

# Wind Turbine Technology A.A.S

**Program Description**

The purpose of the wind turbine program is to prepare individuals to work in the increasingly important field of wind energy. This degree program is designed to train technicians in electrical power transmission, industrial safety climbing, scheduled maintenance and general service. The program will focus on training technicians to work on utility-scale wind turbines which are designed to produce electricity to be sold to consumers.

**Employment Information**

With the decreasing cost of wind energy production and increase in demand for environmentally-friendly power sources, wind farms have popped up all over the nation. This evolving industry will create a great demand for wind turbine technicians. The wind turbine technology degree program will prepare individuals to work in the increasingly important field of wind energy.

**Technical Occupational Specialty**

			42-44 Credit Hours	Date	Institution
<input type="checkbox"/>	EET	1104	Fundamentals of Electricity	4	
<input type="checkbox"/>	EET	2373	Digital Logic Analysis	3	
<input type="checkbox"/>	PTDT	1453	Principles of Power Transmission	3	
<input type="checkbox"/>	PTDT	2003	Principles of Power Distribution	3	
<input type="checkbox"/>	WTT	1001	Climb Safety and Tower Rescue	1	
<input type="checkbox"/>	WTT	1113	DC Theory	3	
<input type="checkbox"/>	WTT	1123	AC Theory	3	
<input type="checkbox"/>	WTT	1203	Introduction to Hydraulics	3	
<input type="checkbox"/>	WTT	2113	Wind Turbine Operations & Maintenance	3	
<input type="checkbox"/>	WTT	2213	Wind Turbine Motors & Generators	3	
<input type="checkbox"/>	WTT	2313	Wind Turbine Mechanical Systems	3	
<input type="checkbox"/>	WTT	2413	Wind Turbine Siting & Construction	3	
<input type="checkbox"/>	WTT	2533	Wind Turbine Diagnosis & Repair	3	
<input type="checkbox"/>	WTT	2600	Wind Turbine Internship	1-6	

**Support and Related Courses**

			6 Credit Hours	Date	Institution
<input type="checkbox"/>	CIS	1113	Computer Concepts with Applications	3	
<input type="checkbox"/>	FPST	1113	Introduction to Occupational Safety	3	

**Degree Awarded**

Associate in Applied Science

**For More Information Contact:**

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 Room 300  
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 Oklahoma City, OK 73107  
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 science.engineering@osuokc.edu

**General Education Requirements**

			18 Credit Hours	Date	Institution
<input type="checkbox"/>	ENGL	1113	English Composition I	3	
<input type="checkbox"/>	ENGL	1213	English Composition II	3	
<b>or</b>					
<input type="checkbox"/>	ENGL	2333	Technical Report Writing	3	
<input type="checkbox"/>	SPCH	1113	Introduction to Speech Communications	3	
<input type="checkbox"/>	HIST	1483	U.S. History to 1865	3	
<b>or</b>					
<input type="checkbox"/>	HIST	1493	U.S. History Since 1865	3	
<input type="checkbox"/>	MATH	1513	College Algebra	3	
<input type="checkbox"/>	POLS	1113	American Government	3	

**Total to Graduate**

**66-68 Credit Hours**

<b>Student Name:</b>	_____
<b>CWID:</b>	_____
<b>Counselor:</b>	_____

**WTT 1001 CLIMB SAFETY & TOWER RESCUE**

This course combines classroom and laboratory instructions on the safety procedures involved in climbing wind turbine towers. Students will also receive instruction and practice in the proper techniques involved in tower rescue.

**WTT 1113 DC THEORY**

This course will review the elementary principles of electricity, covering basic units, OHM's law, circuit solutions, magnetism, inductance and capacitance.

**WTT 1123 AC THEORY**

The study of transient analysis and network theorems for electric circuits. This course introduces resonant circuits, filters, AC power and computer-aided circuit analysis techniques.

**WTT 1203 INTRODUCTION TO HYDRAULICS**

An examination of basic fluid power, covering hydraulic systems, fluid power symbols, operating theory, components and basic electrical and manual controls.

**WTT 2113 WIND TURBINE OPERATION & MAINTENANCE**

In-depth study of the components, principles and processes involved in the generation of electrical power using wind energy.

**WTT 2213 WIND TURBINE MOTORS & GENERATORS**

A study of the operation and maintenance of motors and generators, including an in-depth look at the common components and contrasting operating procedures.

**WTT 2313 WIND TURBINE MECHANICAL SYSTEMS**

An introduction to operation and maintenance of the mechanical systems that control blade pitch, turbine speed and transfer the energy from the wind through a gearbox to the generator.

**WTT 2413 WIND TURBINE SITING & CONSTRUCTION**

An introduction to the mapping of wind patterns that help assist in determining where wind turbines will be located and they can be best constructed, delivered and set up for operation.

**WTT 2533 WIND TURBINE DIAGNOSIS & REPAIR**

The course will cover the theory and practice of installation, operation, maintenance, troubleshooting and repair of wind turbine electromechanical systems.

**WTT 2600 WIND TURBINE INTERNSHIP**

The cooperative agreements with other educational institutions and/or wind turbine owner/operators, Students will have the opportunity for "Hands On" work on operational wind turbines. Students will work under the supervision and direction of professionals in the wind energy industry. Variable Credit one-six credit hours. May be repeated up to a maximum of six credit hours.