

INSTRUCTOR  
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# RENEWABLE ENERGY SYSTEMS TECHNICIAN

## Program Description

This program is designed to meet the AAS requirement for individuals who wish to enter the job market with the skills to install, maintain, and troubleshoot photovoltaic systems, wind turbines, solar thermal systems, methane energy production systems, and biofuel manufacturing equipment. People in this position need a strong electro-mechanical background and therefore will receive such training. Renewable Energy System Technicians need to be able to analyze a site, install equipment, and have working knowledge of electrical systems, pumps, and motors related to renewable energies.

A Renewable Energy Systems Technician employed in the renewable energy field might:

- Assess sites for photovoltaic, solar thermal, and wind energy installations and analyze the feasibility of using such systems at certain locations.
- Work with customers to plan and design renewable energy systems.
- Install systems in a wide variety of settings.
- Work with concrete construction contractors for installing wind turbines and free-standing photovoltaic systems.
- Work with inverters and batteries, as well as grid-inter tie systems.
- Install pumps, storage tanks, and plumbing for solar thermal systems and for biofuels equipment.
- Troubleshoot photovoltaic, solar thermal, and wind energy systems and be able to repair problematic systems.
- Install, maintain, and troubleshoot ethanol and biodiesel manufacturing equipment, and methane energy production systems.

## Award Options

Associates of Applied Science Degree (AAS), Certificate

## Job Outlook

The Renewable Energy Systems Technician training program will open up many doors for students. With the strong background in electromechanical systems that this program will provide, students will have a wide variety of employment options. Renewable energies are a rapidly growing field locally, regionally, nationally, and internationally. Considering the training that students will receive in this program, students will have a variety of potential employment options following graduation. With North American Board Certified Energy Practitioner (NABCEP) certification, students would be more marketable. Employment with electrical firms, construction businesses, ethanol plants, biodiesel plants, or as an independent contractor is likely. Furthermore, employment with photovoltaic and wind turbine manufacturers is possible. As large companies continue to explore and expand renewable energy infrastructure, the need for trained technicians will continue to grow.

## Earnings

\$25,000-35,000 annually - starting salary

## Related Occupational Titles

Electrician, Renewable Energy Technician, Solar Systems Installer, Ethanol Manufacturing Maintenance Technician, Biodiesel Manufacturing Maintenance Technician, Windsmith



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toll-free

# RENEWABLE ENERGY SYSTEMS TECHNICIAN

## SESSION I

ELE:101	Industrial Safety
ELE:115	Basic Electricity I
ELE:124	Tools/Adapters/Instruments
ENG:107	Composition I: Technical Writing
	Term Total

## Hours

1
2
2
3
8.0

## SESSION II

ELE:131	Basic Electricity II
EGT:133	Hydraulics/Pneumatics I
ELE:127	Troubleshooting
ELE:116	Blueprint Reading
ENG:107	Composition I: Technical Writing (Continued)
	Term Total

## Hours

2
2
1
1
0
6.0

## SESSION III

MAT:722	Industrial Math & Measurement I/A
ELE:144	Basic Electronics I/A
ELE:128	Electrical Systems I
CSC:112	Fundamental Computers for Technicians
	Term Total

## Hours

1.5
1.5
3
2
8.0

## SESSION IV

MAT:723	Industrial Math & Measurement I/B
ELE:145	Basic Electronics I/B
CSC:113	Fundamental Computers for Technicians
EGT:134	Hydraulics/Pneumatics II
	Term Total

## Hours

1.5
1.5
2
4
9.0

## SESSION V

SER:100	Introduction to Renewables
SER:102	History of Power Generation
PHY:173	Applied Physics I/A
ELE:129	Electrical Systems II
	Term Total

## Hours

2
3
1.75
3
9.75

## SESSION VI

SER:103	Renewable Energy Site Assessment
PHY:174	Applied Physics I/B
ELE:134	Electrical Systems Controls
	Term Total

## Hours

3
1.75
3
7.75

## SESSION VII

SER:104	Small Wind Power Systems
SER:105	Small Wind Tower Systems
SER:108	Inverters, Chargers and Storage Devices
	Term Total

## Hours

3
3
3
9.0

## SESSION VIII

SER:109	Monitoring and Maintenance
EGT:116	Continuous Quality Management
ELE:139	Electrical Systems Analysis
	Term Total

## Hours

3
3
3
9.0

**PROGRAM TOTAL**

**66.5**

**TOTAL CREDIT HOURS**

**66.5**

ADMISSIONS OFFICER

**Catherine Petersen**

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JOB PLACEMENT/STUDENT  
SUCCESS SPECIALIST

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