

Environmental Science: Biology Option

Bachelor of Science (BS)

Biology Option

Environmental quality is fundamental to our quality of life. Environmental science seeks to preserve and improve our environment for ourselves and future generations.

Environmental science is an inter-departmental, interdisciplinary degree program based in the College of Science, Technology, Engineering and Mathematics. It is a diverse, hybrid field of study that is based upon strong training in the natural sciences, mathematics, law, economics and health.

The curriculum for the B.S. in environmental science consists of a core of approximately 60 credit hours and 20-30 additional credit hours in one of six degree option areas. All students participate in internships and/or research. This education and training provides multiple opportunities for graduates in the growing environmental field.

Environmental Science students will...

- Complete a science-intensive interdisciplinary curriculum providing a foundation to address environmental issues of today and the future.
- Study in modern classrooms and laboratories in the remodeled Magill Hall of Science.
- Gain valuable professional and personal experiences through internships and/or research.
- Be well prepared to enter career positions in the environmental field or to pursue post-baccalaureate education programs.
- Develop competencies to become professional and community leaders in efforts to develop a sustainable society.

Becoming Career Ready...

/ Faculty-mentored research and guidance will help you develop the professional skills needed for success in a competitive job market and/or advanced study in graduate and professional programs. Students will utilize critical thinking skills derived from biological science and environmental science to enhance their employment and earning potential.

/ The Environmental Science: Biology option program prepares graduates for multiple opportunities in the growing emergency management field. Example job titles include animal biologist, plant biologist, oceanographer and environmental science research scientist.

/ 100% of Southeast programs offer real-world experience. Environmental Science: Biology option students earn this through completing a required internship and/or research participation that addresses real-world challenges.

/ The path to a successful career starts with you! You can maximize your career development by working closely with Career Services and Southeast faculty – they are here to help you connect your passions, interests and skills to jobs and opportunities in the field. Career Services provides professional career counseling and coaching, resume critiques, practice interviews, job search strategies, career events, networking opportunities and more.

Internship, Employment and Post-Baccalaureate Opportunities of Recent Graduates:

- U.S. Environmental Protection Agency
- Missouri Department of Conservation
- U.S. Green Building Council
- Centers for Disease Control and Prevention
- Illinois Natural History Survey
- A.T. Still University School of Osteopathic Medicine
- Science Applications International Corporation
- Missouri Department of Natural Resources
- Saint Louis University School of Law
- U.S. Fish and Wildlife Service
- Southern Illinois University - Edwardsville
- CH2M Hill Inc.
- KRCU National Public Radio
- Missouri Botanical Garden
- Emory University
- Burns & McDonnell Engineering Co. Inc.
- Illinois Environmental Protection Agency
- St. Louis County Department of Health
- U.S. Army Corps of Engineers
- Saint Louis Zoological Park

Special Options with Environmental Science

Southeast offers a Master of Science in Environmental Science.

Transfer and Dual Credit Students

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at semo.edu/transfercredit.

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

To explore
 the College of Science,
 Technology, Engineering and
 Mathematics online, visit
semo.edu/stem

For advising
 Center for Academic Advising
semo.edu/advising



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Degree Map 2019-2020

This is a guide based on the 2019-2020 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

Environmental Science: Biology Option – 65-69 Hours

- ___ BI163 Evolution & Ecology (4)
- ___ BI332 General Ecology (3)
- ___ BS105 Environmental Biology (3)
- ___ CH185/085/005 General Chemistry (5)
- ___ CH186 Foundations of Inorganic Chemistry (3)
- ___ EC344 Environmental Economics (3)
- ___ EN190 Writing & the Environment (3)
- ___ EV201 Environmental Science Seminar I (1)
- ___ EV400 Health Physics (3)
- ___ EV401 Environmental Science Seminar II (1)
- ___ EV454 Risk Assessment Applications (3)
- ___ EV481-483 Internship (3)
- OR
- ___ EV491-493 Research (3)
- ___ EV xxx EV Course (300-500 level) (3)
- ___ GO110 Physical Geology (3)
- ___ GO365 Environmental Soil Science (3)
- ___ GO460 Environmental Hydrology (3)
- ___ MA139 Applied Calculus (3)
- OR
- ___ MA140 Analytical Geometry & Calculus I (5)
- ___ MA223 Elementary Probability & Statistics (3)
- ___ PH106 Physical Concepts (3)
- OR
- ___ PH120 Introductory Physics I (5)
- ___ UI429 Environmental Ethics (3)

Choose 6 Hours From:

- ___ UI331 Foundations of Biochemistry (3)
- ___ UI360 Recycling & Waste Management (3)
- ___ UI370 Media Ethics (3)
- ___ UI373/073 Earth and Life Through Time (3)
- ___ UI386 Environmental Health (3)
- ___ UI387 Environmental Law & Public Policy (3)

Biology Option Courses

- ___ BI173 Cellular & Organismal Biology (4)

Choose 2 Courses From:

- ___ BI310 General Microbiology (4)
- ___ BO310 Plant Biology (4)
- ___ ZO310 Animal Biology (4)

Choose 6 Hours From:

- ___ Students may select from a list of more than 20 courses with a BI, BO, or ZO prefix at 3xx to 5xx level

Additional Required Courses: 10 Hours

- ___ CH187 Inorganic Chemistry & Qualitative Analysis Lab (2)
- ___ CH341 Foundations of Organic Chemistry (4)
- ___ CH342 Organic Chemistry Lab I (1)

General Education Requirements – some requirements may be fulfilled by coursework in major program

- Social and Behavioral Sciences – 6 hours
- Constitution 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)
- Civics examination

SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	BI163	4
	EN100	3	CH185/085/005	5
	BS105	3	GO110/010	3
	General Education	3	EN190	3
	General Education	3		
	Total	15	Total	15
Milestone: maintain 2.0 cumulative GPA				
SECOND YEAR	BI173	4	BI/BO/ZO310	4
	CH186	3	CH341	4
	CH187	2	CH342	1
	General Education	3	EV201	1
	General Education	3	PH106 or PH120	3-5
			General Education	3
Total	15	Total	16-18	
Milestone: maintain 2.0 cumulative GPA				
<i>(summer courses are encouraged to avoid semesters exceeding 15 hours)</i>				
THIRD YEAR	BI/BO/ZO310	4	BI332	3
	EC344	3	EV400	3
	EV454	3	GO460	3
	GO365	3	MA223	3
	MA139 or MA140	3-5	General Education	3
	Total	16-18	Total	15
Milestone: maintain 2.0 cumulative GPA				
FOURTH YEAR	BI or BO or ZO elective	3	BI or BO or ZO elective	3
	EV Intern/Research	3	EV401	1
	Required UI3XX	3	EV elective	3
	General Education	3	Required UI3XX	3
	General Education	3	UI429	3
			General Education	3
Total	15	Total	16	
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 the General Education program, completion of 39 senior division hours (300-599), Writing Proficiency Exam (WP003).

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 degree.

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4/29/2019

To learn more
Office of Admissions
(573) 651-2590
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To explore
the College of Science,
Technology, Engineering and
Mathematics online, visit
semo.edu/stem

For advising
Center for Academic Advising
semo.edu/advising