

enhance your skills energize your career

HARNESSING THE POWER OF WIND

Key to Energy Sustainability 6

World of Possibilities

Road through Iowa Lakes goes around the World 14

Women of Wind

Wind Grad advocates for women in the industry 19

Leading the Charge

Meet the people leading Energy Sustainability 12

ILEC Partnership Benefits Region

Electric Cooperative and Community College make a great team 16



INSIDE: Credit & Non-credit courses to provide utilities sector companies with workers!

PREMIER EDITION

Iowa Lakes Community College is committed to providing relevant education and training which is responsive to industry needs. Articles featured in this initial publication are intended to inspire others. Ordinary students who have completed their degree or training program have gone on to achieve notable accomplishments.

The companies featured have inspired the college to focus on the possibilities as well. Share **YOUR** story with us. Share this publication with **OTHERS**.

You have received this introductory copy as a result of a professional membership or serving one of the College Advisory Committees. In order to continue to receive this magazine, please email me: **industry@iowalakes.edu** to be added to the mailing list.

This publication made possible through funding from the TAACCCT IHUM Grant. Additional information and project outcomes can be found at **www.enhanceiowa.com**.

LOOKING for an Employee? Companies can post job openings at the College for **FREE** at the Career Resource Center.

You also have the capabilities to search the resumes posted there as well.

Iowa Lakes hosts two job fairs annually, in October and April. Students are seeking internships between their freshman and sophomore years or their first job within the major they have completed.

Employers have an opportunity throughout the year to interview candidates following those short, burst training programs (Tower Technician and Electrical Maintenance) at the end of their programs.

To receive notice of the interview opportunities, please send an email to: **industry@iowalakes.edu**.



Jolene Rogers

Jolene Rogers
Executive Director of
Community & Business
Relations, Iowa Lakes
Community College

Powering the **future** through **education** and **sustainability**.



Our goal at Iowa Lakes is to educate and train students providing a path to lucrative and booming careers, helping to appreciate the importance of renewable energy, and giving the sense of accomplishment and satisfaction in helping our planet move forward and into the future.



The Sustainable Energy Resources & Technologies facility has a number of energy-efficient features which, quite often, double as learning opportunities in the classroom.



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INSIDE

- 4** Certified Training for In-Demand Jobs
- 6** Harnessing Wind Power - Vertical Axis Turbine
- 8** MidAmerican Energy Wind Power Expansion
- 11** Electrician Employment In Demand
- 12** Leading The Charge - Meet the Staff
- 14** Iowa Lakes Opens World of Possibilities
- 16** Partnership Benefits Region
- 19** Women of Wind Energy - Opportunity
- 20** Iowa Lakes Takes Grad Around The World
- 23** Heating, Ventilation & Air Conditioning Keeps Growing



DEGREE OPTIONS IN:

- Water Quality & Sustainable Aquatic Resources
- Heating, Ventilation & Air Conditioning
- Construction Technology
- Wind Energy & Turbine Technology
- Environmental Studies
- Electrical Technology
- Engineering Technology
- PLUS Industry Training



This workforce solution is funded by the IHUM Consortium which is 100% financed through a \$15,000,000 grant from the U.S. Department of Labor's Employment & Training Administration.

The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

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Certified Training for In-Demand Jobs

New, six-week courses are now available at Iowa Lakes Community College to assist local and regional individuals who are seeking a new career path.

These courses enable people to train in a minimal amount of time, assisted by a career coach, and receive help with preparation to seek employment in their chosen field.

Wind Energy

Wind energy is a fast-growing industry in Iowa.

"Here in Iowa, we were number two in the nation in wind production last year and still growing, said Joien Rogers, Executive Director of Community and business

Iowa Lakes has convened an Energy Sector Board that looks at short-term transitional pathways. Those completing the short-term course will have the opportunity to take additional coursework and many of the industries hiring them help with that additional cost.

Previous experience is not necessary.

"We are ready to roll as soon as we get students signed up to take either of these courses," Rogers continued. "That means this summer is possible and certainly by fall."

Certifications:

- Tools @ Height
- Building Performance
- Torque
- Meter



Tower Tech

Tower Tech is a face-to-face course relating to the operation and maintenance of wind turbines. This course includes a primary focus on safety, obtaining an OSHA 10 card, first aid with CPR, tools at heights training, torque certification, basic electrical and rigging.

Jolene Rogers, Executive Director of Community and Business Relations is enthusiastic about the new course. "A person can take the six weeks of learning and decide if there is one phase of the wind energy job market that especially appeals to them. If they aren't comfortable with heights, there are several tasks besides climbing the towers. For instance, those turbines are operated by remote control and perhaps the technical side of the industry will appeal to them. There are several options, if they have a passion for wind energy," she pointed out.

According to Rogers, Iowa Lakes works hand in hand with many companies in its vast campus area. "They pay well at the entry level," she noted. "Many of the jobs are local so the certified person would not have to travel if they didn't want to. There are also great positions for those who would prefer to travel."

Industrial Maintenance

The second new short-term course is Industrial Maintenance. The course focuses on safety first, OSHA 10 certification, basic industrial motors and controls, blueprint reading, tool identification and proper use, and technology.

"With more and more industry in our campus area, there is a huge demand for people to fill these positions and the course is a highly hands-on course," Rogers explained.

"These two courses are designed to work around the students' work schedules. Many of them need to be employed while going to school and we are flexible with that," she said. "I also encourage those with a need, to apply for one of the scholarships available for this."

If there are questions about the Tower Tech and Industrial Maintenance courses, contact Rogers at jrogers@iowalakes.edu.

SAFETY FIRST! & INDUSTRY CERTIFICATIONS



Iowa Lakes Workforce Development and Training Center covers topics appropriate for employees on their first day or the most seasoned staff. Safety Training is the staple of a successful company. Providing employees with a safe working environment, with emphasis on employee accountability and responsibility, reduces injury and downtime. Iowa Lakes trainers have the credentials and experience to infuse real-life occurrences as participants learn to be proactive and identify hazardous conditions as they look first, before a costly mistake happens. Customized safety training on specific equipment and procedures can be developed with your needs in mind.

