



## OCCC Wind Turbine Technician–Certificate Program

Students enrolled in the program will study basic electricity, industrial electronics, electromechanical devices, programmable controller systems, and instrumentation and control operations along with Wind Energy Industry fundamentals and safety procedures. The program

was designed to meet the needs of employers in this rapidly growing alternative energy segment and to offer students a rewarding new career opportunity. For information, contact Corporate Learning at [rcantrell@occc.edu](mailto:rcantrell@occc.edu) or (405) 682-7853.

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### **Introduction to Wind Energy**

The students will be exposed to different facets of wind energy. The course will cover the history and development of the industry, terminology, various types and applications of wind turbines as well as current and future environmental and economic challenges facing the wind industry.

### **AC/DC Fundamentals**

The student will demonstrate a knowledge of principles by solving problems relating to both DC and AC in subjects such as resistive circuits, reactance, impedance, AC circuits and resonance. Laboratory applications are an integral part of this course.

### **Industrial Electronics**

Student will demonstrate knowledge of basic industrial electronic principles and devices by solving problems and constructing lab experiments in subjects such as resistive circuits, Ohms law and power, series, parallel circuits, DC and AC circuits, solid state circuits and devices, and operational amplifiers. Common electronics test equipment will be used in the laboratory experiments to explore different circuits and devices.

### **Electromechanical Devices**

The student will demonstrate problem maintenance and troubleshooting procedures on various types of electrical motors and electromechanical systems.

### **Instrumentation and Control**

The student will discuss terminology and demonstrate system operations by proper measurement and control techniques of flow, pressure, temperature and level control within the system.

### **Programmable Controller**

Following a study of the theory and operational characteristics of programmable control systems used in industry, the students will demonstrate the operation of a programmable controller by writing a program to control on-delay and off-delay timers, test the program for correct operation and apply troubleshooting techniques as necessary. Laboratory experience with equipment similar to that used in industry is an integral part of the course.

