

# ENVIRONMENTAL ENGINEERING TECHNOLOGY, AS

Program code: EVET-AS

Location: Three Rivers

## Program Description

The Environmental Engineering Technology program is designed for students interested in becoming environmental technicians or beginning their pathway in environmental engineering. Common duties of environmental technicians include inspecting and maintaining monitoring equipment, controlling and managing hazardous waste, collecting samples (water, air, and/or soil), managing waste operations, assisting with regulatory compliance and other duties as needed. Environmental Engineering Technicians are involved with sustainability projects, research to develop solutions to control climate change which effects ocean acidification, stormwater management, erosion and sedimentation control, and understanding and controlling flooding events, food security and agriculture sustainability, and other important environmental issues.

The degree focuses on practical education with courses covering basic quantitative and conceptual skills required of environmental engineering technicians, including the comprehensive and technical aspects of environmental issues and common environmental methods. Environmental Engineering Technicians work with Environmental Engineers and Scientists to identify, evaluate, prevent and control contamination of the environment associated with air, water, and land. Environmental technicians often work both in lab environments and in the field. The broad-based curriculum meets the demands of a range of environmental positions. Graduates work for manufacturing firms, regulatory agencies, and as consultants. Many have continued their education at baccalaureate institutions. Targeted populations for this program include recent high school graduates to returning students to post-associate degree students looking for career change.

## Learning Outcomes

1. Demonstrate the ability to use appropriate mathematical, computational and graphic-thinking skills needed for environmental engineering technology applications.
2. Combine oral, graphical and written communication skills to present and exchange information effectively and communicate design solutions.
3. Know of a professional code of ethics describe concepts relating to environmental monitoring, policy, processes and continuous improvement.
4. Describe how the concepts of environmental measurements and the design, management and operation of environmental facilities affect evaluation of analysis, policies and decision making.
5. Illustrate an ability to think critically and identify, evaluate and solve complex environmental problems; demonstrate technical and provide practical applications in environmental control problem and solutions; and communicate solutions technically and effectively.
6. Practice the skills needed to work effectively in teams and as an individual.

7. Recognize actions and acts of professionalism that allow them to become informed and participating citizens cognizant of ethics, civic duty and social responsibility.
8. Demonstrate lifelong learning and continuous improvement of professional, ethical, and social responsibility.

## Degree Requirements

| Code   | Title                                      | Credits                 |
|--|--|-------------------------|
| <b>General Education Courses</b>                   |  |                         |
| ENG 1010   | Composition                                | 3                       |
| MATH 1610  | Precalculus (or higher)                    | 4                       |
| Elective ARHX - Arts & Humanities Course           |  | 3-4                     |
| ENVE 1010  | Introduction to Environmental Science      | 3                       |
| Elective SBSX - Social / Behavioral Science Course |  | 3                       |
| COMM 1301  | Public Speaking                            | 3                       |
| CCS 1001   | College and Career Success                 | 3                       |
| <b>Program Courses</b>                             |  |                         |
| ENVE 1100  | Environmental Regulations                  | 3                       |
| CHEM 1210  | General Chemistry I                        | 4                       |
| ENVE 1500  | Geomatics Spatial Analysis                 | 3                       |
| BIO 1210   | General Biology I                          | 4                       |
|  | or EARTH 1030                              | Earth Sciences with Lab |
| BIO 1220   | General Biology II                         | 4                       |
| ENVE 2400  | Hydrology                                  | 3                       |
| ENVE 2500  | Geomatics                                  | 4                       |
| ENVE 2600  | Fundamental Measurements and Applications  | 3                       |
| ENVE 2410  | Water Resources Engineering with Lab       | 4                       |
| ENVE 2300  | Long Island Sound Conservation             | 3                       |
| ENVE 2210  | HAZWOPER                                   | 3                       |
| ENVE 1700  | Environmental Research Project I           | 1                       |
| ENVE 2700  | Environmental Research II                  | 1                       |
| ENVE 2701  | Environmental Research Project III         | 1                       |
| ENVE 2702  | Environmental Rsrch Proj IV                | 1                       |
| ENVE 2694  | Environmental Engineering Technology Co-op | 1                       |
| <b>Total Credits</b>                               |  | <b>65-66</b>            |

- Environmental Engineering Technology: Environmental Health & Safety Management Certificate
- Environmental Engineering Technology: Land Surveying & Geographical Information Systems (GIS) Technician Certificate