

# ENVIRONMENTAL SUSTAINABILITY, BSLAS

for the degree of Bachelor Science in Liberal Arts and Sciences in Environmental Sustainability

The Environmental Sustainability major combines earth system science and the social sciences to equip students to address complex environmental challenges. All students receive a broad education in human–environment interactions and a deep understanding of their chosen focus area, which encompasses the sciences, social sciences, and humanities. The major emphasizes systems thinking, quantitative reasoning and clear communication. Graduates of the program are prepared for professional roles or graduate study in a wide variety of environmental and sustainability fields.

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## Graduation Requirements

Minimum hours required for graduation: 120 hours.

Minimum required major and supporting course work: Normally equates to 46-56 hours. Twelve hours of 300- and 400-level courses in the major must be taken from this campus. Substitutions may be made with advisor approval.

## University Requirements

The university and residency requirements can be found in the Student Code (<https://studentcode.illinois.edu/article3/part8/3-801/>) (§ 3-801) and in the Academic Catalog (<http://catalog.illinois.edu/general-information/degree-general-education-requirements/>).

## General Education Requirements

Follows the campus General Education (Gen Ed) requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT/>). Some Gen Ed requirements may be met by courses required and/or electives in the program.

Code	Title	Hours
	Composition I	4-6
	Advanced Composition	3
	Humanities & the Arts (6 hours)	6
	Natural Sciences & Technology (6 hours)	6
	Social & Behavioral Sciences (6 hours)	6
	Cultural Studies: Non-Western Cultures (1 course)	3
	Cultural Studies: US Minority Cultures (1 course)	3
	Cultural Studies: Western/Comparative Cultures (1 course)	3
	Quantitative Reasoning (2 courses, at least one course must be Quantitative Reasoning I)	6-10
	Language Requirement (Completion of the fourth semester or equivalent of a language other than English is required)	0-20

## Orientation and Professional Development

Code	Title	Hours
LAS 101	Design Your First Year Experience	1
OR		
LAS 100 & LAS 101	Success in LAS for International Students and Design Your First Year Experience	3
OR		
LAS 102	Transfer Advantage	1

## Major Requirements

Code	Title	Hours
<b>ESE Coursework</b>		<b>10</b>
ESE 200	Earth Systems	3
ENSU 300	Environmental Sustainability	3
ESE 379	Introduction to Geographic Information Systems	4

### Advanced Courses 18-24

A minimum of six 300- and 400-level courses (from the lists below), totaling at least 18 credit hours, and in an academically coherent program approved by the advisor, are required. At least three of these six advanced courses must be listed or cross-listed as an ESE or ENSU course.

#### Capstone and Experiential

ESE 389	Environment and Sustainability Field Expedition	3
ESE 401	ESE Capstone	3
ESE 497	Special Topics in ESE	1 to 4

#### Earth's Biosphere & Ecology

ESE 439	Biogeography	3
HORT 430	Children and Nature	2
IB 362	Marine Biology	3
IB 411	Bioinspiration	3
IB 440	Plants and Global Change	3
IB 444	Insect Ecology	3
IB 451	Conservation Biology	4
IB 452	Ecosystem Ecology	3
IB 453	Community Ecology	3
IB 461	Ornithology	4
NRES 348	Fish and Wildlife Ecology	3
NRES 419	Env and Plant Ecosystems	3
NRES 420	Restoration Ecology	4

#### Earth's Physical Systems, Resources, & Hazards

ABE 436	Renewable Energy Systems	3
ATMS 420	Atmospheric Chemistry	4
CEE 330	Environmental Engineering	3
CHEM 360	Chemistry of the Environment	3
ENSU 302	Air Pollution to Global Change	3
ESE 320	Water Planet, Water Crisis	3
ESE 333	Earth Materials and the Env	4
ESE 411	Geomorphology	4
ESE 445	Earth Resources Sustainability	3
ESE 470	Introduction to Hydrogeology	4
ESE 486	Environmental Consulting	3

