The Environmental Technology Geoscience program helps students develop a conceptual knowledge base in environmental geoscience and provides them with the basic knowledge and technical skills necessary to seek a career in the environmental sciences or pursue a baccalaureate degree.

ENVIRONMENTAL TECHNOLOGY GEOSCIENCE

Program Description

The Environmental Technology Geoscience Associate in Applied Science (A.A.S.) degree program at Erie Community College's North Campus is an academic program consisting of lecture and laboratory courses which form the basis for students to learn about energy systems and environmental conservation.

The primary focus of the A.A.S. degree is employment upon graduation. Students will be prepared for a career in environmental testing, geological waste testing, forestry services, land conservation and ecosystems. The goals of the program include the following: (1) to develop a conceptual knowledge base in environmental geoscience and (2) to provide students with the basic knowledge and technical skills necessary to seek a career in the environmental sciences, the traditional sciences or pursue a baccalaureate degree.

Transferability

The mission of Erie Community College is to provide university parallel degree programs for students aspiring to baccalaureate degrees and related professions. Graduates of Environmental Science will be well-positioned to transfer to other educational institutions offering degrees in Environmental Science, Environmental Studies, Environmental Biology and the Natural Sciences.

Transfer to SUNY at Buffalo

The Environmental Technology Geoscience program has identified the ECC coursework necessary to articulate directly with SUNY at Buffalo. Students will be able to complete a B.A. or B.S. degree in Environmental Studies in two years following graduation from ECC.

SUNY College of Environmental Science and Forestry at Syracuse

The Environmental Technology Geoscience program has identified the ECC coursework necessary to articulate directly with SUNY College of Environmental Science and Forestry at Syracuse. Students will be able to complete a B.S. degree in Environmental Science or a B.S. degree in Environmental Biology in two years, following graduation from ECC.

SUNY College of Environmental Science and Forestry has formally reviewed the ECC Environmental Technology Geoscience degree program and stated that any student who earns an associate degree should be successful in completing the Environmental Biology baccalaureate degree at SUNY E.S.F. within two additional years of study. Students would enter this educational institution with junior level status.

Admission Requirements

A high school diploma or GED is a basic requirement. It is necessary that the student have a background in elementary algebra. The student should have taken college preparatory courses in high school in mathematics (algebra and trigonometry) and chemistry. ECC has available non-degree credit college preparatory courses in Math (MT013) and English (EN011 and EN023). All students seeking matriculation are required to take the mandatory placement test and achieve a test score in English which qualifies them to take EN110 College Composition and a placement test score sufficient in mathematics to take MT125 College Mathematics. Students who have taken the New York State Regents English III with a score of 85 or higher are considered to be prepared for EN110.

Service learning courses in the Environmental Technology Geoscience curriculum will provide a practical experience for students to learn valuable skills while contributing to their communities. Service learning in higher education integrates community service with academic instruction. Students will participate in organized curricular projects that address community needs, while enhancing their academic knowledge and skills and fostering civic responsibility.

Targeted ECC's Environmental Technology Geoscience courses will provide students with the opportunity to:

- Use the knowledge and technical skills from one or more Environmental Science courses to identify and address community problems
- Collaborate with peers and community members to establish and achieve goals
- Develop skills and professional attitudes beneficial for the workplace and for participating in civic affairs

Program Competencies

Upon graduation with an Associate in Applied Science in Environmental Technology Geoscience the graduate will be able to:

- Develop technical writing skills for the analysis and preparation of scientific environmental reports
- Apply scientific principles, identify the technologies and determine their efficiency and its impact on environmental problems
- Attack environmental problems and propose solutions focusing on environmental integrity, sustainable resources, and ecological solutions
- Assess the most recent scientific, technical and socioeconomic information concerning climate change and other environmental topics

- Conduct and write laboratory tests/experiments in a clear and concise manner using proper communication skills
- Develop an appreciation for the non-technical human aspects of environmental issues
- Complete OSHA HAZWOPER certification as specified OSHA 29CFR 1910.120
- Learn mapping and GIS applications
- Enter, with junior standing, one of many SUNY colleges, provided grades are acceptable

Degree: Associate in Applied Science (A.A.S.)
Hegis: 5619; CIPS code: 40.0699 Geological & Earth Sciences/Geosciences, Other
Curriculum Code: _____
Total degree Credits: 66.5 – 69.5
Campus Location: North Campus
Liberal Arts Division

CURRICULUM

Students should consult with his/her academic adviser prior to registering.

First Year, Fall Semester

EN 110	College Composition (3 cr)
GL 160	Physical Geology (4 cr)
GL 161	Laboratory for GL160 (0 cr)
PH 120	Environmental Science (3 cr)
PH 121	Laboratory for PH120 (1 cr)
MT 125	College Mathematics I (4 cr)
OF 127	MS Access Level 1 (1 cr)
OF 137	MS Access Level 2 (1 cr)

First Year, Spring Semester

EN 111	Composition and Interpretation of Literature (3 cr)
CH 180	University Chemistry I (3 cr)
CH 181	Laboratory for CH180 (1.5 cr)
PH 122	Environmental Science II (3 cr)
PH 123	Laboratory for PH122 (1 cr)
GP 150	Introduction to Geographic Information Systems (4 cr)

Second Year, Fall Semester

CH 182	University Chemistry II (3 cr)
CH 183	Laboratory for CH182 (1.5 cr)
PH 130	Alternative Energy (3 cr)
CI 388	Soils and Foundations (2 cr)
CI 389	Laboratory for CI 388 (1 cr)
MT 143	Introductory Statistics I (4 cr)
BU 131	Computer Applications in Business(3 cr)

Second Year, Spring Semester

GL 130	Hazardous Waste Operations (3 cr) (HAZWOPER training by certified trainer)
CH 240	Analytical Chemistry I (3 cr)
CH 241	Laboratory for CH240 (1.5 cr)
GL 180	Internship in Environmental Technology and Geoscience (3 cr)
Elective *	3 - 4.5 cr
Elective *	3 - 4.5 cr

Electives* 6 to 9 cr

BI 110	Biology I (3 cr)
BI 115	Laboratory for BI110 (1.5 cr)
BI 112	Biology II (3 cr)
BI 117	Laboratory for BI112 (1.5 cr)
CH 116	Chemistry and the Environment (3 cr)
CH 220	Organic Chemistry I (3 cr)
CH 221	Laboratory for CH220 (1.5 cr)
CH 222	Organic Chemistry II (3 cr)
CH 223	Laboratory for CH222 (1.5 cr)
PH 260	Technical Physics I (4 cr)
PH 261	Laboratory for PH260 (0 cr)
PH 262	Technical Physics II (4 cr)
PH 263	Laboratory for PH262 (0 cr)
GP 250	Geographic Information Systems (4 cr)
GP 290	Advanced Topics G.I.S. (4 cr)
CI 496	Hydraulics and Hydrology (4 cr)

SUNY ECC ERIE COMMUNITY COLLEGE
STATE UNIVERSITY of NEW YORK

(716) 851-1ECC - www.ecc.edu

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