Clean Energy Technology Program

Clean Tech ATE prepares students to join the community of innovators working to solve the challenges of climate change, resource depletion, and renewable energy technologies distribution. With advice from 12 industry partners, the project has identified the knowledge, skills, and abilities that are incorporated in three new courses that blend theoretical learning with practical, hands-on practice using high-tech tools and software.

A summative report at the conclusion of the project activities and analysis captured results and formed the basis for a subsequent industry validation, where the group of employers and subject matter experts evaluated and ranked a list of job-related tasks, skills, and competencies. This group validated the identified tasks and weighting factors to accurately represent two (2) High Performance Building Systems (HPBS) jobs – Clean Energy Analyst and Clean Energy Designer.

• A *Clean Energy Analyst* is an energy solutions professional who collects and analyzes data related to site conditions, modeling, simulations, building systems and equipment, energy usage, and recommends strategies to reduce energy, water, and associated costs to help established goals.

• A *Clean Energy Designer* develops design specifications and requirements for high-performance buildings; to include site-specific analysis, modeling, simulations, analysis of building systems and equipment, implements strategies to reduce energy, water, and associated costs to help meet established goals.

Graduates of the Clean Energy Technology Program—20 associate degrees and 11 certificates were awarded from 2016 to 2019—are employed doing tasks that include energy modeling, renewable energy evaluation, and energy life cycle cost analysis.

Three new courses were developed:
Buildings in Context- In this course, students explore sustainable design for the built environment by analyzing both the qualitative (performance measures and systems) and qualitative (experience and cultural equity) dimensions of sustainable design.

Large Building Energy: Methods & Measurements- The objective of this course is to prepare students for identifying energy efficiency opportunities and making recommendations on improving energy performance of medium and large commercial buildings.

Virtual Design for Energy Technologies- The objective of this course is to prepare students with foundational technical skills in the use of Building Information Modeling (BIM) for high performing/renewable energy systems in the built environment.

High school teachers who attended the project's WA STEM Educator Solar Institute create solar photovoltaic technology lessons to implement in their classrooms and have used its alternative energy lessons with 4,000 students from 2017 to 2019.

shoreline.edu/clean-energy

Clean Tech ATE: Advancing Technician Training in Clean Energy Technology
#1665227
Shoreline Community College, Shoreline, WA

Shoreline
COMMUNITY COLLEGE
Engage. Achieve.