



ENGINEERING TECHNOLOGY Alternative Energy Technology – Wind Turbine Careers

Strong winds are blowing change into the energy industry, creating new careers. According to the U.S. Department of Energy, wind power is the fastest growing energy source in the country. As the industry expands, so does the need for technicians to install, operate, and maintain wind turbines.

Wind turbine technicians build or service individual turbines, help with the construction of entire wind farms, or work indoors at factories that manufacture wind turbines. These technicians use a range of mechanical, hydraulic, and electrical skills. Except for those working in factories, wind turbine technicians spend a good deal of their time outdoors and working atop wind towers. Therefore, these technicians should be comfortable with heights. An increasing number of educational institutions offer wind turbine technician degree or certificate programs.

The first associate's degree credit program in Ohio in the burgeoning field of wind turbine power generation will begin in fall of 2009 at Lorain County Community College. The associate of

science degree in Alternative Energy Technology – Wind Turbine trains students to become installation and maintenance professionals.

Wind turbine power is expected to be one of the fastest-growing alternative energy sources. The desire to develop alternative energy sources is growing rapidly, here and around the world. It will need qualified people to service the technology that is involved.

The new associate's degree program at Lorain County Community College covers an overview of alternative energy sources, with specialized training in electronics, electronic controls, mechanical systems and more. The major focuses on residential-sized wind turbines and will include training on commercial-sized turbines.

For more information about the wind power industry, contact the American Wind Energy Association, 1501 M St. NW., Suite 1000, Washington, D.C. 20005; (202) 283-2500. Or visit online at www.awea.org.

Job Outlook

According to the American Wind Energy Association, wind now provides enough electricity to serve 5.3 million American homes or power a fleet of more than 1 million plug-in hybrid vehicles. This amount of wind capacity can generate as much electricity every year as 28.7 million tons of coal or 90 million barrels of oil. Wind generation currently displaces 34 million tons of carbon dioxide annually, equivalent to taking 5.8 million vehicles off the road. A U.S. Department of Energy study released in May found that wind could provide 20 percent of U.S. electricity by 2030. At that level, wind power would support 500,000 jobs and reduce greenhouse gas emissions by as much as taking 140 million vehicles off the road.

Earnings

These professionals can start their careers earning between \$17-\$20 per hour. This can grow as they advance in the field.

Related Careers

- Electrical Engineer
- Quality Control/Safety
- Welder

Alternative Energy Technology- Wind Turbine

Educational Opportunities in Alternative Energy Technology

Associate of Applied Science

The Wind Turbine Technology program encompasses a wide range of electrical, mechanical and computer skills required to compete in the emerging Alternate Energy-Wind Turbine Industry. Individuals will be prepared for a range of analysis, installation and maintenance assignments associated with the Wind Turbine industry.

Alternative Energy Technology – Wind Turbine Technology

Fall Semester (First Year)

Course No.	Course Title	Credits
ALET 111	Introduction to Alternative Energy	3
ELCT 111	Electrical Circuits I	3
ENGL 161	College Composition I	3
MTHM 121	Technical Mathematics I	4
SDEV 101	College 101	1
TECN 111	Technical Problem Solving	4

Spring Semester (First Year)

AETC 121	Programmable Logic Controllers	3
ALET 112	Wind Turbine Mechanical Systems	4
ELCT 112	Electrical Circuits II	4
ENGL 162	College Composition II	3
MTHM 122	Technical Mathematics II	3

Fall Semester (Second Year)

ALET 220	Wind Turbine Technology I	3
ELCT 121	Digital Electronics	4
ELCT 227	NEC & Electrical Systems Design	2/4
PHYC 151	General Physics I	5
Arts and Humanities Elective**		3

Spring Semester (Second Year)

AETC 241	Instrumentation and Control	3
ALET 221	Wind Turbine Technology II	3
CMNW 220	Digital Data Communications	4
ELCT 211	Electrical Power and Devices	4
Social Science Elective***		3

Total Credit Hours: 68/70

About Lorain County Community College

Lorain County Community College continues to experience enrollment growth because attending LCCC is the most economical way to reach educational goals that help graduates become valuable players in the future economic growth of the county and region. Because of the variety and quality of learning opportunities LCCC provides, enrollment has grown 78 percent since 2000.

Lorain County Community College, which opened in 1963, is one of Ohio's leading colleges delivering credit programs at its Elyria campus and outreach centers in downtown Elyria, Lorain, Wellington and Brunswick. Plus more than 200 courses are offered via distance-learning education options, and the Associate of Arts degree can be completed entirely online.

Students can choose from more than 80 educational programs. Students can complete the first half — and sometimes more — of a bachelor's degree through LCCC's University Partnership, which brings eight universities to the LCCC campus offering 40 bachelor's and master's degree programs. Students can upgrade, retrain and improve current life skills.

In addition to providing a great education for those who enter college with aspirations of a degree, LCCC helps those who have changed their career goals, who want to broaden their horizons, and who want to return to work. LCCC provides learning and training for those who want to move up but find they need new or improved skills for the kind of professional opportunities they seek.

LCCC faculty is recognized locally and nationally for their work as professors and in other areas. They all have advanced degrees and real world experience and understand their primary responsibility at LCCC is to teach classes.

LCCC is fully accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, which is the regional accrediting authority for Ohio colleges and universities. Since opening its doors, LCCC has served more than 300,000 people. More than six million students enroll annually in credit courses at America's community colleges, representing about 46 percent of all students in higher education and about 56 percent of all first-time college entrants.



Lorain County
Community College



The University
Partnership

of Lorain County Community College

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