



Renewable Energy Technology

at Walla Walla Community College

<https://dept.wwcc.edu/energy>

The Program

The Renewable Energy Technology concentration provides students opportunities to gain the knowledge and skills needed to:

- Assemble and install renewable energy systems (solar, wind, hydro-electric, biofuel/ bioproducts);
- Monitor and control/adjust equipment to ensure optimal performance, including: turbines, pumps, valves, gates, fans, controllers, filters, and instruments; and
- Troubleshoot, diagnose, and repair or replace wiring and electrical, mechanical, and hydraulic equipment safely to NEC standards using a variety of testing devices and power tools.

Career Opportunities

Growing demand for energy, retirement of technicians at power generation facilities, and upgrades to aging infrastructure will drive growth of renewable energy-focused /process technician jobs and careers.

Median entry-level wages

approximately \$40,000 - \$55,000 annually

- Maintenance/Operations Technician
- Systems Specialist
- System/Site Supervisor

WWCC Degree Options

AAS degree in Energy Systems Technology (EST)

with concentration in Renewable Energy Technology. A Certificate is available after successful completion of first three quarters of the EST degree. Completion of additional EST concentrations is an option.



For More Information

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Walla Walla Community College... *Shape Your Future!*

Energy Systems Technology Degree

Concentration: Renewable Energy Technology

Require Coursework for: Electrical Systems Technology Core

The actual order and specific coursework may vary depending on student placement, start date, and quarter. Please check with your advisor prior to any substitutions.

Fall Quarter		
Course #	Course Name	Credits
EST 145	Industrial Safety and Rigging	5
EST 131	Principles of Electricity Theory	5
AMATH 107*	Applied Mathematics (M)	5
EST 260	Introduction to the National Electrical Code	2
Total Credits		17

Winter Quarter		
Course #	Course Name	Credits
EST 132	Principles of Electricity AC Application	5
AENG 100	Applied Writing (W + J)	5
CS 100**	Introduction to Microcomputers	5
ENT 112	Blueprint Reading	2
Total Credits		17

Spring Quarter		
Course #	Course Name	Credits
EST 133	Introduction to Controls	5
EST 150	Electric Motors and Motor Maintenance	3
ACOM 102	Applied Communications (O/R/L)	5
EST 252	Principles of Power Generation and Distribution	5
IFA 022	AHA Heartsaver First Aid	0.4
Total Credits		18.4
Total Certificate Credits		52.4

The following courses are required for the concentration in:

Renewable Energy Technology

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Fall Quarter		
Course #	Course Name	Credits
EST 159	Hydraulics and Pneumatics	3
EST 240	Introduction to Basic Electronics	5
EST 235	Introduction to Solar PV and Applications	3
EST 106	Process Control Instrumentation and Troubleshooting	5
Total Credits		16

Winter Quarter		
Course #	Course Name	Credits
EST 250	Programmable Logic Controllers	5
CS 121	Python Programming	5
EST 115***	Industrial Mechanics	5
EST 202	Bio-Chemical Conversion	5
Total Credits		20

Spring Quarter		
Course #	Course Name	Credits
AGPR 254	Robotics and Drone Technologies	5
EST 203	Applied Controls and Operations	5
EST 175	Tower Rescue and Climbing Competency	1.2
Total Credits (min.)		11.2
Total Degree Credits (min.)		99.6

Certificate can be earned by completing first 3 quarters of program.

***OCSUP/AMATH 105 and OCSUP/AMATH 106 are for Certificate completion only, not for degree completion.**

****Students can substitute CS 110 for CS 100 if they have sufficient computer skills and gain Instructor and Advisor permission.**

*****Students can substitute WELD 141 for EST 115 with advisor approval.**

The following courses can be substituted for identified related instruction courses.

(W) Written Communication:	ENGL 097 or higher
(M) Computation / Mathematics:	AMATH (OCSUP) 107 or higher MATH
(O) Oral Communications:	Any O course
(J) Job Seeking Skills:	Any J course
(R) Human Relations:	Any R course
(L) Leadership:	Any L course