

# Biology Education: Unified Science

## Bachelor of Science in Education (BSED)

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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. 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.

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.

Demonstrated Career Proficiency is a Requirement of all Southeast Students		
CL001	First Semester	Students connect academic career planning by completing an online career assessment
CL002	Second Semester	Students learn more about resources available to enhance academic and career planning
CL003	Junior Year	Students learn about continued career planning, job search strategies, and networking
CL004	Senior Year	Students learn about resume development, professional communication, interviewing, and transitioning to the first job from college

### 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

- 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

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This is a guide based on the 2017-2018 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.

### 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.

#### 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)
- \_\_\_ EX390 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 II (3)
- \_\_\_ SE365 Pedagogy 2: Secondary School (4)
- \_\_\_ SE380 Advanced Field (3)
- \_\_\_ SE385 Pedagogy 3: Middle and Secondary Education Methods of Secondary Teaching (3)
- \_\_\_ SE390 Instructional Interventions for Middle and Secondary Students with Special Literacy Needs (3)
- \_\_\_ SE465 Student Teaching (12)

#### Biology Education - 61 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 389 Career Development in Biology (1)
- \_\_\_ BI 405 Engineering in Science Education (1)
- \_\_\_ MA 134 College Algebra (3)
- \_\_\_ UI 318 Earth Science: A Process 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 186 Foundations of Inorganic Chemistry (3)
- \_\_\_ GO 110 Physical Geology (3)
- \_\_\_ MA 133 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

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at [semo.edu/transfercredit](http://semo.edu/transfercredit)

### SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI 100	3	BI 173	4
	BI 163	4	CH 186	3
	CH 185/085/005	5	EN 100	3
	MA 134	3	MA 133	3
			Political Systems	3
	<b>Total</b>	<b>15</b>	<b>Total</b>	<b>16</b>
Milestone: Maintain 2.75 cumulative GPA				
SECOND YEAR	BI 283	4	BI 332	3
	BS 113/013	4	BS 114/014	4
	<b>PY222</b>	3	<b>ED280</b>	3
	Develop of a Major Civ	3	Oral Expression	3
	Written Expression	3	Social Systems	3
	<b>Total</b>	<b>17</b>	<b>Total</b>	<b>16</b>
Milestone: Maintain 2.75 cumulative GPA, 42 hours completed; completed MEP: Passing score MoGFA				
THIRD YEAR	BI 310	4	BI 405	1
	EX 390	3	PH 121/021	5
	PH 120/020	5	SE 307	3
	SE 350	3	SE 355	3
	Economic Systems	3	SE 365	4
		<b>Total</b>	<b>18</b>	<b>Total</b>
Milestone: Pass Physics, Chemistry, Biology Mo. Content Exams; maintain 3.0 GPA in content and pedagogy courses				
FOURTH YEAR	SE 320	3	BI 389	1
	SE 380	3	BO 310	4
	SE 385	3	GO 110	3
	SE 390	3	UI 318	3
	UI 422	3	Artistic Expression	3
	Literary Expression	3		
		<b>Total</b>	<b>18</b>	<b>Total</b>
Milestone: Pass Earth Science Mo. Content Exam; maintain a 3.0GPA in content and pedagogy courses				
FIFTH YEAR	EF 400	1		
	SE 465	12		
		<b>Total</b>	<b>13</b>	
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, completion of 39 senior division hours (300-599), career proficiencies (CL001-004), Writing Proficiency Exam (WP003), and completion of the Measure of Academic Proficiency and Progress (MAP) at the senior level. Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for this program.*

Revised  
10/16/2017