First Aid/CPR, Learn the American Heart Association standards as an industry worker to become certified to perform Adult First Aid, Cardio Pulmonary Resuscitation (CPR) and learn to operate an Automated External Defibrillator (AED).

OSHA 10-hour & 30-hour Industrial Training General Safety, Created by OSHA, which has authorized certain OSHA Outreach trainers to conduct this training.

OSHA 10-hour Construction, Includes instruction from the 1926 standards and is intended for all workers in the construction industry.

Confined Spaces, Overview of the hazards involved within confined spaces, and learn how to maximize your own safety as well as those around you.

Forklift - Scissor Lift - Bobcat Skid Steer - Boom Truck; Aerial Boom Truck/Trailer, Certifications

Welding AWS Certifications, Iowa Lakes has an AWS Welding Inspector who deliver top notch training for all levels of welders as well as a state-of-the-art learning laboratory.

Working at Heights, Three-day training for certification as an Authorized Climber. Part of NATE Certification Series.

Tools at Heights, All workers who perform duties over six feet off the ground will benefit from this training, emphasizing a commitment for a zero drop philosophy and resulting in a certification from the National Coalition of Certification Centers (NC3).

Multimeter and Digital Metering (NC3) Certification, Basic meter usage and safety procedures. Torque Certification (NC3).

Rigging Inspection, Inspection techniques and practice skills are vital for safety and damage control while working at heights.

Hazard Communication, Aligns with the UN's Globally Harmonized System of Classification and Labeling of Chemicals, SDS sheets, health and safety issues.

Global Harmonization, OSHA revised its Hazard Communication Standard to align with the UN's Globally Harmonized System of Classification and Labeling of Chemicals.

70e Arch Flash Electrical Hazard Recognition and Documentation, Reviews the safety requirements when working on equipment that presents an electrical hazard.

High Voltage Recognition and Safety Practices, Assess potential dangerous situations when working with and around electrical devices in the workplace.

Lock Out and Tag Out (LOTO) Procedures and Reporting Requirements, OSHA's standard on the control of hazardous energy (the lockout/tag out standard) appears often on the agency's list of most violated standards.

Drug Awareness for Supervisors, this training complies with HR, industry and government regulation compliance for drug awareness and reporting.

Hearing protection and baseline testing for Decibel reduction, Proper training for in-the-ear protection is tested and graphed for employers and employees to achieve maximum benefit.

ACI Concrete Certification, delivered by Iowa Ready Mix Association, skill up your concrete crew and supervisors including flatwork technician certification, field testing, and more.

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For More Info Contact:

Gary Schmidt | 712-362-6807 | gschmidt@iowalakes.edu

Harnessing Wind Power: Change May Lead To Sustainability

Wind turbines rise in choir-like formations over the Iowa landscape where Iowa Lakes Community College has emerged as a leader in wind energy education.

As new ideas for wind turbines take shape, it sometimes takes multiple efforts to effectively launch those innovations. One of those pioneering ideas is a prototype Chava turbine located at the college's farm laboratory which, after being erected, is still in the testing stage.

"We've been getting calls from people," Hagen Ruff, Co-founder and CEO of Chava Energy, said concerning the delay in launching the turbine.

There's a good reason why the launch of the prototype vertical axis turbine got postponed.

Because some of the early planning incorporated Windtest North America, a 'bug' was identified early on.

The Chava wind turbine looks like an egg beater with its blade to the sky. This design is called a vertical axis turbine, and since the blade sits on top of the tower, it presents a more compact silhouette than a traditional turbine. This makes it more versatile in locations in which the wind direction is highly variable or turbulent.

Since this model is so new – only two exist in the United States – it has taken longer to launch the turbine.

"We are in a holding pattern at the moment," Dan Lutat, Director of Sustainable Energy Resources and Technologies at Iowa Lakes Community College said.

A solution is being created.

"The design is being modified to a

3-blade design, which will serve as a more stable rotor," Lutat said. "Once the changes are made to the torque tubes that form an integral part of the rotor, the Chava team will be back in Iowa to modify the turbine."

And that enhances the future.

"Our testing program helps to improve the quality of this turbine and it also helps to promote the small wind turbine industry in Iowa – and in the U.S. market in general," said Monika Kramer, President and CEO of Windtest. "Tested and certified turbines bring the highest value to turbine operators – and landowners."

This, in turn, is positive for the operation of the new turbine.

"It will set the stage for the certification period, once the tuning of the new configuration is complete," Lutat said. "In the meantime, we are working with Windtest North America to design and build the instrumentation system for the meteorological tower (met tower) that will collect the air data necessary to develop a true picture of the turbine's performance under varying weather and wind conditions."

Once operational, the turbine will benefit the college by supplying power to run the farm laboratory. At 102 feet tall, the turbine produces about 20 kilowatts of power.

It is expected that the Chava wind turbine will be quite successful in the unpredictable wind conditions through all of Iowa's weather seasons.

Chava's main goal in designing the vertical axis turbine is to eventually sell this turbine in Japan, where land space is limited.

"We basically figured that the

mast and turbine together create harmonics, and we needed to develop ways to manage the harmonics better," Ruff said. "The first option was to put large guy wires on the very top. The result would increase the footprint too much. The second option was to utilize a three-blade design."

The three-blade design will be built and tested in Miami first, and then brought to Iowa.

Ruff said, "This design will have the same hydraulic tilt, generator, and controls. Even the 2 blades we have remain at the same 120 degree angle."

Instead of setting guy wires at the top, Ruff said, "we basically put slim guy wires on the bottom of the turbine at a steep angle so we





◀ OPPOSITE:

From left to right:
Fernando Zambrana,
Frankie Maestri, Bill
Hman, Patrick Kibbie,
Ken Kranz, Hagen
Ruff & Dan Lutat
stand in front of
the Chava Turbine
during its inaugural
erection.

/// Iowa Lakes Community College has earned the educational 'Seal of Approval' from the American Wind Energy Association. It was in the first group to receive the seal and is one of just seven colleges in the United States to achieve this respected designation.

