



Wayne  
County  
Community  
College  
District

# Renewable Energy

## ABOUT THE PROGRAM

The Renewable Energy Technology program is designed to provide students with the theoretical knowledge necessary for a career in energy management and renewable energy technology fields, with special emphasis on solar panel (PV) installation. Students acquire hands-on skills in installation, operation, repair and replacement of related equipment. The program prepares students to pursue careers in the renewable energy field through coursework focused on solar and wind energy production and usage.

The AAS degree (requires a minimum of 62 credits of coursework) along with related job experience, will allow students to sit for the solar PV installer exam (offered by NABCEP) and the LEED AP exam (offered by the Green Building Counsel). The certificate program requires a minimum of 38 credits and depending on the work experience of the student, may also qualify the student to sit for the exams.



## PAY

The salary for renewable energy technicians depends on location, experience and the particular company hiring the individual. According to Simply Hired, an average yearly wage for this type of technician is around \$38,000. It is possible to earn much more over time and with a continuance of education to stay current in the field.

## JOB OUTLOOK

Renewable-energy technicians have excellent job prospects, and the American Solar Energy Society predicts that by 2030, one of our four jobs in the U.S. will be in the renewable-energy field.

*2014 Simply Hired, Inc; A Job Description for a Renewable Energy Technician*  
<http://www.simplyhired.com/salaries-k-renewable-energy-technician-jobs.html>

## WHAT DO RENEWABLE ENERGY TECHNICIANS DO?

Renewable energy technicians install and maintain sustainable energy systems in homes and commercial buildings. These systems rely on energy from wind, geothermal, biofuels, and solar sources rather than traditional fossil fuels like gas and oil.

## WHERE DO THEY WORK?

Renewable energy technicians work in homes and commercial buildings, construction sites, new turbine installation locations, and other environments that have renewable energy installations and/or maintenance needs.

**Wayne County Community College District....  
Jobs for Today, Jobs for the Future!**

**FOR MORE INFORMATION, CALL 313-496-2600  
OR VISIT OUR WEBSITE AT WWW.WCCCD.EDU**



## Recommended Sequence of Courses

### Renewable Energy Technology: College Certificate

CR. No.	COURSE TITLE	CREDITS
<b><u>SEMESTER 1</u></b>		
RET 101	Renewable Energy Principles . . . . .	3
SED 101	Principles of Sustainability . . . . .	3
EE 101	Circuit Analysis I . . . . .	4
EE 107	Math for E/E I . . . . .	4
<b>SEMESTER TOTAL . . . . .</b>		<b>14</b>

### **SEMESTER 2**

EE 102	Circuit Analysis II . . . . .	4
EE 115	Math for E/E II . . . . .	4
RET 143	Wind Power and Hydropower . . . . .	3
RET 144	Solar Power . . . . .	3
<b>SEMESTER TOTAL . . . . .</b>		<b>14</b>

### **SEMESTER 3**

EE 103	Residential Wiring . . . . .	3
EE 111	Solid State Fundamentals . . . . .	3
RET 210	Advanced Photovoltaic Concepts and Commercial Applications . . . . .	4
<b>SEMESTER TOTAL . . . . .</b>		<b>10</b>
<b>CERTIFICATE TOTAL . . . . .</b>		<b>38</b>

*Note: Certificate total hours may not include prerequisites.*

### Renewable Energy Technology: Associate of Applied Science

CR. No.	COURSE TITLE	CREDITS
<b><u>SEMESTER 1</u></b>		
RET 101	Renewable Energy Principles . . . . .	3
SED 101	Principles of Sustainability . . . . .	3
EE 101	Circuit Analysis I . . . . .	4
EE 107	Math for E/E I . . . . .	4
<b>SEMESTER TOTAL . . . . .</b>		<b>14</b>

### **SEMESTER 2**

EE 102	Circuit Analysis II . . . . .	4
EE 115	Math for E/E II . . . . .	4
ENG 119	English I . . . . .	3
RET 143	Wind Power and Hydropower . . . . .	3
RET 144	Solar Power . . . . .	3
<b>SEMESTER TOTAL . . . . .</b>		<b>17</b>

### **SEMESTER 3**

EE 103	Residential Wiring . . . . .	3
EE 111	Solid State Devices . . . . .	3
PHY 115	Fundamentals of Physics . . . . .	4
RET 210	Advanced Photovoltaic Concepts and Commercial Applications . . . . .	4
<b>SEMESTER TOTAL . . . . .</b>		<b>14</b>

### **SEMESTER 4**

PS 101	American Government . . . . .	3
FM 106	Safety and Support Services . . . . .	3
MCT 203	Electrical Machinery and Controls . . . . .	3
PHY 235	General Physics I . . . . .	4
Elective:	Technical: CAD 101 OR CT 203 . . . . .	4
<b>SEMESTER TOTAL . . . . .</b>		<b>17</b>

**A.A.S. PROGRAM TOTAL . . . . .62**

*Note: Program total hours may not include prerequisites.*