

NATURAL RESOURCES, AS

Program code: NATR-AS

Location: Northwestern

Program Description

The Natural Resources AS program is designed for students with an interest in environmental science, forestry, fisheries, conservation ecology, environmental biology, sustainability, wildlife management, soil science, environmental health and monitoring, sustainable agriculture/horticulture, and resource economics. This degree in natural resources provides students with a strong background in basic sciences, including life and the physical sciences, in addition to introducing them to concepts in nature conservancy, resource management, and environmental risk and assessment.

Students may choose to transfer into programs such as those offered through the College of Agricultural and Natural Resources at UConn, the School of Arts and Sciences at Central Connecticut State University, the Environmental Studies program at Southern Connecticut State University and many other college and university programs across the state, region, and country. Graduates of the program have successfully transferred to many bachelor-degree institutions. Some alumni are also now pursuing Masters degrees and PhDs in related fields of study. The Natural Resources Certificate is embedded in this program.

Learning Outcomes

1. Demonstrate basic, safe laboratory skills.
2. Demonstrate a variety of safe field sampling techniques.
3. Apply the scientific process, experimental design, and statistical analysis of real-world data.
4. Describe cellular, organismal, microbiological, and ecological principles of biology.
5. Explain energy and nutrient transfer relationships through ecosystems.
6. Compare and contrast the characteristics of the kingdoms of life and discuss various mechanisms to identify species.
7. Utilize dichotomous keys, biomolecular analysis, and other methods to identify organisms.
8. Describe population and community dynamics, ecosystem function, and systems thinking.
9. Explain abiotic processes shaping terrestrial and aquatic communities from direct sampling and analysis.
10. Discuss deep time, genetics, evolution, and mechanisms of evolution including natural selection.
11. Explain chemical and biomolecular concepts as they relate to life and environmental topics.
12. Evaluate important natural resources to humans as well as regional and global environmental concerns.
13. Describe how science and risk assessment inform decision-making.
14. Identify the importance of wicked problems, resilience, and adaptive management in natural resource planning.
15. Transfer to a 4-year program and prepare for a career in Natural Resources, Environmental Science, or a related field.

Degree Requirements

Code	Title	Credits
General Education Courses		
ENG 1010	Composition	3
MATH 1610	Precalculus	4
Elective ARHX - Arts & Humanities Course ¹		3-4
ENV 1010	Introduction to Environmental Science	3
ANTH 1001	Introduction to Anthropology	3
Elective ORAX - Oral Communication Course		3
CCS 1001	College and Career Success	3
Program Courses		
ENV 1000	Exploring Environmental Careers	1
BIO 1720 or BIO 2700	General Ecology Ecology	4
BIO 1210	General Biology I	4
BIO 1220	General Biology II	4
BIO 2350	Microbiology	4
CSA 1111	Spreadsheet Applications	3
CHEM 1210	General Chemistry I	4
MATH 1200	Statistics I	3
Choose one of the following Directed Electives:		3-6
BIO 1550	Botany	
BIO 1098	Topics of Interest in Biology	
BIO 2098	Special Topics in Biology	
ENV 2995	Environmental Science Internship	
Choose three of the following Restricted Electives:		9-12
BIO 2600	Principles of Genetics	
BIO 2630	Molecular Genetics	
CHEM 1220	General Chemistry II	
DTS 2201	Programming in Data Science	
ERTH 1010	Earth Science	
ENV 2998	Special Topics in Environmental Science	
GEOG 1010	World Regional Geography	
GEOG 1300	Introduction to Geographic Information Systems	
MATH 2200	Statistics II	
MATH 2600 or PHYS 1201	Calculus I General Physics I	
Total Credits		61-68

¹ ARTH 1001 Global Art History Prehistory to 1500 CE or ARTH 1002 Global Art History 1500 CE to present or PHIL 1101 Ethics recommended

- Natural Resources Certificate