/// Windtest North America has facilities at the Estherville campus and is recognized as a leader in testing and technical consulting in measurements in power performance, mechanical load, sound emission, acoustic vibration, grid integration and performance assessment.

/// As a leader in renewables, the S.E.R.T. (Sustainable Energy Resources and Technologies) Center on the campus in Estherville incorporates:

- Engineering Technology
- Electrical Technology,
- HVAC (Heating, Ventilation & Air Conditioning)
- Water Quality and Sustainable Aquatic Resources
- Environmental Studies
- Several Wind Energy and Turbine Technology classes
- And, numerous Industry Training courses.

don't enlarge the footprint."

Ruff noted that when complete, the project will be unique as "the only certified, vertical axis tu United States."

Lutat points to the value of wind energy.

"As soon as you put (the turbine) in the ground, (it) starts to pay back.

Once this is operational, we will begin to see the benefits," Lutat said.

He added that the Chava turbine "will be an affordable option for isolated, rural areas and ag operations which have to operate really economically."

The innovation will be an up-to-the-second technology opportunity for incoming students. Lutat

said it will give them an entirely new perspective of wind power production for different markets.

And that's one of the reasons Iowa Lakes was one of the first group of colleges to receive the American Wind Energy Association's Seal of Approval.

Innovation and collaborative learning which incorporates the scientific process. Start with a design, test it, adapt and test some more. Collect data, analyze, evaluate and continue to improve and evaluate.

The opportunity to collaborate with progressive entrepreneurial spirits and successful companies such as Chava, Windtest North America, Anemometry Specialists and other wind companies support Iowa Lakes' national recognition.

Join Iowa Lakes to see what the future holds in Wind Energy and Turbine Technology.

MidAmerican Energy Reveals Major Wind Energy Expansion

DES MOINES, Iowa | MidAmerican Energy Company CEO and President Bill Fehrman was joined April 14 by Iowa Governor Terry Branstad and other state officials in making an announcement that MidAmerican is planning Wind XI, a \$3.6 billion project to construct 1,000 wind turbines that will generate 2,000 megawatts of electricity in Iowa.

Noting that the project is the largest industrial development project in the state's history, Fehrman explained, "When the project is completed, the utility will generate wind energy that equals 85 percent of its annual customer sales in Iowa." Wind XI is expected to be completed without asking for an increase in customer rates or financial assistance from the state to pay for it, Fehrman added.

MidAmerican Energy is working to finalize locations for its Wind XI development while the Iowa Utilities Board considers the project filing request. The company has asked the IUB to approve its ratemaking principles by September so it can take full advantage of the extended

production tax credit (PTC) available for the construction of new wind projects. Iowa Economic Development Authority Director Debi Durham said that wind power supports as many as 7,000 jobs in Iowa. She noted the industry's growth, its cost competitiveness and job creation, have been driven by the wind production tax credits.

"Investments of this scale are viable because federal production tax credits are at their highest level. It makes sense to leverage that benefit to solidify Iowa's leadership in wind energy. Today's announcement continues to build Iowa's legacy in the renewable energy space – and in a very real way, provides economic benefits to all Iowans," Durham added.

"This project puts Iowa on track to be the first state in the nation to generate more than 40 percent of its energy needs from wind power – far ahead of any other state," Branstad said. "

"Today, Iowa is the only state to have crossed the 30 percent mark." We welcome this opportunity to expand Iowa's renewable energy and thank MidAmerican Energy for making this investment in our great state. Every wind turbine you see in Iowa means income for farmers, revenue for counties and jobs for Iowa families."

Iowa Lt. Gov. Kim Reynolds added her thoughts as well, while on an overseas venture with the Republican Lt. Governors Association economic development delegation.

"The announcement today shows the level of commitment



Bill Fehrman, MidAmerican Energy Company CEO and President

MidAmerican Energy has for providing an even greater amount of renewable energy to their customers. Companies that we recruit from all over the world cite our reliable cost of renewable energy as one of the top reasons for locating in Iowa. This project will go a long way in attracting more high-paying quality jobs to Iowa."

Fehrman detailed some of the many economic benefits Wind XI will generate in the state.

MidAmerican Energy has been able to build renewable energy over the past decade while keeping its customer rates among the lowest in the nation, Fehrman said. "Our progress would not have been possible without visionary state leaders and regulators and the tremendous support for renewable energy we have received from our customers, supplier partners and community leaders throughout the state of Iowa. We are prepared to do more in pursuit of our 100 percent renewable vision."

2004

- MidAmerican Energy completed its first wind farm
- Iowa Lakes launches Wind Energy & Turbine Technology Program

Ten Years Later...

- MidAmerican Energy announces nearly \$7 billion expansion
- Iowa Lakes graduated nearly 300 Wind Techs



MORE GOOD THINGS 'IN THE WIND'

MidAmerican Energy is also in the process of building a transmission line from O'Brien County, through Clay, Palo Alto, Kossuth and Humboldt counties to Webster County, largely replacing a system that has been dismantled.

Due for completion by the end of 2016, the new transmission line is designed to advance Mid-American's transmission infrastructure, allowing for more efficient energy delivery to homes and businesses.

"The new lines are designed to meet expected growth in renewable energy generation. They will allow us to deliver more clean energy, like wind, to customers," Ashton Newman, Mid American representative, states. "The project will create several economic benefits, including landowner easement payments, an increase in annual property tax payments to local counties, construction jobs and future renewable energy

possibilities."

Estherville-based Iowa Lakes Electric Cooperative president and CEO Rick Oleson explained, "the new lines are expected to spawn a lot of wind development between the east side of the Iowa Great Lakes area to I-35. Even though we have great wind resources in the area, we haven't been able to develop wind power without adequate transmission lines."

Oleson said two local wind projects, The NorthStar and Red Rock wind energy systems, have been "in the wind," for a decade.

Organizer Al Blum, of Estherville, said the two farms are planned and with the soon-to-be completed transmission lines, he believes construction of the projects could begin before the end of 2016.

With headquarters in Des Moines, MidAmerican Energy is Iowa's largest utility. MidAmerican is a subsidiary of Berkshire Hathaway Energy.

