

Environmental Science: Geoprocessing and Soils Option

Bachelor of Science (BS)

Geoprocessing and Soils 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 a unique academic program at Southeast. It is an inter-departmental, interdisciplinary degree program based in the College of Science, Technology and Agriculture. Environmental science 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 complete internships and/or research participation. This broad-based 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 for addressing environmental issues of today and the future.
- Study in modern classrooms and laboratories in the newly remodeled Magill Hall.
- Gain valuable professional and personal experience through internships and/or research participation.
- Be well prepared to directly enter career positions in the environmental field or to successfully pursue post-baccalaureate education programs.
- Develop the competencies to become professional and community leaders in an effort to develop a sustainable society.

Career Planning

Each student works individually with a faculty advisor in the degree option area. The advisor assists students with curricular planning and in development of clear career goals.

Approximately 70% of environmental science graduates directly enter the work force. All graduates seeking employment in the environmental field have been successful in obtaining a relevant career position.

Approximately 30% of environmental science graduates continue their education in graduate programs in the sciences, law school, MBA programs, or medical school.

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.

Career Services, located in Academic Hall 057, provides professional career advising to guide students in their career development.

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

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

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

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

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This is a guide based on the 2014-2015 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

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80-84 Hours Required

- ___ AG440 Precision Agriculture (3)
- ___ BI153 Introduction to Organismal Biology (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)
- ___ EV201 Environmental Science Seminar I (1)
- ___ 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)
- ___ GO445 Geographic Information Systems (3)
- ___ GO460 Environmental Hydrology (3)
- ___ GO555 Soil Classification & Resource Management (3)jt
- ___ 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)
- ___ UI373 Earth and Life Through Time (3)
- ___ UI386 Environmental Health (3)
- ___ UI387 Environmental Law & Public Policy (3)
- Choose 3 Hours From:**
- ___ AG551 Water Management (3)
- ___ GO340 Remote Sensing (3)
- Choose 3 Hours From:**
- ___ AO427 Soil Fertility & Plant Nutrition (3)
- ___ BI440 Ecology & Management of Wetlands (3)
- Additional Required Courses: 10 Hours**
- ___ CH187 Inorganic Chemistry & Qualitative Analysis Lab (2)
- ___ CH341 Foundations of Organic Chemistry (4)
- ___ CH342 Organic Chemistry Lab I (1)
- ___ CH450 Environmental Chemistry (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, and Social Systems

SAMPLE FOUR-YEAR PLAN

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Requirements for the 2014-2015 Undergraduate Bulletin

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	BI153	4
	EN100	3	CH185/085/005	5
	BS105	3	GO110	3
	Artistic Expression	3	Written Expression	3
	Behavioral Systems	3		
Total		15	Total	15
SECOND YEAR	CH186	3	BI332	3
	CH187	2	CH341	4
	EV201	1	CH342	1
	MA139/MA140	3-5	GO340/AG551	3
	Literary Expression	3	PH106/PH120	3-5
Total		12-14	Total	14-16
<i>(Summer courses are encouraged to avoid semesters exceeding 15 hours.)</i>				
THIRD YEAR	CH450	3	EC344	3
	GO365	3	EV454	3
	Required UI3XX course	3	GO445	3
	Economic Systems	3	MA223	3
	Oral Expression	3	Develop of a Major Civ	3
Total		15	Total	15
FOURTH YEAR	EV401	1	AG440	3
	GO460	3	BI440/AO427	3
	EV Internship/Research	3	GO555	3
	Required UI3XX course	3	UI429	3
	Political Systems	3	EV elective	3
Elective	3	Social Systems	3	
Total		16	Total	18

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 freshman and senior levels

A minimum 2.0 GPA in the major and overall are required to graduate with a B.S. in Environmental Science.

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

Revised
02/18/2014