GEOL 380	Environmental Geology	4	UP 480	Sustainable Design Principles	2
GEOL 450	Investigating the Earth's Interior	3	<b>Visualizing the Earth System</b>		
GEOL 451	Environmental Geophysics	4	ATMS 305	Computing and Data Analysis	3
GEOL 460	Geochemistry	3	ESE 380	Geographic Information Systems II	4
GGIS 401	Watershed Hydrology	3	ESE 421	Earth Systems Modeling	4
GGIS 406	Fluvial Geomorphology	4	GGIS 371	Spatial Analysis	4
GGIS 408	Humans and River Systems	4	GGIS 407	CyberGIS & Geospatial Data Science	4
MSE 489	Matl Select for Sustainability	3	GGIS 412	Geospatial Technologies & Society	3
NRES 351	Introduction to Environmental Chemistry	3	GGIS 460	Aerial Photo Analysis	3
<b>Environment &amp; the Human Response</b>			GGIS 476	Environmental Remote Sensing	3
AGCM 330	Environmental Communications	3	GGIS 477	Introduction to Remote Sensing	3
HK 408	Environmental Health	3	GGIS 479	Advanced Topics in GIS	4
ENGL 476	Topics in Literature and the Environment	3	NRES 427	Modeling Natural Resources	4
ENSU 301	Soc Impacts Weather & Climate	3	NRES 454	GIS in Natural Resource Mgmt	4
ESE 311	Environmental Issues Today	3	<b>Required Concentration. Choose one below:</b>		
ESE 360	Environmental Writing	3	Science of the Earth System ( <a href="http://catalog.illinois.edu/undergraduate/las/environmental-sustainability-bslas/science-of-the-earth-system/">http://catalog.illinois.edu/undergraduate/las/environmental-sustainability-bslas/science-of-the-earth-system/</a> )		
ESE 467	Multimedia Environmental Communications	3	Society and the Environment ( <a href="http://catalog.illinois.edu/undergraduate/las/environmental-sustainability-bslas/society-and-the-environment/">http://catalog.illinois.edu/undergraduate/las/environmental-sustainability-bslas/society-and-the-environment/</a> )		
ESE 477	Advanced Environmental Writing	3	<i>for the degree of Bachelor Science in Liberal Arts and Sciences in Environmental Sustainability</i>		
ESE 498	Environmental Writing for Publication	3	<hr/>		
GGIS 350	Sustainability and the City	3	<b>Sample Sequence</b>		
GGIS 384	Population Geography	3	<i>This sample sequence is intended to be used only as a guide for degree completion. All students should work individually with their academic advisors to decide the actual course selection and sequence that works best for them based on their academic preparation and goals. Enrichment programming such as study abroad, minors, internships, and so on may impact the structure of this four-year plan. Course availability is not guaranteed during the semester indicated in the sample sequence.</i>		
GGIS 495	Advanced Topics in Geography	3 or 4	<i>Students must fulfill their Language Other Than English requirement by successfully completing a fourth level of a language other than English. See the corresponding section on the Degree and General Education Requirements page (<a href="http://catalog.illinois.edu/general-information/degree-general-education-requirements/">http://catalog.illinois.edu/general-information/degree-general-education-requirements/</a>).</i>		
GGIS 496	Climate & Social Vulnerability	3	<b>First Year</b>		
LA 430	Children and Nature	2	<b>First Semester</b>		
LA 450	Ecology for Land Restoration	4	LAS 101		Hours
NRES 340	Environ Social Sci Res Meth	3	General Education course		3
NRES 472	Environmental Psychology	4	ESE 200		3
SOC 447	Environmental Sociology	3	Language Other Than English (3rd level)		4
<b>Sustainability, Policy, and Global Change</b>			Composition I or General Education course		4
ACE 310	Natural Resource Economics	3	<hr/>		
ACE 406	Environmental Law	3	<b>Total Hours 15</b>		
ACE 411	Environment and Development	3	<hr/>		
ATMS 307	Climate Processes	3	<b>Total Hours 15</b>		
ATMS 447	Climate Change Assessment	3	<hr/>		
ATMS 449	Biogeochemical Cycles	4	<hr/>		
CPSC 336	Tomorrow's Environment	3	<hr/>		
CPSC 415	Bioenergy Crops	3	<hr/>		
CPSC 431	Plants and Global Change	3	<hr/>		
ENSU 303	Sustainable Business I	4	<hr/>		
ENSU 310	Renewable & Alternative Energy	4	<hr/>		
ENSU 410	Sustainable Organizations	4	<hr/>		
ESE 410	Green Development	4	<hr/>		
ESE 465	Transportation & Sustainability	3	<hr/>		
ESE 466	Environmental Policy	3	<hr/>		
ESE 482	Challenges of Sustainability	3	<hr/>		
ETMA 311	Humanity in the Food Web	3	<hr/>		
NPRES 480	Energy and Security	3	<hr/>		
NRES 325	Natural Resource Policy Mgmt	3	<hr/>		
NRES 439	Env and Sustainable Dev	3	<hr/>		
UP 446	Sustainable Planning Seminar	4	<hr/>		
UP 456	Sustainable Planning Workshop	4	<hr/>		

