

ENVIRONMENTAL SCIENCE, AREA OF CONCENTRATION IN ARTS & SCIENCES (AS)

Award: Associate of Science Degree

No. of credits required: 60

For more information: Contact Professor Tami Imbierowicz, 443-412-2122, timbierowicz@harford.edu or Associate Professor Andy Adams, 443-412-2283, anadams@harford.edu (August 15 – June 15); and stem@harford.edu or Admissions, 443-412-2019, admissions@harford.edu (year-round).

Program Description

The Environmental Science program prepares students to pursue a bachelor's degree in environmental science or a related field. The program provides students with foundational scientific knowledge, problem solving skills, and field and laboratory experiences. Students conduct field work to gain knowledge and solve problems in living and non-living aspects of ecosystems, including populations and communities of organisms; water, soil, and air quality; and weather and climate. Environmental Science is a diverse and interdisciplinary field of study. The program prepares students to pursue careers in wildlife, plant, or soil biology; law and policy; mapping and land planning; development of technology; sustainability; or environmental education.

Program Goals

At the successful completion of the AS Environmental Science degree program, the student will be able to:

1. Apply the interdisciplinary principles of environmental science.
2. Complete experiments and/or projects using scientific processes.
3. Demonstrate safe laboratory and field techniques.
4. Evaluate ethical issues in the discipline.
5. Evaluate scientific information effectively.
6. Apply quantitative skills to make informed decisions about environmental issues.
7. Communicate scientific ideas and arguments effectively.

Transfer Information

Students planning to transfer to a four-year college or university should check the degree requirements of that institution. If they differ significantly from those listed, students should consult with an advisor for academic guidance.

Employment Information

Federal, State, and local governments employ over half of all environmental scientists and specialists. The strongest job growth is expected to be in private-sector consulting firms. According to the Bureau of Labor Statistics, the average growth rate for occupations in this field is 11% from 2014-2024.

Degree Requirements

Recommended Course Sequence

First Semester		Credits
ENV 111	Introduction to Environmental Science (GS)	3
ENV 112	Environmental Science Laboratory (GL)	1
CHEM 111	General Chemistry I (GL)	4
ENG 101	English Composition (GE)	3
Select from:		4
MATH 216	Introduction to Statistics (GM)	
Core Elective (p. 2)		
Credits		15
Second Semester		Credits
BIO 120	General Biology I (GL)	4
CHEM 112	General Chemistry II A (GL)	4
MATH 109 or MATH 203	Precalculus Mathematics (GM) ¹ or Calculus I (GM)	4
GEOG 101	Physical Geography (GB)	3
Credits		15
Third Semester		Credits
BIO 121	General Biology II (GL)	4
Select from the following		3
GEOG 203	Fundamentals of Geospatial Technology	
Core Elective (p. 2)		
Select from the following:		3
ECON 102	Microeconomics (GB)	
Behavioral/Social Science Elective (GB) (https://catalog.harford.edu/general-education/#behavioral-social-science)		
Core Elective (p. 2) ^{1,2}		5
Credits		15
Fourth Semester		Credits
Select from the following:		4
ENV 220	Principles of Environmental Analysis I	
Core Elective (p. 2)		
Select from the following:		3
PHIL 222	Environmental Ethics (GAH)	
Arts/Humanities Elective (GAH)		
PHYS 101	Introductory Physics I (GL)	4
Physical Education Elective		1
Arts/Humanities Elective (GAH)		3
Credits		15
Total Credits		60

¹ Consult Program Director to ascertain which course(s) best suit individual needs.

² Core electives are chosen based on the transfer institution degree program. The student is encouraged to consult the transfer institution and HCC advisors to select core electives.

Core Electives

Code	Title	Credits
BIO 110	Introduction to Plant Sciences (GL)	4
BIO 107	General Zoology	4
BIO 205	Microbiology (GL)	4
BIO 208	Genetics	4
CHEM 112	General Chemistry II A (GL)	4
CHEM 207	Organic Chemistry I	4
CHEM 208	Organic Chemistry II	4
DSCI 102	Introductory Statistics with Programming Applications (GM)	4
ECON 102	Microeconomics (GB)	3
ENV 122	Introduction to Soil Sciences	3
ENV 191	Indep Study: Environ Science	1
ENV 193	Independent Study: Environmental Sciences	3
ENV 220	Principles of Environmental Analysis I	4
ES 105	Earth Science (GS)	3
ES 106	Earth Science Laboratory (GL)	1
GEOG 203	Fundamentals of Geospatial Technology	3
GEOG 204	Introduction to Geographic Information Systems	4
GEOG 210	Remote Sensing and Global Positioning Systems	3
GS 182	Introduction to Research Methods	2
HLTH 104	Environmental Health (GI)	3
MATH 204	Calculus II (GM)	4
MATH 216	Introduction to Statistics (GM)	4
PHIL 222	Environmental Ethics (GAH)	3
PHYS 102	Introductory Physics II (GL)	4

General Education Degree Requirements

Note: The following codes identify courses which satisfy the General Education Degree Requirements:

- Behavioral/Social Science (GB)
- English Composition (GE)
- Arts/Humanities (GAH)
- Interdisciplinary and Emerging Issues (GI)
- Biological/Physical Laboratory Science (GL)
- Mathematics (GM)
- Biological/Physical Science (GS)