

## Skill Sets – Wind Turbine Technician

Airfoils and Composite Repair			
Dept.		Course Title	Sem. Hrs.
WTT	210	<a href="#">Wind Turbine Mechanical Systems*</a>	4
WTT	270	<a href="#">Airfoils and Composite Repair*</a>	3

\*NOTE: Course may require Pre/Co-requisite courses.

Upon successful completion of the skill set, students will be able to:

- Demonstrate airfoil repair techniques
- Discuss construction methods used in airfoil construction
- Analyze airfoil failure methods
- Explain airfoil limitations
- Describe materials utilized in various types of airfoils.

Electrical Generation Applications			
Dept.		Course Title	Sem. Hrs.
CIS	108	<a href="#">Computer Fundamentals</a>	3
WTT	150	<a href="#">Electrical Practical Applications*</a>	4
WTT	160	<a href="#">Power Generation and Transmission*</a>	4

\*NOTE: Course may require Pre/Co-requisite courses.

Upon successful completion of the skill set, students will be able to:

- Describe how motor controls are used in a Wind Turbine
- Explain how power is generated in the various types of Wind Turbines
- Describe the operating system that controls a Wind Turbine and Wind Farm
- Discuss issues related to high voltage distribution

Wind Control Systems			
Dept.		Course Title	Sem. Hrs.
CIS	108	<a href="#">Computer Fundamentals</a>	3
ELM	210	<a href="#">PLC Fundamentals*</a>	3
WTT	230	<a href="#">Supervisory Control and Data Acquisition*</a>	4

\*NOTE: Course may require Pre/Co-requisite courses.

Upon successful completion of the skill set, students will be able to:

- Discuss remote monitoring systems
- Discuss software utilized for remote system operations
- Analyze turbine systems and control via remote connections
- Analyze PLC programs
- Apply ladder logic and schematic analysis techniques

Wind Energy Safety and Basic Operations			
Dept.		Course Title	Sem. Hrs.
WTT	101	<a href="#">Introduction to Maintenance Technology</a>	2
WTT	110	<a href="#">Wind Safety and OSHA*</a>	4

\*NOTE: Course may require Pre/Co-requisite courses.

Upon successful completion of the skill set, students will be able to:

- Explain how wind turbines generate power
- Explain how the energy grid operates
- Discuss OSHA requirements and safety needs of a wind operation
- Describe the operations of a wind farm management system

Wind Turbine Systems and Repair			
Dept.		Course Title	Sem. Hrs.
WTT	210	<u>Wind Turbine Mechanical Systems*</u>	4
WTT	260	<u>Wind Turbine Troubleshooting and Repair*</u>	4

\*NOTE: Course may require Pre/Co-requisite courses.

Upon successful completion of the skill set, students will be able to:

- Discuss mechanical systems within a wind turbine
- Explain standard troubleshooting procedures
- Demonstrate critical thinking skills utilized in troubleshooting
- Discuss mechanical failures and their probable causes
- Demonstrate knowledge in utilizing industrial meters and diagnostic equipment