<b>First Year</b>	
<b>Second Semester</b>	
	<b>Hours</b>
General Education course	3
General Education course or Composition I	3
General Education course	3
Language Other Than English (4th level)	4
General Education course	3
<b>16</b>	

**Total Hours 16**

<b>Second Year</b>	
<b>First Semester</b>	
	<b>Hours</b>
Concentration Coursework	3
Free Elective course	3
Concentration Coursework	3
Concentration Coursework	3
General Education course	3
<b>15</b>	

**Total Hours 15**

<b>Second Year</b>	
<b>Second Semester</b>	
	<b>Hours</b>
Concentration Coursework	3
ENSU 300	3
General Education course	3
General Education course	3
Free Elective course	3
<b>15</b>	

**Total Hours 15**

<b>Third Year</b>	
<b>First Semester</b>	
	<b>Hours</b>
ESE 379	4
Concentration Coursework	3
Advanced ESE or ENSU course	4
General Education course	3
<b>14</b>	

**Total Hours 14**

<b>Third Year</b>	
<b>Second Semester</b>	
	<b>Hours</b>
Advanced ESE or ENSU course	3
Concentration Coursework	3
General Education course	3
General Education course	3
Free Elective course	3
<b>15</b>	

**Total Hours 15**

<b>Fourth Year</b>	
<b>First Semester</b>	
	<b>Hours</b>
Advanced ESE or ENSU course	3
Advanced course from list	3
General Education course	3
Free Elective course	3
Free Elective course	3
<b>15</b>	

**Total Hours 15**

<b>Fourth Year</b>	
<b>Second Semester</b>	
	<b>Hours</b>
Advanced course from list	3
Advanced course from list	3
Concentration Coursework	3
Free Elective course	3
Free Elective course	3
<b>15</b>	

**Total Hours 15**

**Total Hours: 120**

*for the degree of Bachelor Science in Liberal Arts and Sciences in Environmental Sustainability*

1. Be able to recognize, critique and implement commonly accepted Sustainability models and ideas in a wide variety of settings, using systems thinking to link social and natural science concepts.
2. Have a fundamental understanding of the underlying natural science (SES concentration) or social science (SAE concentration) concepts; being able to recognize and apply appropriate scientific methods (SES concentration) and social science methods (SAE concentration).
3. Use quantitative methods to describe, understand and evaluate theoretical and applied issues in environmental and sustainability study; this includes direct calculation, working with data, and using quantitative models.
4. Be able to critically evaluate and then communicate environmental and sustainability concepts to both specialized and wide audiences.
5. Students will demonstrate professional competence in environmental and sustainability practice by executing appropriate laboratory and field techniques, applying Geographic Information Science tools and software, and selecting and employing suitable quantitative and qualitative analytical methods.

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