

# RENEWABLE ENERGY SYSTEM SPECIALIST

## 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 freestanding 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

## Related Occupational Titles

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

## Job Outlook

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. Starting salary is approximately \$25,000 to \$35,000 annually.

For details, please visit this link <http://www.bls.gov/oco/>



**THE** *Community's College*



**SCOTT COMMUNITY  
COLLEGE**

### Program Faculty

**Craig Nelson**

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### Our Web Links:

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[www.eicc.edu/catalog](http://www.eicc.edu/catalog)

Since the colleges of EICC are continually reviewing programs, information in the course catalog may change. Please visit [www.eicc.edu/catalog](http://www.eicc.edu/catalog) for any program updates which have occurred since the most recent edition of the catalog.

Tuition and fees subject to change by the EICC Board of Trustees.

# RENEWABLE ENERGY SYSTEM SPECIALIST

## A.A.S. Degree

### TERM 1

		Credits
ELE:101	Industrial Safety	1.00
ELE:216	D.C. Circuit Analysis	3.00
ELE:217	A.C. Circuit Analysis	3.00
IND:134	Industrial Print Reading	2.00
MAT:705	Industrial Math & Measurement I	2.00
MAT:706	Industrial Math & Measurement II	2.00
		<u>13.00</u>

### TERM 2

CSC:110	Introduction to Computers OR	3.00
CSC:112	Fundamental Computers for Technicians I AND	2.00
CSC:113	Fundamental Computers for Technicians II	2.00
ELE:225	Electrical Motor Control and Power Distribution	3.00
ELE:309	Digital Circuits and Systems	3.00
ELT:312	Solid State Devices and Systems	3.00
PHY:185	Conceptual Physics Fundamentals I	2.00
		<u>14.00</u>

### TERM 3 – SUMMER

ECN:120	Principles of Macroeconomics OR	3.00
ECN:130	Principles of Microeconomics OR	3.00
HUM:105	Working in America OR	3.00
HUM:110	Changes and Choices OR	3.00
POL:111	American National Government OR	3.00
PSY:110	Introduction to Psychology OR	3.00
SOC:110	Introduction to Sociology	3.00
ENG:105	Composition I OR	3.00
ENG:107	Composition I: Technical Writing	3.00
PHY:186	Conceptual Physics Fundamentals II	2.00
		<u>8.00</u>

### TERM 4

EGT:117	Fluid Power Fundamentals	2.00
ELT:123	Programmable Logic Controllers	3.00
IND:136	Process Control I	3.00
SER:100	Intro to Renewable Energy Application	2.00
SER:102	History of Power Generation	3.00
SER:103	Renewable Energy Site Assessment	3.00
		<u>16.00</u>

### TERM 5

SER:104	Residential Renewable Energy Power Systems	3.00
SER:105	Residential Renewable Energy Mounting and Tower Systems	3.00
SER:108	Inverters, Chargers and Storage Devices	3.00
SER:109	Monitoring & Maintenance	3.00
SER:306	Sustainable Energy Capstone	3.00
		<u>15.00</u>

**A.A.S. Total** ..... **66.00**

## Clinton Community College

1000 Lincoln Boulevard,  
Clinton, IA 52732  
(563) 244-7001  
1-800-638-0559

[www.facebook.com/clintoncommunitycollegeia](http://www.facebook.com/clintoncommunitycollegeia)

### Admissions Officer

**Heather Evans**

[hlevans@eicc.edu](mailto:hlevans@eicc.edu)

(563) 244-7007

FAX (563) 244-7107

## Muscatine Community College

152 Colorado Street,  
Muscatine, IA 52761  
(563) 288-6001  
1-800-351-4669

[www.facebook.com/muscatinecommunitycollege](http://www.facebook.com/muscatinecommunitycollege)

### Admissions Officer

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FAX (563) 288-6014

## Scott Community College

500 Belmont Road,  
Bettendorf, IA 52722  
(563) 441-4001  
1-800-895-0811

[www.facebook.com/scottcommunitycollege](http://www.facebook.com/scottcommunitycollege)

### Admissions Officer

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If you have questions or complaints related to compliance with the policy, please contact: Debora J. Sullivan, Equity Coordinator, 306 W. River Drive, Davenport, Iowa 52801, 563/336-3487, [djsullivan@eicc.edu](mailto:djsullivan@eicc.edu) or the Director of the Office for Civil Rights, U.S. Department of Education, Citigroup Center, 500 West Madison, Suite 1475, Chicago, IL 60661, phone number 312/730-1560, fax 312/730-1576.