

# Renewable Energy Systems (EET Option)



*Rural wind turbine*

“Green” is “in!” Sustainability is a priority for the State of Oregon and a key federal initiative. Riding this wave of support, PCC Sylvania is a burgeoning site for many “green technology” fields of study, one of which is **Renewable Energy Systems (RES)**.

RES is an option within the **Electronic Engineering Technology (EET)** program at the Sylvania campus of Portland Community College. Students have two

academic options: They can obtain an Associate of Applied Science (AAS) degree in RES to become technicians or seek a nine-month RES certificate to become operators. Graduates of either program will have acquired the skills to succeed in such industries as **solar power, wind power** and **fuel cell**, among others.

Pre-requisites for the RES option and the RES certificate include placement in MTH 95 and WR 121.

An abundance of RES positions – in manufacturing, installing and servicing – are predicted for the next several decades. Industry support is strong, and PCC is aggressively pursuing co-op experience for its RES students with local renewable energy companies.

Those interested in continuing their studies can fully transfer to the Electronics Engineering Technology accredited Bachelor of Science program at the Oregon Institute of Technology. Many courses transfer to other four-year BSEET programs, as well.

For more information, contact **Sanda Williams**, department chair,  
Electronic Engineering Technology

**503-977-4527**

[www.pcc.edu](http://www.pcc.edu)

<http://www.pcc.edu/programs/electronic-engineering/>

## Renewable Energy Systems - EET Option

### 2-Year A.A.S. Degree

(Wind/Hydro/Solar Power, Fuel Cell Technology, Industrial Power, etc.)

**Program Prerequisites:** Placement in MTH 111 and completion of WR 121.

Basic computer skills in the Windows™ operating system, email and internet research skills, word processing and spreadsheets are required. All students must have an advising interview with an EET advisor.

**Total credits required: 108**

EET Department: Sylvania, ST 208; email: [sanda.williams@pcc.edu](mailto:sanda.williams@pcc.edu)

Engineering office phone 503.977.4159; FAX: 503.977.4859; <http://www.pcc.edu/programs/electronic-engineering/>

#### First Term

EET 101	Intro to Electronic Technology	1
EET 111	Electric Circuit Analysis I	5
EET 121	Digital Systems I	3
MTH 111B or C	College Algebra	5
<sup>1</sup> EET 110	Intro to Renewable Energy	3

**Total: 17**

#### Second Term

EET 112	Electric Circuit Analysis II	5
EET 122	Digital Systems II	4
<sup>2</sup> EET 188	Industrial Safety	1
MTH 112	Elementary Functions	5
<sup>3</sup> PHY 201	General Physics	4

**Total: 19**

#### Third Term

EET 113	Electrical Power	5
EET 123	Digital Systems III	4
EET 178	PC Architecture for Tech	4
<sup>4</sup> CIS 133U	Intro to C <u>or</u>	4
CS 161	Computer Science I	

**Total: 17**

#### Summer Term

<sup>3</sup> PHY 202	General Physics	4
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**Total: 4**

<sup>1</sup>REE 201, at OIT can substitute for EET 110

<sup>2</sup>OSHA industrial safety training can substitute

<sup>3</sup>PHY 201 and 202 are offered during Summer in a compressed format as 4-week classes. PHY 211/212 can substitute for PHY 201/202.

<sup>4</sup>CS 161 is required by OIT

<sup>5</sup>Prereqs for CMET 213: MTH 112 and PHY 202.

<sup>6</sup>ELT classes are offered at Cascade

<sup>7</sup>RES Elect: Wind Power-EET 269 (SY); RET 122 (CGCC); Solar Mfg.-MT 101/102/104 (RC); Solar Install-(CA)

**The following classes are part of the RES certificate (42 cr): EET 101,111,121,112,122,113,110,188,3cr RES electives, Math 111B or C, Math 112, ELT 125, and 3cr RES electives.**

#### Fourth Term

EET 221	Semiconductor Devices	5
EET 241	Microcomputer Systems	4
<sup>5</sup> CMET 213	Fluid Mechanics	3
General Ed:	Social Science	3
<sup>6</sup> ELT 125	Basic PLC	2

**Total: 17**

#### Fifth Term

EET 222	Op-Amp Circuits	5
EET 254	Seminar	1
EET 242	Microcontrollers Sys	4
<sup>6</sup> ELT 126	Intermediate PLC	2
General Ed:	Arts and Letters	3
EET 271	Motors and Generators	3

**Total: 18**

#### Sixth Term

<sup>7</sup> RES Electives		3
EET 223	RF Communication	5
EET 256	Capstone Project <u>or</u>	2
EET 280A	Co-Op: EET	
<sup>6</sup> ELT 225	Advanced PLC	2
EET 272	Electronic Control Sys	4

**Total: 16**

Start in the fall (day) or in the winter (evening). Third term EET classes are offered in the summer as well. Check with the math department for compressed summer classes. EET program and all its options fully transfer to Oregon Institute of Technology (OIT) in the 4-year BSEET degree - check with the dept. for details or the PCC/OIT agreement on our website. For prior learning credit, contact Sanda Williams, department chair, at [sanda.williams@pcc.edu](mailto:sanda.williams@pcc.edu). To receive formal credit, students must provide official transcripts, complete the Course Substitution form, have it signed by the dept. chair, and sent to the Registrar. Students may have up to 45 Nontraditional credits. Please check with the dept.

**Highly Recommended: 1cr lab of OIT's MET 218 Fluid Mechanics (3-3-4)**