

RENEWABLE ENERGY TECHNOLOGY, CERTIFICATE

Program Code: CC.RNEWNRGYTECH

The Renewable Energy Technology (RET) program provides technical training for employment in the field of manufacturing, installation and maintenance of renewable energy systems and products. Graduates will be prepared to integrate, install and make repairs related to equipment and controls. This program takes a broad-based approach to training renewable energy technicians, with emphasis on mechanical and electro-mechanical systems, fluid power, instrumentation and controls as well as systems troubleshooting. RET graduates will be prepared to work in the capacity of a technician with specialized skills in energy system measurement, energy efficiency, system design and electronic controls.

For information contact the Industrial Technology Department at 503-594-3318

Outcomes

Related Instruction Outcomes

Computation

- 1 course - MTH-050 Technical Mathematics I
- Use appropriate mathematics to solve problems.

Communication

- 1 course - WR-101 Communication Skills: Occupational Writing
- Read actively, think critically, and write purposefully and capably for professional audiences.

Human Relations

- 3 credits - See [Related Instruction](#) for course list
- Engage in ethical communication processes that accomplish goals.

Program Outcomes

Upon successful completion of this program, students should be able to:

- communicate effectively through technical drawings to determine product and customer specifications in building systems, energy products and thermal components;
- diagnose and repair electromechanical systems;
- design, install and troubleshoot electrical and fluid power controls related to energy system integration;
- analyze potential energy sources and select appropriate technologies;
- perform a residential energy audit, recommend and implement remediation measures;
- communicate the pros and cons of renewable energy technologies to a diverse user base.

Requirements

Course	Title	Credits
First Term		
MFG-109	Computer Literacy for Technicians	3
MFG-130	Basic Electricity I	3
MTH-050	Technical Mathematics I	4

Course	Title	Credits
RET-200	Renewable Energy Systems	4
RET-240	Alternative Fuels	4
Credits		18
Second Term		
EET-139	Principles of Troubleshooting I	2
MFG-107	Industrial Safety & First Aid	3
MFG-131	Basic Electricity II	3
MTH-080	Technical Mathematics II	3
RET-209	Renewable Energy I: Energy Efficiency	3
Credits		14
Third Term		
MET-170	Introduction to Manufacturing Processes	3
MFG-103	Machining for Fabrication & Maintenance	3
RET-211	Renewable Energy II: System Fundamentals	3
RET-280	Renewable Energy/CWE	2
WR-101	Communication Skills: Occupational Writing	3
Human Relations requirement		3
Credits		17
Total Credits		49

Careers

Career opportunities include:

- residential/commercial energy systems integrator
- energy audit and efficiency technician
- energy systems installer
- photo-voltaic (PV) manufacturing and industrial maintenance technician
- wind turbine technician
- limited renewable technician
- PV, geothermal and solar thermal technicians
- utilities and building trades