI background check
**Degree Map**

**Biology Education: Unified Science**

Bachelor of Science in Education (BSED)

This is a guide based on the 2016-2017 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 DegreeWorks to monitor their individual progress.

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### CURRICULUM CHECKLIST

“Critical Courses” are italicized and bold. 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.

(Curriculum pending state approval)

**Professional Education Courses:**

A grade of 'C' or better is required in education courses. A grade of 'B' is required in ED 280.

- **ED280** Introduction to Teaching (3)
- **EF400** Student Teaching Seminar (1)
- **EX380** Psychology and Education of the Exceptional Child (3)
- **PY222** Development of the Adolescent (3)
- **SE307** Reading/Writing in the Content Area (3)
- **SE320** Techniques of Teaching Science (3)
- **SE350** Pedagogy 1: Principles of Effective Teaching (3)
- **SE355** Field I (3)
- **SE365** Pedagogy 2: Secondary School (4)
- **SE385** Advanced Field (3)
- **SE390** Instructional Interventions for Middle and Secondary Students with Special Literacy Needs (3)
- **SE465** Student Teaching (12)

**Biological Education - 66 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 310 General Microbiology (3)
- BI 322 Developmental Biology (3)
- BI 383 Career Develop in Biology (1)
- BI 405 Engineering in Science Education (1)
- MA 134 College Algebra (3)
- UI 318 Earth Science: Proc Approach (3)
- UI 422 Scientific Reasoning (3)

**UNIFIED SCIENCE OPTION:**

- BO 310 Plant Biology (4)
- BS 113 Anatomy & Physiology I (4)
- BS 114 Anatomy & Physiology II (4)
- CH 185 General Chemistry (5)
- CH 196 Foundations of Inorganic Chemistry (3)
- GO 110 Physical Geology (3)
- MA 134 Plane Trigonometry (3)
- PH 120 Introductory Physics I (5)
- PH 121 Introductory Physics II (5)

**University Studies Requirements (not already listed above):**

UI100 First Year Seminar, EN100 English Composition, Artistic Expression, Written Expression, Oral Expression, Literary Expression, Development of a Major Civilization, Economic Systems, Political Systems, Social Systems, and one IU/UI 3XX

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### SAMPLE FIVE-YEAR PLAN

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<th>Course #</th>
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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: Pass Physics, Chemistry, Biology Mo. Content Exams; maintain 3.0 GPA in content and pedagogy courses

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Milestone: Pass Earth Science Mo. Content Exam; maintain a 3.0 GPA in content and pedagogy courses

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Milestone: Prior to last semester: Passing score Mo Content Exams, 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, career proficiencies (CL001-004), 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 DegreeWorks for additional graduation requirements (i.e. minimum GPA and additional options) for your program of study.