



Engineering Technology/Offshore Wind Power Technology

Program Goals Statement

This program aims to prepare skilled workers, technicians, team leaders, researchers, and scientists for the offshore wind industry. Participants will learn topics in electrical machinery, fluid systems, operations and maintenance, leadership, corrosion management, and offshore safety and survival. Participants will explore wind turbine performance characteristics under varied wind conditions in a wind tunnel. They will also learn about assemblies and components in wind turbines, common failures and faults, maintenance strategies and related risk analysis from availability and maintainability perspective. Assembly, installation, and maintenance of small-scale wind turbines are done in laboratory conditions. The program prepares participants for the wind industry certifications and advances many soft-skills like communication and leadership.

Program Information

- This program is focused around understanding the engineering principles behind offshore wind turbine operation and maintenance and applying such fundamental knowledge in solving technical problems.
- Students are trained to troubleshoot key systems and assemblies in a wind turbine including gearbox, generator, hydraulics, pneumatics, and electrical power devices.
- The program contains a course in offshore safety and survival that provides theoretical knowledge and practical skills to ensure a safe working condition when offshore. The course curriculum aligns with global wind industry standards for offshore health, safety and environment considerations and prepares wind turbine technicians for certification.
- Students are encouraged to discuss their career options with the program coordinator before enrollment as many marine industries including offshore wind, require physical fitness due to the nature of work and health and safety considerations.
- Students who haven't taken basic math courses in high school may complete math prerequisites at Bristol.

Hints for Successful Completion

Successful completion of this program requires participants to be able to identify the challenges with offshore wind turbines operation and maintenance and design cost effective and practical solutions.

After Bristol

- Graduates will have the option to enhance their qualification by enrolling (/transferring) into degree programs in 4-year universities.
- Graduates will be able to apply for Global Wind Organization (GWO) certification and work as certified technicians for an offshore wind farm operator.



- Graduates will be able to seek careers as consultants for a wide variety of roles in marine trade such as oceanography, hydrographic survey, technicians for onshore wind turbines, Remotely Operated Vehicle (ROV) operators, corrosion engineers, or water quality professionals.
- In time, an attempt will be made to collaborate with a four-year institution to enable transfer. Information about the transfer process can be found at www.BristolCC.edu/transfer.

Subject: Engineering
Type: Associate Degree

Campus

Campus:
New Bedford
Item #
Title
Credits

General Education Courses

Item #	Title	Credits
ENG 101	Composition I: College Writing	3
ENG 102	Composition II: Writing about Literature	3
MTH 172	Precalculus with Trigonometry	4
CIS 120	Programming: Logic, Design and Implementation	3
HST 114	United States History from 1877	3
PHL 152	Ethics: Making Ethical Decisions in a Modern World	3
SCI 112	Principles of Ecology	4

Program Courses

Item #	Title	Credits
EGR 151	Electrical Machinery	3
EGR 171	Fluid Systems	4
EGR 282	Wind Power Technology	4
EGR 283	Wind Power Operations and Maintenance	4
EGR 211	Programmable Control Systems	4
EGR 299	Engineering Projects	4
EGR 215	Lean Six Sigma	3
PRM 101	Foundations of Project Management	3
EGR 281	Offshore Safety and Survival	4
EGR 285	Power Transmission in Offshore Environment	4
EGR 286	Data and Command Center Management	4
EGR 287	Corrosion Management and Control	3



Choose one

Item #	Title	Credits
EGR 215	Lean Six Sigma	3
PRM 101	Foundations of Project Management	3

Recommended Course Sequence - Semester 1

Item #	Title	Credits
ENG 101	Composition I: College Writing	3
EGR 151	Electrical Machinery	3
PHL 152	Ethics: Making Ethical Decisions in a Modern World	3
EGR 171	Fluid Systems	4
HST 114	United States History from 1877	3

Recommended Course Sequence - Semester 2

Item #	Title	Credits
ENG 102	Composition II: Writing about Literature	3
EGR 282	Wind Power Technology	4
EGR 211	Programmable Control Systems	4
MTH 172	Precalculus with Trigonometry	4
CIS 120	Programming: Logic, Design and Implementation	3

Recommended Course Sequence - Semester 3

Choose either EGR 215 or PRM 101

Item #	Title	Credits
PRM 101	Foundations of Project Management	3
EGR 215	Lean Six Sigma	3
EGR 281	Offshore Safety and Survival	4
EGR 283	Wind Power Operations and Maintenance	4
SCI 112	Principles of Ecology	4

Recommended Course Sequence - Semester 4

Item #	Title	Credits
EGR 299	Engineering Projects	4
EGR 285	Power Transmission in Offshore Environment	4
EGR 286	Data and Command Center Management	4
EGR 287	Corrosion Management and Control	3



Total credits:

64