

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 post-graduation goals.
- 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. 100% of programs offer our students an internship, study-abroad program, clinical opportunity, student teaching or research internship.

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.

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.

Special Options with Biology

Southeast offers a Master of Natural Science in Biology.

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.

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:

- MA116 Precalculus A (3)
- MA137 Precalculus (5)
- MA139 Applied Calculus (3)
- MA140 Analytical Geometry & Calculus I (5)

Choose one additional math course:

- MAxxx Additional math (for which MA116 is a prerequisite) (3)
- OR
- MA155 Statistical Reasoning (3)

Experiential Learning Requirement: 2 hours

- BI 471-473 Internships in Biology (2)
- BI 551-553 Biology Field Studies (2)
- BI563-565 Experience in Museum Curation (1-3)
- BI 570 Development of Instructional Materials (1)
- BI 589-591 Biological Research (2)

Wildlife and Conservation Option Required Courses:

- BI332 General Ecology (3)***
- BO310 Plant Biology (4)
- ZO310 Animal Biology (4)

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)
- BI469 Wildlife Toxicology (3)

Biology Electives: choose at least 6 Hours not selected above

- Any BI, BO, ZO, BT courses, 300 level and above (6)

Non-Biology Requirements: 3 Hours

- GO110 Physical Geology (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

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	BI173	4
	<i>BI163</i>	4	EN100	3
	CH185/085/005	5	Additional Math	3
	MA116/137/139/140	3-5	University Studies	3
			University Studies	3
	Total	15-17	Total	16
Milestone: achieve a target cumulative GPA of 3.0				
SECOND YEAR	BI283	4	BI332	3
	University Studies	3	BO310	4
	University Studies	3	University Studies	3
	University Studies	3	University Studies	3
	University Studies	3	University Studies	3
	Total	16	Total	16
Milestone: achieve a target cumulative GPA of 3.0				
THIRD YEAR	BI389	1	BI420/430/435/440/469	3
	ZO310	4	GO110	3
	Biology Elective	3	Biology Elective	3
	Elective	3	Elective	3
	Elective	3	Elective	3
	Total	14	Total	15
Milestone: achieve a target cumulative GPA of 3.0				
FOURTH YEAR	BI420/430/435/440/469	3	Elective	3
	Experiential Learning Crs	2	Elective	3
	Elective	3	Elective	3
	Elective	3	Elective	3
	Elective	2	Elective	3
	Total	13	Total	15
Milestone: achieve a target cumulative GPA of 3.0				

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.

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