

Biology: Wildlife and Conservation Biology Option

Bachelor of Science (BS)

Wildlife and Conservation 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, among others.

Faculty advisors in this area have on-going research programs and involve students in their research. Students participate in external internships with the Missouri Department of Conservation and other agencies. In addition students in wildlife and conservation biology have many opportunities to conduct, present, and publish research with biology faculty.

Wildlife and Conservation Biology students will...

- Meet with their advisor each semester to assess their progress towards admission to a professional school.
- Take a core of courses that prepares them in any area of biology.
- Take rigorous coursework in ecology, plant biology, and animal biology, which prepares them for advanced study or employment.
- Select additional option courses in management of wildlife populations, management of wildlife habitat, conservation biology, and wetlands ecology and management
- 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 wildlife certification after they graduate.
- Attend classes in the renovated Magill Hall building 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. Students in Wildlife and Conservation Biology are in high demand. 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
- Madikwe Game Reserve in South Africa
- Black Hills, South Dakota

Graduate School Matriculation

- Southeast Missouri State University
- University of Missouri-Columbia
- Southern Illinois University - Edwardsville

Employment Opportunities

- Missouri Department of Conservation
- Open Rivers & Wetland Field Station
- Trail of Tears State Park
- National Park Service
- Army Corps of Engineers
- Florida Fish and Wildlife Service

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 2015-2016 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:

- ___ BI151 Biological Reasoning (3)
- ___ **BI153 Intro to Organismal Biology (4)**
- ___ **BI154 Genetics and Cell Biology (4)**
- ___ BI489 Analysis of Biological Issues (2)
- ___ 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:

- ___ BI 471-473 Internships in Biology (2)
- OR
- ___ BI 551-553 Biology Field Studies (2)
- OR
- ___ BI 589-591 Biological Research (2)

Wildlife and Conservation Option Required Courses:

- ___ BI332 General Ecology (3)
- ___ **BO200 Plant Biology (4)**
- ___ **ZO200 Animal Biology (3)**

Choose 6 Hours From:

- ___ BI420 Management of Wildlife Populations (3)
- ___ BI430 Management of Wildlife Habitat (3)
- ___ BI435 Conservation Biology (3)
- ___ BI440 Wetland Ecology and Management (3)

Biology Electives: choose at least 7 Hours not selected above*

- ___ BI420 Management of Wildlife Populations (3)
- ___ BI430 Management of Wildlife Habitat (3)
- ___ BI432 Advanced Ecology (3)
- ___ BI434 Marine Evolutionary Ecology (3)
- ___ BI435 Conservation Biology (3)
- ___ BI438 Biogeography (3)
- ___ BI440 Ecology and Management of Wetlands (3)
- ___ BI452 Freshwater Ecology (3)
- ___ BI469 Wildlife Toxicology (3)
- ___ BI 471-473 Internship (1-3)
- ___ BI493 Readings in Biology (2)
- ___ BI551-553 Biology Field Studies (1-3)
- ___ BI 589-591 Biological Research (1-3)
- ___ BO361 Systematic Botany (3)
- ___ BO420 Ethnobotany (3)
- ___ BO445 Plant Physiology (3)
- ___ BO461 Native Aquatic Plants (3)
- ___ BO469 Field Botany (3)
- ___ ZO420 Animal Behavior (3)
- ___ ZO441 Parasitology (3)
- ___ ZO445 Aquatic Entomology (3)
- ___ ZO459 Mammalogy (3)
- ___ ZO460 Herpetology (3)
- ___ ZO465 Entomology (3)
- ___ ZO466 Ornithology (3)
- ___ ZO469 Vertebrate Adaptations (3)
- ___ ZO478 Ichthyology (3)

*At least one course must be BO prefix and one course ZO prefix

Non-Biology Requirements: 3 Hours

- ___ GO110 Physical Geology (3)

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, Political Systems, Social Systems, two IU/UI3XXs and one UI4xx.

SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	BI153	4
	EN100	3	CH185/085/005	5
	BI151	3	Literary Expression	3
	MA134/137/139/140	3-5	Written Expression	3
	Artistic Expression	3		
	Total	15-17	Total	15
Milestone: maintain 2.0 cumulative GPA				
SECOND YEAR	BI154	4	BO200	4
	Additional Math course	3	GO110	3
	Behavioral Systems	3	Economic Systems	3
	Develop of a Mjr Civ	3	Political Systems	3
	Oral Expression	3	Elective	3
	Total	16	Total	16
Milestone: maintain 2.0 cumulative GPA				
THIRD YEAR	BI332	3	BI420 or BI435	3
	ZO200	3	Biology elective	4
	Biology elective	3	Social Systems	3
	Elective	6	IU/UI3XX	3
	Total	15	Total	13
Milestone: maintain 2.0 cumulative GPA				
FOURTH YEAR	BI430 or BI440	3	BI489	2
	Experiential Learning Crs	2	UI4XX	3
	IU/UI3XX	3	Electives	9
	Electives	8		
	Total	16	Total	14
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.

Revised
3/19/2015