Iowa Governor Terry Branstad



"Wind XI puts Iowa on track to be the first state in the nation to generate more than 40 percent of its energy

needs from wind power – far ahead of any other state. Today, Iowa is the only state to have crossed the 30 percent mark."

Debi Durham, Director of the Iowa Economic Development Authority



"Iowa Lakes Community College plays an important role in driving Iowa's evergrowing wind energy industry. With

specialized training programs for wind technicians, Iowa Lakes is educating the workforce that is more and more in demand here in Iowa, the state that leads the nation in wind generation as a percentage of total power output."

Jolene Rogers, Executive Director of Community & Business Relations Iowa Lakes Community College



"MidAmerican's timing for this project is perfect. Iowa Lakes has degree programs and a cadre

of qualified instructors ready to deliver a hands-on, robust academic program for the wind technician or related industry-focused careers. Short-term, skill-up training programs are also available and include completing industry recognized certifications."

ELECTRICAL APPRENTICESHIP PROGRAM

EARN WHILE YOU LEARN!



THERE'S NEVER BEEN A BETTER TIME!

Developed to provide electrical contractors an opportunity to prepare their employees to take the electrical exam. The program is approved by the US Department of Labor's Bureau of Apprenticeship and Training.

Apprenticeship offers an employee the opportunity to work for their employer while taking classes. It also offers an employee a chance to have more opportunities when they complete the different levels of training.

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- Coursework delivered by highly qualified instructors and staff to ensure your success
- 144 hours of training per year which includes lecture, labs, activities, and homework
- 4 years of coursework for a total of 576 hours training
- A Certification from the US Department of Labor upon completion of course
- Training and policies monitored and maintained by Iowa Lakes Community College Apprenticeship and Training Committee
- Work with employers to ensure standards are being met
- Tuition assistance to qualifying businesses and individuals

COURSEWORK TRAINING INCLUDES...

- | CPR, First Aid, AED | Arc Flash Training
- | OSHA 10 Hour | Prints & Electrical
- | Symbols | Electron Theory | Electrical Math | Meters, Hand & Power Tools
- | Intro to NEC (National Electric Code) Standards
- | Residential, Commercial & Industrial Wiring | PLCs (Programmable Logic Controls) | Motors & Controls
- | Motor Drives | Fire Alarm Systems | NEC (National Electric Code) Test Preparation
- | Mechanical Systems | Lighting Systems

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WIND ENERGY & TURBINE TECHNOLOGY

The nation's longest-running Wind Energy and Turbine Technology AAS program has been serving the wind energy industry since 2004 and was one of the first three programs nationally to receive the American Wind Energy Association's Seal of Approval in 2011.

Our hands-on approach to learning in state-of-the-art labs develops industry-transferrable skills. Coupled with industry-recognized certifications through Snap-on® and NC3 (National Coalition of Certification Centers), you will get the realism the industry demands on our 1.65MW Vestas V-82 turbine and several ground trainers, putting you among leading candidates that industry is looking for.



Call for a campus visit today!

Estherville Campus
Admissions (800) 521-5054
www.iowalakes.edu/windenergy



Employment Outlook for Electricians is "Awesome"

Electricity is the utility that provides light so we can work and play at any time, powers the motors that ease our workload and keeps our food cold and then heats it while it's cooking.

We probably rely on it the most – and miss it the most when it is not available.

And, since it's so relied upon, many educated individuals are needed in the electrical energy field.

The Electrical Technology program – located on the Estherville Campus of Iowa Lakes Community College – provides students with the opportunity to acquire these competencies and advance their career.

"Employment outlook for graduates is AWESOME! We have current students who are working for contractors while attending college," commented instructor Doug Zemler as he indicated the need for workers.

Zemler is a Master Electrician and an Army veteran. He began his teaching career in 2008, in the Iowa Lakes Community College Wind Energy & Turbine Technology program. He continues to teach high voltage and substation operation in that program.

The Electrical Technology program was added to the college's lineup in 2014. Zemler's experience in the field, along with his numerous electrical industry certifications, are a perfect match for the program.

The curriculum contains a variety of basic and specific skills required for employment and success in the career. Residential, commercial and industrial electrical systems are stressed, in addition to instruction in the National Electrical Code. The program is five semesters in length and spread over 21 months, which allows ample time for hands-on learning.

Coursework includes electrical safety; electrical theory; electrical code; residential, commercial and industrial wiring; renewable energy; logic controllers; and HVAC. Quality hands-

on training and proper knowledge of theory are essential.

A high voltage component of the curriculum exposes students to the theory and skills of the wind turbine and high voltage utilities. The curriculum of the Electrical Technology program is approved by the Iowa Department of Public Safety: State Fire Marshal Division,



Electrical Licensing and Inspection Program.

Graduates of the Electrical Technology program earn an Associate in Applied Science (A.A.S.) degree. They also earn 2,080 hours toward the total of 8,000 on-the-job (OJT) hours of experience required for testing for Journey Certification. OJT experience must be with a qualified employer. The apprenticeship track also requires OJT with a qualified employer.

The program has an active advisory committee comprised of members who are employers and employees in the industry. Their function is to advise the instructors on program curriculum and technology trends within the industry. They also act as liaisons for obtaining donations of needed instructional units and supplies from manufacturers.

"The advisory committee enables us to improve student skills to maintain employment readiness," Zemler added.

**"The advisory committee enables us to improve student skills to maintain employment readiness."
- Doug Zemler**

Electrician Licensure renewal & CEU Classes contact Gary Schmidt
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ELECTRICAL TECHNOLOGY

Associate in Applied Science Degree
Iowa Lakes Community College's state-of-the-art labs provide hands-on preparation to enter the workforce with confidence, and hours attained in class count toward

- Install, maintain & troubleshoot wiring systems
- Operate meters, tools & equipment
- Read blueprints & schematics
- Understand national & state electrical codes
- Install & maintain lighting & control systems
- Install & maintain electric motors

a journeyman license.

Take the first step toward a better career and get your AAS degree in Electrical Technology!

