

# ENERGY TECHNOLOGIES, AAS

## Wind Energy

The Associate of Applied Science, Energy Technologies, Wind Energy is designed to provide students with the skills necessary to enter the workforce in the renewable energy field as large and small wind installers. Wind installers complete an accurate resource assessment and energy demand analysis from which a wind system will be designed and installed. The program prepares students to sit for industry-recognized certifications required to enter the workforce. Wind installers need strong mechanical, electrical, technical, and computer skills.

### Outcomes

Students completing the degree will:

- Demonstrate knowledge of the operation of wind turbines and wind farms.
- Solve technical problems associated with wind turbines.
- Demonstrate knowledge of environmental regulations in the installation of wind turbines.

AAS degrees are generally non-transfer degrees that are designed for students to enter the workforce.

To earn an AAS degree, students must:

1. Maintain a minimum cumulative GPA of 2.0 (see requirements for graduation.)
2. Complete a minimum of 15 units within the college.
3. Satisfy General Education requirements for the AAS (<http://catalog.tmcc.edu/degrees-certificates/general-education/aas>).
4. Have no financial or library obligation to the college.

Code	Title	Units
<b>General Education Requirements</b>		
<i>Diversity</i> <sup>1</sup> [3]		
Recommended:		
AAD 201	History of the Built Environment	
<i>Communications/English</i>		6
<i>Fine Arts/Humanities/Social Science</i>		3
Recommended:		
AAD 201	History of the Built Environment	
<i>Human Relations</i>		3
Recommended:		
CE 201	Workplace Readiness	
<i>Mathematics</i>		3
Recommended:		
MATH 126	Pre-Calculus I	
<i>Science</i>		3
<i>U.S. and Nevada Constitutions</i>		3
<b>Degree Requirements</b>		
ECON 102	Principles of Microeconomics	3
ENGR 100	Introduction to Engineering Design	3
ENGR 110	Introduction to Renewable Energy	3
ENRG 110	Basic Electricity	3
IS 101	Introduction to Information Systems	3

OSH 222	General Industry Safety	1
<b>Emphasis Requirements</b>		
ELM 127	Introduction to AC Controls	3
ELM 129	Electric Motors and Drives	3
ELM 134	Programmable Logic Controllers I	3
ENRG 120	Fundamentals of Energy Efficiency	3
ENRG 150	Introduction to Wind Energy	3
ENRG 152	Wind Energy Technologies	3
ENRG 215	Electrical Distribution Systems	3
MT 108	Fluid Power (Pneumatics, Hydraulics, Instrumentation)	3
Total Units		61

<sup>1</sup> Course may also count toward degree requirement. Please consult with Academic Advisement.

1st semester		Units
ENGR 100	Introduction to Engineering Design	3
ENGR 110	Introduction to Renewable Energy	3
ENRG 110	Basic Electricity	3
IS 101	Introduction to Information Systems	3
Mathematics <sup>3</sup>		3
OSH 222	General Industry Safety	1
Semester Total		16

2nd semester		Units
English <sup>2</sup>		3
ECON 102	Principles of Microeconomics	3
ELM 127	Introduction to AC Controls	3
ENRG 120	Fundamentals of Energy Efficiency	3
ENRG 150	Introduction to Wind Energy	3
Science <sup>2</sup>		3
Semester Total		18

3rd semester		Units
Communications <sup>2</sup>		3
ELM 129	Electric Motors and Drives	3
ENRG 152	Wind Energy Technologies	3
Humanities/Diversity <sup>2</sup>		3
MT 108	Fluid Power (Pneumatics, Hydraulics, Instrumentation)	3
Semester Total		15

4th semester		Units
CE 201	Workplace Readiness (Human Relations)	3
ELM 134	Programmable Logic Controllers I	3
ENRG 215	Electrical Distribution Systems	3
Human Relations <sup>3</sup>		3
U.S. and Nevada Constitutions <sup>2</sup>		3
Semester Total		15
Total Units		64

<sup>2</sup> See approved General Education list for the AA/AS Degree. (<http://catalog.tmcc.edu/degrees-certificates/general-education/aa-as>)

<sup>3</sup> See program recommendations or requirements.