

Environmental Science and Society

Environmental Atmosphere and Climate Concentration

The Environmental Science and Society program is designed for those students interested in pursuing a career as an environmental technician, environmental health and safety officer, hydrologist, resource manager, and environmental lobbyist. Although, as with many science baccalaureate degrees, many of the jobs available to students who complete the environmental science concentration are entry-level, experience and graduate work can allow students to advance to environmental management positions. The environmental science degree, in consultation with an advisor, prepares students to enter a graduate degree or graduate certificate program in a specific environmental science such as atmospheric scientist, ecologist, or hydrogeologist. Students in the Environmental Science concentration can choose emphases in **Atmosphere and Climate**, Environmental Biology, Environmental Chemistry, Environmental Geoscience, or Environmental Hydrology. No other minor is needed to complete graduation requirements.

General Education Requirements40 hours

Area I Effective Communication (two courses, 6 credit hours)

- 1 ENGL 121 Composition II: Research and Writing the Public Experience.
- 2 CTAC 124 Fundamentals of Speech.
- 3 **A writing intensive course within the major.** (*ENVI 305 satisfies this requirement*)

Area II Quantitative Reasoning (one course, 3-4 credit hours)

- 1 **One General Education Quantitative Reasoning course based upon placement** (*STAT 170 satisfies this requirement*)

Area III Perspective on a Diverse World (two courses, 6 credit hours)

- 1 **One course focused on Global Awareness.** (*BIO/ESSC 107 satisfies this requirement*)
- 2 One course focused on U. S. Diversity.

Area IV Knowledge of the Disciplines (eight courses, 24-32 credit hours)

- 1 Two courses in the Arts with different prefixes.
- 2 **Two courses in the Humanities with different prefixes.** (*PHIL 229 satisfies one course of this requirement*)
- 3 **Two courses in the Natural Sciences with different prefixes.** (*ESSC 110, CHEM 121 & 122, and BIO 110 satisfy this requirement*)
- 4 Two courses in the Social Sciences with different prefixes.

Area V Learning Beyond the Classroom (Satisfy two groups in LBC through experiences and/or courses, 0-9 credit hours)

- 1 **Two, both in different LBC groups** (*ENVI 488 Internship satisfies group 4, Research satisfies group 6*)

Major Requirements79-81 hours

Core Courses34 hours

BIO/ESSC 107 Introduction to Environmental Science (3 hrs) *Offered Fall, Winter, Summer*
 BIO 110 Introductory Biology (3 hrs) and BIO 111 Introductory Biology Lab (2 hrs) *Offered Fall, Winter, Summer*
 CHEM 121 and 122 General Chemistry I with lab (4 hrs) *Offered Fall, Winter, Summer*
 ENVI 105 Introduction to Environment and Society (3 hrs) *Offered Fall, Winter*
 ENVI 305 Topics in Environmental Science and Society (3 hrs) *Offered Fall, Winter*
 ENVI 405 Capstone Seminar (1 hr)- *Offered Fall, Winter, Summer*
 ENVI 488 Internship or BIO 498, Math 498, PHY 498, CHEM 498, ENVI 498, ESSC 498- *Approval required*
 ESSC110 The Dynamic Earth System (4 hrs) *Offered Fall, Winter, Summer**
 GEOG 276 Principles of GIS (3 hrs) *Offered Fall, Winter*
 STAT 170 Elementary Statistics (3 hrs) *Offered Fall, Winter, Summer*
 PHIL 229 Environmental Ethics (3 hrs) *Offered Fall, Winter*

Atmosphere and Climate Required Courses35-37 hours

CHEM 123 and 124 General Chemistry II and Lab (4 hrs) *Offered Fall, Winter, Summer*
 CHEM 283 Introduction to Analytical Chemistry (4 hrs) *Offered Fall, Winter, Summer*
 ESSC 212 Weather, Climate, and the Earth System (3 hrs) *Offered Fall and Winter*
 ESSC 300 Introduction to Hydrology (3 hrs) *Offered Fall and Winter*
 ESSC 324 Weather (3 hrs) *Offered Fall Even Years*
 ESSC 424 Climatology (3 hrs) *Offered Irregularly*
 ESSC 485 Remote Sensing (3 hrs) *Offered Winter*
 MATH 120 Calculus I (4 hrs) *Offered Fall, Winter, Summer*
 PHY 221 (or 223) Mechanics, Sound, and Heat (4-5 hrs) *Offered Fall, Winter, Summer*
 PHY 222 (or 224) Electricity and Light (4-5 hrs) *Offered Fall, Winter, Summer*

***The stated course offerings are only a guideline and are subject to change so check with your advisor every semester for updates.**

BIO 120 Introductory Biology II (3 hrs) and BIO 121
Introductory Biology II Lab (2 hrs)
BIO 310 Ecology (3 hrs)
CHEM 270 Survey of Organic Chemistry (4 hrs)
Or CHEM 371 Organic Chemistry I (3 hrs)
CHEM 415 Environmental Chemistry (3 hrs)
Or ESSC 422 Environmental Geochemistry (3 hrs)
COSC 120 Computational Principles for Math and Science (3 hrs)
Or COSC 145 Introduction to FORTRAN Programming (3 hrs)
ESSC 111 Earth System Through Time (4 hrs)
ESSC 320 Oceanography (3 hrs)
ESSC 325 Geomorphology (4 hrs)

ESSC 327 Soil Science (3 hrs)
 ESSC 370 Glacial Geology (4 hrs)
 ESSC 422 Environmental Geochemistry (3hrs)
 ESSC 425W Severe and Unusual Weather (3 hrs)
 ESSC 448 Hydrogeology (3 hrs)
 ESSC 497/498/499 Independent Study (1/2/3 hrs)
 GEOG 376 Spatial Analysis (3 hrs)
 GEOG 476 GIS Projects (3 hrs)
 MATH 121 Calculus II (4 hrs)
 MATH 122 Elementary Linear Algebra (3 hrs)
 MATH 223 Multivariate Calculus (4 hrs)
 MATH 325 Differential Equations (3 hrs)

University Elective Courses	3-5 hours
PROGRAM TOTAL	124 hours

Take this sheet to an Environmental Science advisor to set up a program of study.
Environmental Science advisors: Dr. Kovacs (Science Complex MJ 303D)

ENVIRONMENTAL SCIENCE ADVISING

Student's Name: _____ Student's Signature: _____

Faculty Advisor's Signature: _____ Date: _____

FALL 20 _____	WINTER 20 _____	SUMMER 20 _____
FALL 20 _____	WINTER 20 _____	SUMMER 20 _____
FALL 20 _____	WINTER 20 _____	SUMMER 20 _____
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