LEADING THE CHARGE

Meet The People Leading Sustainable Energy Resources and Technologies

The focus for Iowa Lakes Community College is not just on students' coursework, but on life skills and job skills necessary to enter America's workforce. In answer to this call, the college offers the opportunity to learn from experts in the respective fields who bring a heavy dose of mentorship into the learning process.

Such leaders are found teaching in the Sustainable Energy Resources and Technologies (SERT) Center, which is located near the clean energy-producing wind turbine on the Estherville Campus. The remodeled facility houses six programs. These include: Engineering Technology, Electrical Technology, Water Quality and Sustainable Aquatic Resources, Environmental Studies, Wind Energy and Turbine Technology, and Heating, Ventilation and Air Conditioning.



DAN LUTAT

OUR DIRECTOR

As the Director of Sustainable Energy Resources and Technologies for Iowa Lakes today, Daniel Lutat continues to work

with an experienced team of instructors to create areas of study that prepare graduates for jobs. By linking intuitive ideas from energy to the environment, Iowa Lakes takes a "systems" approach to developing graduates with a broader perspective. Iowa Lakes is committed to academic excellence with degrees that give graduates the freedom to succeed in any industry sector.

"We prepare students better. We aren't interested in graduates just getting jobs," Lutat said. "We want them to go farther faster and become leaders in their fields, if they choose to be. We understand there is no shortcut to building a good technician and our employers continually tell us that our graduates are ahead of their contemporaries."

For anyone looking for a stable career, energy, environmental and technology fields are where the money is at and offers job security.

"Not only are they in high demand, they are recession-proof," he assured. "In the 2008-09 economic downturn, wind energy grew by 30 to 40 percent those years – and growth is greater now than it's ever been." "For women in particular," Lutat continued, "the deficit of women in

technical fields is tremendous. We need the diversity of their problem-solving skills to the point that women entering gender-non-traditional fields can write their own ticket, building a career where opportunities are unlimited."



PATRICK MCCOY

ANSWERING THE CALL WITH WIND ENERGY

Iowa Lakes Community College's Associate in Applied Science degree in Wind Energy and

Turbine Technology was the first offered in the nation in 2004.

Patrick McCoy and Mike Gengler collaborate seamlessly to educate others about this "green" and "environmentally-sensitive" field.

McCoy's experience as a planning technician and civil engineering technician for the City of Sioux City, coupled with 11 years teaching in the classroom prepared him to switch gears and join the Wind Energy and Turbine Technology team.

Climbing 250 feet in the air, to the top of a wind turbine, still gives the Northwest Missouri State University alum an



MIKE GENGLER

adrenaline rush.

The same goes for Gengler, who grew up in Coldwater, Ohio. He is an Iowa Lakes Associate in Applied Science Wind Energy and Turbine

Technology Alumnus, Class of 2010.

"I knew I had chosen the right field when I opened the top hatch of the first turbine I had climbed," Gengler recalled. "I saw the view and I was hooked."

He served three years as a traveling wind technician for Windingen before joining Iowa Lakes as an instructor in 2013.

Both men agree that wind energy, like any other technical field, is poised for fast growth. In fact, with its recent passage of a multi-year extension of the wind energy Production Tax Credit and Investment Tax Credit, Congress secured stability for American wind industry workers and private investors helping to grow American wind power.



DON EDWARDS

HEATING, VENTILATION AND AIR CONDITIONING

Don Edwards began working for an Emmet County plumbing and heating contractor

as a high school student. Firming his vocation selection, he completed a technical degree and worked as a tech five years before buying a plumbing company and starting his own business.

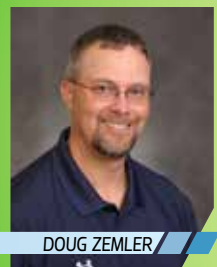
Edwards added the Heating, Ventilation and Air Conditioning (HVAC) instructor title to his professional résumé in 2014, when he joined Iowa Lakes' teaching staff.

Students who enroll in the HVAC program at Iowa Lakes have the opportunity to earn a national refrigeration license and other industry specific certifications.

With change as the constant reminder of relevance, Iowa Lakes is continuing its pursuit of educational excellence with degrees that give graduates the freedom to succeed in any industry sector.

"We understand there is no shortcut to building a good technician and our employers continually tell us that our graduates are ahead of their contemporaries." - Daniel Lutat, Director

"Students get 'real-world' instruction and experience guiding them through their time here at college," Edwards noted. "This is very important because the industry is going to become more automated in the area of 'smart' buildings."



DOUG ZEMLER

ELECTRICAL TECHNOLOGY

Doug Zemler is a master electrician and educator.

He grew up on a farm near Fulda, Minn., and enlisted in the U.S. Army after graduating from high school.

He completed the Lineman-Substation Technician Program, earning an Associate in Applied Science degree. Zemler worked for a time prior to starting his own business in the Lakes area. He joined the Iowa Lakes Wind Program team in 2008.

In the Fall of 2014, the College added the Electrical Technology program to the degree opportunities for students. And, in 2015, Iowa Lakes piloted an Electrical Apprenticeship program, approved by the U.S. Department of Labor.

"Employment Outlook is bright. Job openings are expected to increase by 20 percent," he said. "Older wiring needs to be replaced in both homes and businesses. The need for qualified licensed electricians is huge."

When asked why an individual should consider attending Iowa Lakes for an education and training in this area, Zemler answered, "It is very affordable to learn a trade and not be overwhelmed with student debt. Grads make a decent wage and there are lots of jobs. Iowa Lakes students have a great opportunity for scholarships!"

MEET THE INSTRUCTORS:

**Schedule a Campus Visit by calling
1-800-521-5054**

**Companies interested in training opportunities, visit
iowalakes.edu/CE**



GARY PHILLIPS

ENVIRONMENTAL STUDIES AND WATER QUALITY

Gary Phillips grew up hunting and fishing with his father which played a major role in his decision to pursue a career with ties to the nature world. Phillips joined the ranks of Iowa Lakes Community College professors in 1982.

Teaching a subject area he enjoys, having the opportunity to involve himself with environmental issues at the city, county and state levels, and guiding his students to achieving their personal dreams have kept him at Iowa Lakes for 34 years.

