Environmental Technology Certificate
Small Wind Technology

The Environmental Technology certificates are a collaborative partnership among Cape Cod Community College, Massachusetts Maritime Academy and University of Massachusetts - Dartmouth, for persons seeking to acquire skills and knowledge in eight environmental fields: Coastal Zone Management, Environmental Site Assessment, Geographic Information Systems, Photovoltaic Technology, Small Wind Technology, Solar Thermal Technology, Wastewater Management, and Water Supply. Students may need to travel to each of the three schools in order to complete all the courses in any certificate program. Students are encouraged to enroll in ENV260 Cooperative Work Experience/Internship.

Course #	Course Title	Credits	Prerequisites	Semester Offered	Semester Taken	Grade Earned
ENV170	Renewable Energy Sources	3	MAT020, ENL020 & ENL050 or satisfactory basic skills assessment scores	Fall, Spring, Summer		
ENV171	Energy Efficiency and Conservation Methods	3	MAT020, ENL020 & ENL050 or satisfactory basic skills assessment scores	Fall		
ENV177	Introduction to Wind Energy	3	MAT020, ENL020 & ENL050 or satisfactory basic skills assessment scores	Spring		
ENV180	Small Wind Installation	3	ENV177	Varies		
ENV260	Internship (recommended)	3	ENV118 or ENV170 & permission of instructor	Fall, Spring, Summer		
Total Credits		12/15				

Overview
This certificate provides a solid understanding of small wind technology, site analysis, system design, and installation methods. This certificate appeals to anyone interested in learning more about wind energy and applying that knowledge to their home, business, or career.

Career Outlook
The “clean energy cluster” is a large and fast growing segment of the Massachusetts economy. A person with this certificate has basic knowledge of small wind-electric systems, suitable for a supervised, entry-level position with a dealer/installer, or other small wind industry company or organization. Professionals in building trades can gain the knowledge necessary to expand their services to include small wind system design, consulting, specification, and installation. A wide range of additional career opportunities are available within the clean energy cluster for students with degrees in a variety of fields, such as science, engineering, business, law, political science, and communication.

Program Outcomes
Upon completion of the Small Wind Technology Certificate, students are able to:

- Conduct a basic home energy audit and make energy efficiency and conservation recommendations.
- Conduct a wind energy site assessment and quantify the amount of wind energy available at a particular site.
- Properly site, size, and design a residential scale small wind system for both on and off grid applications.
- Accurately explain the benefits and limitations of wind-electric systems.
- Conduct an economic and environmental assessment of proposed small wind systems.