

# ALTERNATIVE ENERGY

## - WIND TURBINE

Delivered by Lorain County Community College for Eastern Gateway Community College

### ***Program Overview***

The associate's degree program in the burgeoning field of wind turbine power generation is available at Eastern Gateway Community College.

The Associate of Science Degree in Alternative Energy Technology – Wind Turbine major is delivered by Lorain County Community College. It will train students to become installation and maintenance professionals. These professionals can start their careers earning between \$17-\$20 per hour. This can grow as they advance in the field.

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.

This associate's degree program at Eastern Gateway Community College will cover an overview of alternative energy sources, with specialized training in electronics, electronic controls, mechanical systems and more. The major will focus on residential-sized wind turbines and will include training on commercial-sized turbines. 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 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.

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. Typical job responsibilities will include Design, Testing, R&D, Service, Maintenance and Installation Assignments. Eastern Gateway Community College has articulation agreements with colleges and universities including programs offered by Lorain County Community College's University Partnership. A short-term certificate program is also available.

# **Alternative Energy Technology- Wind Turbine Major**

## **Curriculum Guide**

<b>Fall 2010 Schedule</b>	<b>Dates</b>	<b>Location</b>	<b>Credits</b>
ELCT111 Electrical Circuits	8/23-12/12	Online	3
ENG101 English Composition I*	8/23-12/12	Valley Center	3
CSS103 Succeeding in College	8/23-12/12	Valley Center	1
ENG102 English Composition II*	8/23-12/12	Online	3
ELCT121 Digital Electronics>	8/23-12/12	Online	4
ELCT227 NEC&Elect Sys Des^>	8/23-12/12	Online	2/4

## **Remaining courses to complete the Alternative Energy Technology Degree:**

AETC121 Programmable Logic Controllers>	3
AETC241 Instrumentation and Control>	3
ALET111 Introduction to Alternative Energy	3
ALET112 Wind Turbine Mechanical Systems>	4
ALET220 Wind Turbine Technology I>	3
ALET221 Wind Turbine Technology II>	3
CMNW220 Digital Data Communications>	4
ELCT112 Electrical Circuits II>	4
ELCT211 Electrical Power and Devices>	4
MTH110 Technical Algebra>	3
MTH111 Technical Trigonometry>	3
MTH121 College Trigonometry>	3
PHY106 College Physics I >	4
TECN111 Technical Problem Solving	4
Arts and Humanities Elective**	3
Social Science Elective*	3

1. > Indicates course has prerequisite

2. \* Indicates a course has a prerequisite or may be taken concurrently.

3. \*\* See advisor for course selection

4. ^ Indicates a student may substitute from a list of courses for equivalent credit hours, see advisor.

The Eastern Gateway delivery partner for the Alternative Energy Technology Program is Lorain County Community College. General education classes are offered by Eastern Gateway and technical program courses are offered by LCCC.



# **Eastern Gateway Community College**

Eastern Gateway Community College was authorized by the Ohio General Assembly in July 2009 to serve Columbiana, Jefferson, Mahoning, and Trumbull Counties. Eastern Gateway makes community college education accessible and affordable by integrating the college into all aspects of the community. Students may take college classes from the comfort of their own home, on their own time, using the Internet. Learners in all four counties will be able to interact with one another through video conferencing without having to leave their own community. And, traditional classes are being offered through use of existing facilities to help keep the cost of a college education down.

Seven locations are serving students including the Valley Center at Forum Health Northside Medical Center, Youngstown, the four career centers within the Mahoning Valley, Warren Center, and the Jefferson County Campus in the southern portion of the district. Continued effort will be made to expand the college's offerings through local schools, neighborhood organizations, and other facilities so people can attend classes close to where they live and work.

Partnerships are the foundation upon which Eastern Gateway has been established. The college, an expansion of 41-year-old Jefferson Community College, is using its own programs and is borrowing existing community college programs that meet higher education standards to save time and money associated with the development and delivery of new programs. Through Eastern Gateway, a variety of well-established and industry-accredited community college programs are available to residents. **The college has more than 60 associate degree and certificate programs; however, all programs are not available at all sites.**

Eastern Gateway also works closely with local universities so credits from a two-year degree are transferred easily to a bachelor or graduate degree. Dual enrollment across colleges and universities is available to avoid multiple application and admission processes.

To find out more, call 800.682.6553 x212 for all of your enrollment service needs, including admissions, registration, advising and counseling.

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