"The Environmental Studies and the Water Quality and Sustainable Aquatic Resources programs at Iowa Lakes Community College are very hands-on. Both offer students the opportunity to develop technical skills," Phillips said. "Laboratory experience is a key component of courses, and provides students with the opportunity to experience career specific skills."

"If you are concerned about the plight of the environment and want to pursue a career which will provide an opportunity to make a difference you should consider a career in environmental science or water quality," he said.



DOUG ENGER

ENGINEERING TECHNOLOGY

Doug Enger has taken on the responsibility for the new Engineering Technology program path at Iowa Lakes. His Associate in Applied Science degree in Industrial Instrumentation and Control, as well as field experience, allows students in the Robotics classes and PLC classes to develop a tremendous resume of skills.

He began working at Iowa Lakes in 2009 in the Wind Energy and Turbine

Technology Program and easily transitioned into Engineering Technology in the fall of 2014.

The Engineering Technology Program specifically provides students with a strong foundation in electronics, programmable logic control, and pneumatics so that graduates are able to design, program and install many different automation platforms.

The program incorporates renewable energy, together with lean manufacturing principles, thus equipping students with a broad knowledge base to pursue positions in the advanced manufacturing sector.



GARY SCHMIDT

BEST FOOT FORWARD: SAFETY AND CUSTOMER SERVICE

Gary Schmidt, is an Iowa Lakes Community College alumnus armed with a Bachelor's degree in Business Production Management. After running his own business, he spent over 15 years as a college instructor, preparing many for the world of work. "When I was hired at the college, I continued to help people achieve their skills and dreams – but I shifted from building buildings to building people," Schmidt recalled.

In 2015, he transitioned to Industry Training in the college's Continuing Education department, where he collaborates with companies to grow their employees and focus on safety and leadership skills. "The unique thing about the community college system is its ability to respond to industry needs quickly and to help industry find competent employees," he said. "The local area should be very proud of what Iowa Lakes Community College has done with its programming and getting the best people around to deliver training and information."

Wind Energy & Turbine Technology Program Opens a World of Possibilities

There's a saying posted on the wall in the Student Achievement Center on the Estherville campus of Iowa Lakes Community College. "Education is not preparation for life. Education is life itself."

Like many others, Jacob Hansen didn't know where life would take him when he was studying at Iowa Lakes. Yet, looking back, he knows his education was definitely worth the effort. Hansen enrolled in Iowa Lakes' Wind Energy and Turbine Technology.

Since his graduation in 2008, he has experienced a lot of life.

"Because of Iowa Lakes' Wind program having so much prestige in the wind industry, we had a lot of wind companies come to campus and meet with us," Hansen said. "This allowed us

to have great job opportunities once we graduated."

He currently works as a Wind Turbine Manager for the Centerra company as a civilian contractor for the Navy at Guantanamo Bay Naval Base in Cuba.

"I operate and maintain the four wind turbines on the base. Since all power must be made on the base it is very important to create as much renewable power as possible," he added.

While attending Iowa Lakes, Hansen took advantage of support services and scholarships.

TRIO Student Support Service, a U.S. Department of Education grant-funded program, assists first-year college students. He appreciated and gained so much from the program that by his second year, he was assisting other students.

"My second year in the TRIO-SSS program, I worked as a mentor for freshmen getting adjusted to college life," Hansen said.

"TRIO-SSS was a great program that allowed me to meet other students and go to different events and activities."

Like many at Iowa Lakes, he valued the chance to apply for scholarships to help pay for college.

"I received several scholarships

"Iowa Lakes truly opened the door to my career. I was blessed to be surrounded by great instructors who took the time to make sure you understood the material." - Jacob Hansen



Jacob Hansen works as a Wind Turbine Manager for the Centerra company.

at Iowa Lakes which made a tremendous impact," he said.

He was also involved in the Wind Energy Club where he helped raise money to attend the American Wind Energy Association Wind Power Conference.

And, he credits these activities with helping to shape his life.

"Iowa Lakes truly opened the door to my career. I was blessed to be surrounded by great instructors who took the time to make sure you understood the material," Hansen said. "Thanks to Iowa Lakes for opening the doors."

"Without Iowa Lakes I would not have the career I do now," Hansen concluded. "I never dreamed I'd journey outside Estherville or Emmet County."

SCHOLARSHIPS

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ILEC Sees Fruit of Tree it Planted at Iowa Lakes

After several years of assisting with the planning for a wind energy program at Iowa Lakes Community College, Iowa Lakes Electric Cooperative President and CEO Rick Oleson remembers the day in 2004 when the classes finally got underway.

"As Iowa Lakes started the training program for the technicians, Al Zeitz, who now works for us, was the instructor of the dozen or so students involved. We kind of kid about it now, because their first class activity was putting their desks together. There were about 12 people in an empty room. They started literally from the ground up."

That "ground up" effort later became the first nationally-certified wind energy training program in the nation – and the crew that grew into positions at the electric cooperative.

Then Vice President of Operations and Engineering for ILEC, Oleson had helped in the program's planning stages, especially with interconnection with ILEC, Cornbelt Power Cooperative and the City of Estherville, knowing

that in the not-too-distant future that ILEC would have its own wind generation system.

ILEC put its seven turbines online in Superior in 2009, with a like number in Lakota. Both sites provide a good portion of the electricity that powers the ethanol plants in those two communities.

More than a decade later, ILEC has gained from the Iowa Lakes program in several ways.

When its 14 General Electric turbines were put online, ILEC initially used contracted crews to operate and maintain the turbines under a three-year warranty program, but opted to bring the operations in house when that warranty expired.

Oleson says the move increased both the efficiency and profitability of its generation system. "We can't make the wind

blow. But when it does blow, we need our turbines to be available." Standards range from 95 to 98 percent availability when wind conditions are right for power generation.

ILEC was under 98 percent availability with the warranty contractor. "But once we went with our in-house, three-man crew, we cut our maintenance costs by over \$100,000 per year, and improved our availability rating, even though our plant is aging and is harder to keep online as it gets older," he explained.

