ENVIRONMENTAL SCIENCE: SUSTAINABILITY, AS

Program code: SUST-AS

Location: Manchester

Program Description

The Environmental Science: Sustainability program is intended for students looking to acquire jobs or transfer to continue their studies in a variety of fields including geosciences (including hydrology, soil, and agricultural resources), energy resources, and sustainability, among others. The environmental science field has enjoyed rapid growth. Occupational employment projections indicate that job opportunities are increasing for environmental scientists. An increase in local, state and federal laws concerning environmental issues has provided increased opportunity for professionals in this field.

The emerging field of sustainable energy and sustainable resource management is spurring the growth of job opportunities as a result of the ever-increasing awareness to monitor and improve the quality of the environment, to study the effect that human activity has on terrestrial and aquatic systems, and to find ways to restore them.

Growth is also expected to be fueled by demands for waste regulation and for compliance monitoring. As the demand for oil and other fuels continues to change, recognizing the threat of increased pollution, an increasing amount of research is focusing on the development of alternate renewable and non-polluting energy sources.

Learning Outcomes

Upon successful completion of all Program requirements, graduates will:

1. Develop knowledge of the scientific basis for issues affecting the environment and their impact on society as well as the role of sustainable technologies in addressing these issues.
2. Understand and be skilled at collecting, analyzing and presenting scientific data by various means including up- to-date computer technologies.
3. Be able to use the scientific method for problem solving in biology, chemistry, geology, physics and environmental sciences, and be able to use this skill to address issues related to the environment.
4. Research and assess the accuracy of appropriate information sources involving both print literature and electronic sources, including online databases and publications.
5. Communicate knowledge and understanding of environmental sciences and related societal issues in appropriate written, oral and mathematical means.
6. Demonstrate interrelationships and connections with other subject areas associated with a college-level education.
7. Use a wide array of knowledge, principles and skills acquired in laboratory, field and lecture settings for use in transferring to baccalaureate degree program or for use in seeking further training toward a technical degree.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Component.

Degree Requirements

Code	Title	Credits
General Education Courses		
ENG 1010	Composition	3
MATH 1610	Precalculus	4
Elective ARHX - Arts & Humanities Course		3-4
ENV 1010	Introduction to Environmental Science	3
ECON 1002	Principles of Microeconomics	3
COMM 1301	Public Speaking	3
CCS 1001	College and Career Success	3
Program Courses		
GEOL 1200	Introduction to Physical Geology	4
CHEM 1210	General Chemistry I	4
CHEM 1220	General Chemistry II	4
BIO 1720	General Ecology	4
BIO 1210	General Biology I	4
MATH 1201	Statistics I with Computer Applications	4
ENV 1800	Sustainable Energy and the Environment	3
PHYS 1201	General Physics I	4
BIO 1220	General Biology II	4
or PHYS 1202	General Physics II	
Choose one of the following Restricted Electives:		3-4
BIO 1220	General Biology II	
CHEM 2310	Organic Chemistry I	
EGR 1110	Introduction to Engineering	
ENG 1020	Composition II and Literature	
ENG 1080	Composition II: Technical Writing	
MATH 2600	Calculus I	
MATH 2610	Calculus II	
OCEN 1010	Introduction to Oceanography	
PHYS 1202	General Physics II	
Total Credits		**60-62**

Students may earn only one Associate degree in this parent discipline.

- Environmental Science: Environmental Biology, AS
- Environmental Science: Environmental Science & Toxicology Certificate
- Environmental Science: Environmental Science and Toxicology, AS