Environmental Science

Environmental Science Degrees and Certificates

Environmental Science, Associate in Science

This degree can lead to a baccalaureate degree in environmental science or environmental studies at accredited colleges or universities. In consultation with an academic advisor; electives should be selected based on the student's interest, the requirements of the transfer institution or technician-level vocation opportunities. Some courses require pre-requisites, check course descriptions.

For information, contact faculty advisor, James Sacchinelli, at (609)343-4943 or jsacchin@atlanticcape.edu, or Richard Perello at (609)343-4969 or rperello@atlanticcape.edu, or contact department chair, Ken Cabarle, at (609)343-5128 or kcabarle@atlanticcape.edu.

Upon completion of this program students will be able to:

- Develop work ethics that are effective and safe in a laboratory environment;
- Apply the scientific method to collect and interpret information;
- Experiment with laboratory and field equipment to obtain data;
- Analyze records of results and procedures;
- Discuss effectively, both orally and in writing;
- Analyze and evaluate problems critically.

(*ENVL-Fall 2022*)

General Education Courses

When a course is not specified, refer to the list of approved General Education courses.

Communication

Course #	Title	Credits
ENGL101	Composition I	3
ENGL102	Composition II	3

Mathematics-Science-Technology

Course #	Title	Credits
BIOL109	General Biology I	4
CHEM110	General Chemistry I	4
	Choose: MATH150-Precalculus, MATH155-Calculus or MATH220-Statistical Methods (4 credits)	4

Social Science

Course #	Title	Credits
	General Education Social Science Course (3 credits)	3

Humanities

Course #	Title	Credits
	General Education Humanities Course (3 credits)	3
	Choose: ARTS103, ARTS108, ARTS109, ARTS115, DANC170, MUSC100 or THEA110 (3 credits)	3

General Education Elective

Course #	Title	Credits
	General Education Course (3 credits)	3

Program Requirements

Course #	Title	Credits
ENVL200	Environmental Science	4
ENVL205	Ecology	4
ENVL221	Physical Geography	4

Program Electives

Choose 18 credits from the following:

Note: If selecting a PHYS course from the list below, option should be chosen by referring to the transfer institution's program/degree requirements and consulting with an academic advisor.

Course #	Title	Credits
AVIT185	Remote Sensing Using Unmanned Aircraft Systems	4
BIOL205	Genetics	4
BIOL110	General Biology II	4
BIOL250	Microbiology	4
CHEM111	General Chemistry II	4
CHEM210	Organic Chemistry I	4
CHEM211	Organic Chemistry II	4
ENGL224	Environmental Literature	3
GIST101	Introduction to Geographic Information Systems	4
GIST150	Geospatial Data Collection	4
MATH156	Calculus II	4
	PHYS125 or PHYS225 (See advisor for best option. PHYS125 offered in fall only)	4
	PHYS126 or PHYS226 (See advisor for best option. Offered in spring only)	4
TCOM125	Technical Communication	3

Technological Competency: 0-4 Credits

(Is fulfilled with CISM125 or CISM132, which may be taken as a General Education Elective, testing or reviewed departmental portfolio.

	Total Credits	60

Recommended Sequence of Courses

First Semester

Course #	Title	Credits
ENGL101	Composition I	3
BIOL109	General Biology I	4
CHEM110	General Chemistry I	4
	Choose: MATH150-Precalculus, MATH155-Calculus or MATH220-Statistical Methods (4 credits)	4
	General Education Social Science Course (3 credits)	3

Second Semester

Course #	Title	Credits
ENGL102	Composition II	3
	Choose: ARTS103, ARTS108, ARTS109, ARTS115, DANC170, MUSC100 or THEA110 (3 credits)	3
	General Education Humanities Course (3 credits)	3
	Program Elective Course (4 credits)	4
	Program Elective Course (4 credits)	4

Third Semester

Course #	Title	Credits
ENVL200	Environmental Science	4
ENVL205	Ecology	4
	Program Elective Course (4 credits)	4

Fourth Semester

Course #	Title	Credits
ENVL221	Physical Geography	4
	General Education Course (3 credits)	3
	Program Elective Course (3 credits)	3
	Program Elective Course (3 credits)	3

Environmental Science Courses

ENVL/CISM122 : Agricultural Technology

This course covers topics related to the use of technology in modern agriculture. Students will learn to make informed agricultural observations and decisions related to raising crops and the basics of scouting for problems and helping to solve problems in commercial farms. Students are required to attend at least three field-trips to local farms.
Credits 3
Lecture Hours 3
Lab/Clinical/Field Study Hours 0

ENVL200 : Environmental Science

Introduces students to current environmental problems and discusses the methods by which we analyze, monitor and solve them. Topics include natural cycles and ecosystems, environmental policy and decision-making, energy use, alternative energy, resource extraction and use, food and agriculture, conservation, waste management, pollution, global warming and sustainability.
Credits 4
Lecture Hours 3
Lab/Clinical/Field Study Hours 3
Prerequisites
BIOL109 and CHEM110

ENVL205 : Ecology

Designed to give the student an overview of the discipline of ecology. Ecology is the study of the abundance and distribution of organisms, and how they interact with their surroundings. This course examines individual, community and ecosystem dynamics using a systems-based approach. Lab methods, data analysis skills and scientific observation are emphasized as tools to help in ecological studies. Topics include: systems, introduction to ecology and the individual (species), population ecology, community ecology, ecosystem structure and dynamics.
Credits 4
Lecture Hours 3
Lab/Clinical/Field Study Hours 3
Prerequisites
BIOL109. Prior completion of a college-level course in Statistics is highly recommended

ENVL221 : Physical Geography

Introduces the fundamental principles of physical geography, including the Earth-Sun relations and associated phenomena-latitude, longitude and time; weather elements and climate types, natural vegetation, soil types and regions; maps and map projections. Interrelationship between animals and nature will be discussed. Lab sessions include fieldwork, data acquisition and processing.
Credits 4
Lecture Hours 3
Lab/Clinical/Field Study Hours 3
Prerequisites
ENVL200 and MATH122 or MATH150.