"Now we've exceeded 98 percent every year – with lower cost and



RICK OLESON, President & CEO



MEET THE IOWA LAKES CONNECTION AT ILEC

AL ZEITZ

Al Zeitz's first full-time wind technology job came on the Buffalo Ridge project near Lake Benton, Minn., when opportunities in the field were few, and most that existed were installed in California.

Zeitz also worked in Texas, before returning to Iowa to commission turbines in the Storm Lake area.

At Iowa Lakes, Zeitz says he saw a difference between most traditional and non-traditional students at Iowa Lakes. "Students right out of high school are looking for a career – without having the same life experiences as many non-traditional students."

Zeitz was the first Iowa Lakes Community College wind instructor.

SHANNON LEHMKUHL

Shannon Lehmkuhl worked his way through high school and college, including an extended enlistment in the Iowa Army

National Guard.

Lehmkuhl says he, "drove truck, for a little bit, was a carpenter for a little bit – trying to figure out what he wanted to be – then went into construction technology (at Iowa Lakes) in Emmetsburg."

After graduation and deployment, Lehmkuhl landed his Wind Technician position with Iowa Lakes Electric Cooperative as the maintenance and operations crew was being put together.

Lehmkuhl is somewhat atypical of many of his generation. He says he has no regrets about working in his younger years.

"It's a lot like the military, too, where you get structure and discipline and not everybody gets a trophy."

He also explained that his time at Iowa Lakes was beneficial not only to his career in wind technology, but helped when he was deployed.

Iowa Lakes, he said, gave him the technical skills, the electrical knowledge and electrical theory he needed on-the-job to diagnose and troubleshoot electrical circuits, in addition to

Iowa Lakes Electric Cooperative is a consumer-owned electric cooperative that serves approximately 12,400 farms, homes, businesses and industries in Northwest Iowa – the heart of America's breadbasket.

higher performance. That's about as good as it gets. We're running above nameplate – sometimes about 5 percent over."

"We get to see production for some of the other projects in our area. Basin Electric, one of our power providers, has about 800 mw of wind generation capability. Their monthly capacity factor for February was 40 percent. We had 100% of our 21 mw on peak. And our capacity factor was 53 percent."

"That doesn't come easily. Our guys respond right away, from home or out in the field, where if we had



a contractor who had to drive from another community, it could either take a long time, or the response was 'we can get it another day.' Our guys really pay attention to our turbines.

The Iowa Lakes program is the most comprehensive program in the country, in addition to being the first one certified nationally."

In addition to Zeitz, who is Manager of Renewable Energy Services, the ILEC crew is comprised of two of his Iowa Lakes students, Zach Herum, and Shannon Lehmkuhl.

"When Zach and Shannon went through the GE training in Schenectady, New York, of the 200 or so in that class, Zach was the highest scorer. He's a low-key guy, a very good troubleshooter and competent technician. Shannon, who like Al is a veteran, did very, very well, too."

Oleson says wind turbine technology is a good career. "Now, with tens of thousands of utility-scale turbines it's a very good vocation – a very good career path."

While Oleson admits a bit of bias

having started his career as a lineman, then going to college to get a business degree, he said he sees, "wind energy technicians as one of those blue-collar jobs that pays a good, living wage and has benefits associated with it. You can go through four years of college, and what our guys are paid after a four-year apprenticeship is comparable."

There's also great job satisfaction, he says. "Our guys also get a report card every day when they print out production results. Everybody looks at what our availability was the previous day. And the monthly report goes to the board of directors. So everybody sees how we performed. When you have a small project footprint like we do, with only 14 total turbines, if you lose one or two turbines, the numbers drop quickly."

Oleson also explains that federal regulations don't allow ILEC to train technicians in-house, so the cooperative depends on community colleges to train their students for jobs with a good future.

safety training to work at heights – even rescue training at heights. "That's a huge safety issue," he said.

"Iowa Lakes has worked out in multiple ways in my life."

ZACH HERUM

"Wind technology was kind of a new thing at Iowa Lakes when I first learned about it," Zach Herum explained, adding that he was in the third graduating class.

His paid internship with Vestas gave him great experience, he noted. Vestas is the Bloomington, Ill., company that built the Iowa Lakes turbine.

His early wind turbine job experiences came in Illinois, Iowa, North Dakota and Texas, before he returned to the Hawkeye State. Unlike many young people, Herum said he, "really liked working on the road but looked to eventually return to Iowa."

"Everybody was saying when I went through Iowa Lakes was the best time to do it. But I honestly think it's going to grow tremendously over the next 20 years – more than anybody ever

thought."

Herum says that, "When I first told my Mom I was going to do the wind energy program at Iowa Lakes, she wasn't too thrilled."

"She didn't know what a wind turbine was. But now she's glad I did what I did at Iowa Lakes."



FROM LEFT TO RIGHT: Shannon Lehmkuhl, Al Zeitz, Zach Herum

What Goes On Under the Green Dome?

As travelers approach Estherville, Iowa, from the south on Iowa Highway 4, many often wonder about what happens under the green domes they see on the east side of the road.

While – as Mark Twain might say – there isn't "gold in them thar hills" there are many very good jobs for those who care about the environment.

As more emphasis gets placed on water quality in Iowa – and worldwide – more technicians are needed to keep water clean.

Two Iowa Lakes graduates are taking advantage of this new opportunity.

Jeff Kautz, Wastewater Utility Superintendent, and Ian Schmitz, Wastewater Operator 3, are Iowa Lakes graduates employed by the City of Estherville.

"We need well qualified employees that can be trained quickly and we are just one municipality. Take that times all the cities, Department of Natural Resources and counties who need these workers too," Kautz said.

Schmitz says the state's focus on clean water emphasizes the need for continual training and education.

Kautz and Schmitz agree that those considering this profession need to

realize several factors.

"You can't just come in and turn knobs day after day," Schmitz noted. "You have to learn to adapt to changes that occur daily. And, individuals should be environmentally responsible."

Kautz added, "You have to want to protect the environment. You are helping more than yourself or your boss; you are helping the entire community so you need to be civic minded."

Pride comes with the job.

