

Biology: Organismal, Ecological, & Evolutionary Biology Option
Bachelor of Science (BS)
Organismal, Ecological, & Evolutionary Biology Option

This option is designed for students preparing to do graduate work or to seek full-time employment in this field. Employment can be found with national and state conservation and resource management agencies, park services, environmental consulting agencies, zoological parks, botanical gardens, and public health facilities, etc. This option can be customized to the student's interest in learning more about field biology, botany, zoology, ecology, etc. This is an option also appropriate for students considering veterinary school.

Faculty advisors in this area are active in research and they involve students in their research. These opportunities give students the potential to conduct, present, and publish research carried out with faculty members.

Organismal Biology students will...

- Meet with their advisor each semester to assess their progress towards admission to a professional school.
- Take a core of courses prepares them in any area of biology.
- Take rigorous coursework in evolutionary biology, ecology, plant biology, and animal biology which prepares them for advanced study or employment.
- Complete 80 hours for 2 credit hours of experiential learning, usually in field studies or internships.
- Complete additional coursework in geology and mathematics to qualify them for employment and graduate school.
- Attend classes in the renovated Magill Hall furnished with modern equipment.
- Have access to the Miller Reserve Wetlands Restoration project, the Kelso Wildlife Sanctuary, and the Reis Biological Research Station.

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.

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.

Demonstrated Career Proficiency is a Requirement of all Southeast Students		
CL001/CL002	First Semester	Complete the FOCUS2 assessment and develop a Career Action Plan.
CL003	Junior Year	Students gain information about career planning and job searching resources.
CL004	Senior Year	Students demonstrate advanced proficiency by identifying a position in their field, developing a cover letter, and tailoring a resume for the position. Materials are critiqued to ensure preparedness for a successful job search.

Recent Internship and Field Studies Experiences

- Missouri Department of Conservation
- Open Rivers & Wetland Field Station
- Trail of Tears State Park
- Big Oak Tree State Park
- Fults Hill Prairie Nature Reserve
- Whiterock Nature Preserve, Illinois
- Saltlick Nature Preserve, Illinois
- World Bird Sanctuary
- Army Corps of Engineers
- Black Hills, South Dakota
- St. Louis Zoo, Missouri

Graduate and Professional School Matriculation

- Southeast Missouri State University
- University of Missouri
- University of Missouri, School of Veterinary Medicine
- Southern Illinois University- Edwardsville
- University of Illinois- Champagne, School of Veterinary Medicine

Recent Employment Realized

- Missouri Department of Conservation
- Open Rivers & Wetland Field Station
- Trail of Tears State Park
- National Park Service
- Army Corps of Engineers
- Woodland Hills High School
- LAD Foundation

Admission Requirements

A college preparatory sequence that includes three years of science (including biology, chemistry, and physics) and mathematics through advanced algebra is encouraged.

To learn more
 Office of Admissions
 (573) 651-2590
admissions@semo.edu
www.semo.edu

To explore the College of Science, Technology, and Agriculture online, visit
www.semo.edu/costa

For advising
 College of Science, Technology, and Agriculture
 Advising Center (573) 651-5930
costaadvising@semo.edu
www.semo.edu/costa/advising

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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.

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.

Required Courses:

- ___ BI163 Evolution & Ecology (4)
- ___ BI173 Cell & Organismal Biology (4)
- ___ BI283 Genetics (4)
- ___ BI389 Career Development in Biology (1)
- ___ CH185/085/005 General Chemistry (5)

Choose one math course:

- ___ MA134 College Algebra (3)
- ___ MA137 Precalculus (5)
- ___ MA139 Applied Calculus (3)
- ___ MA140 Analytical Geometry & Calculus I (5)

Choose one additional math course:

- ___ MAxxx Additional math (MA133 or higher) (3)

Experiential Learning Requirement: 2 hours

- ___ BI 471-473 Internships in Biology (2)
- ___ BI 551-553 Biology Field Studies (2)
- ___ BI 589-591 Biological Research (2)
- ___ BI 570 Development of Instructional Materials (1)

Organismal, Ecological, & Evolutionary Option Required Courses

- ___ BI300 Introduction to Evolutionary Biology (3)
- ___ BI332 General Ecology (3)
- ___ BI438 Biogeography (3)
- ___ BO310 Plant Biology (4)
- ___ ZO310 Animal Biology (4)

Biology Electives: 7 Hours

- ___ Any BI, BO, ZO, BT courses, 300 level and above (7)

University Studies Requirements (not already listed above):

UI100 First Year Seminar, EN100 English Composition, Artistic Expression, Written Expression, Oral Expression, Literary Expression, Behavioral Systems, Development of a Major Civilization, Economic Systems, Social Systems, Political Systems, two IU/UI3XX and one UI4xx.

SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	BI173	4
	BI163	4	EN100	3
	CH185/085/005	5	Additional math	3
	MA134/137/139/140	3-5	Artistic Expression	3
			Oral Expression	3
	Total	15-17	Total	16
Milestone: maintain 2.0 cumulative GPA				
SECOND YEAR	BI283	4	BI332	3
	Develop of a Major Civ	3	BO310	4
	Economic Systems	3	Behavioral Systems	3
	Literary Expression	3	Social Systems	3
	Political Systems	3	Written Expression	3
	Total	16	Total	16
Milestone: maintain 2.0 cumulative GPA				
THIRD YEAR	BI389	1	BI300	3
	ZO310	4	Biology electives	4
	Biology elective	3	General electives	9
	IU/UI3XX	6		
	Total	14	Total	16
Milestone: maintain 2.0 cumulative GPA				
FOURTH YEAR	Experiential Learning Crs	2	BI438	3
	General electives	12	IU/UI4xx	3
			General elective	7
	Total	14	Total	13
Milestone: maintain 2.0 cumulative GPA				

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.

A minimum 2.00 GPA in the major and overall are required to graduate with a BS in Biology degree.

Refer to the Undergraduate Bulletin or DegreeWorks for additional graduation requirements (i.e. minimum GPA and coursework) for your program of study.