"We take a lot of pride in what we do here," Kautz continued. "If you are looking for recognition, you are in the wrong place. We are only thought about when a sewer backs up or something like that," he added with a chuckle.

Both stressed the importance of



getting an education.

The courses offered at Iowa Lakes send graduates into the workforce ready to work. "The two-year course can get you up to a grade three so you are ready for a beyond entry level position immediately," Kautz advised.

Schmitz added that more employers will help with continuing education of 20 hours every two years in order to maintain or increase the grade level of their employees.

The regulations currently "on the books" allow for six months on the job to obtain the certification.

Grade four is the top level in Iowa. "The jobs are opening up fast since many of the current workforce are nearing retirement age so well-qualified employees are needed now," said Kautz.

Dedication is high on Kautz's list of attributes sought in job applicants. "You have got to be dedicated to this profession, as you are on call 24 hours a day 365 days a year."

He has one lab technician and four operators at his plant.

Schmitz says the job is never boring.

Kautz encourages those concerned about the environment to consider the courses offered by Iowa Lakes. "The jobs are here and we all need to find well-trained employees to fill those jobs."



"The courses at Iowa Lakes give an excellent foundation to the workers," – Ian Schmitz

distinction."

They both recommend the Water

Quality & Sustainable Aquatic Resources program as well as the Environmental

WATER QUALITY & SUSTAINABLE AQUATIC RESOURCES

At Iowa Lakes, you can earn an Associate in Applied Science degree in Water Quality Technology in just two years!

Employment of water and wastewater treatment plant and system operators is projected to grow 12 percent between now and 2020 according to the Bureau of Labor Statistics. The median annual wage of water and wastewater treatment plant and system operators, depending on experience, location, and education is \$40,770 according to Bureau of Labor Statistics.



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Wind Graduate Advocates for Women in Industry

When Loma Roggenkamp decided her five years of varied work experience and bachelor's degree in Marine Biology weren't the right fit, at the advice of her mother she began looking into the wind energy field.

While Roggenkamp's interest was piqued, she soon found despite her higher education and experience, she lacked necessary skills to enter the field. Researching online for wind tech training programs led her to the Wind Energy and Turbine Technology program at Iowa Lakes. She came to Estherville for summer orientation and stayed until graduation in 2010.

"Iowa Lakes provided me with so many more opportunities than my previous education," commented Roggenkamp. "Previously, I had attended a University which seemed to favor a select few, but Iowa Lakes provided an equal opportunity to everyone furthering their education."

The flexibility Roggenkamp found at Iowa Lakes allowed her to be a full-time student, have a part-time job, and develop an enthusiasm and commitment to renewable energy development.

She led the Women of Wind Energy Iowa Chapter and was an active part of the Iowa Lakes Wind Energy Club. One of her favorite activities was with the Estherville Kiwanis in presenting a wind energy program Career Exploration event for the Girl Scouts of Greater Iowa. Scouts attended from more than six Iowa counties.

Her activities led to securing a fellowship just prior to her Iowa Lakes graduation. The Women of Wind Energy Rudd Mayer Memorial Fellowships are awarded on a competitive basis to only seven women nationwide annually. The fellowship paid for her to attend the American Wind Energy Association Annual Conference in Dallas, where she was able to network with employers for potential internships and employment.

After graduation, on-the-job training



WOMEN OF WIND ENERGY

www.womenofwindenergy.org

took her to Houston for training with Siemens Wind Service USA. Her positions with Siemens are constantly evolving, just like the industry. Her current role is the Eastern Region Environmental Health and Safety Field Specialist. In that capacity she provides in-house inspections and guidance in accordance with OSHA and company regulations. Each farm is run as its own entity and Roggenkamp provides support services to the administrators of 14 wind farms in Iowa, one in Indiana, and one in Maine.

Roggenkamp is actively working to revive the Iowa Chapter of Women

of Wind Energy, as Iowa is second of the top producers of Wind Energy in the country. She continues to present to classrooms and community groups regarding women in the wind energy field, avoiding calling the industry "non-traditional" for women.

"The wind energy field has an opportunity for anyone. For the industry to be successful they have to pull talent from everywhere," Roggenkamp explained. "You are as good as you push yourself to be, and no one should categorize you without knowing what you have to contribute."

"Iowa Lakes provided me with so many more opportunities"
– Loma Roggenkamp

ENVIRONMENTAL STUDIES

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Road from Armstrong to Iowa Lakes Goes Through Europe, Iraq and Arizona

Had you asked 18 or 19-year old Ryan Craig if he had intentions of ever returning to northwest Iowa after he graduated from high school and enlisted in the Air Force, he says the answer definitely would have been "no."

But his time in the Air Force, along with a few years of maturity, changed that.

"One of the main reasons I joined the Air Force is that when I was younger I didn't know what I wanted to do – though I did know I needed to do something. The Air Force was a good avenue for me," Craig explains almost 15 years later. "It's hard to ask an 18-year old kid, 'what do you want to do for the rest of your life,' when he has essentially no life experience."

Craig recounts a military experience that took him all over Europe, to Iraq, and to several locations in the United States, including work with the Border Patrol in Arizona. And while he never flew planes in the Air Force, Craig initially enrolled in the Iowa Lakes aviation program before realizing he wanted to settle down more than he wanted to travel.

"Things mechanical and electrical just make sense to me. So on the recommendation of a friend in the

wind energy program I looked into it and squeezed through the door in 2010, then did a summer internship at Edison Mission, the California company that owned half of the wind farm in Alta."

As graduation neared in the spring of 2012, Craig said he applied for jobs "anywhere and everywhere," and was picked up by (the Spanish) Ibedrola Renewables doing maintenance and troubleshooting in the Corpus Christi area. (Ibedrola also operates wind farms near Harris and Clear Lake, Iowa.) He then landed the Service Site Supervisor position with Siemens. He and his technicians service wind projects in northwest Iowa.

The Highland wind farm is one of the largest such projects in the state. Craig also oversees a wind farm near Pomeroy.

MidAmerican Energy has an

agreement with Siemens to monitor, service and troubleshoot any issues with the turbines.

While Craig's job largely involves human resources, he says his focus, "has to be on maintenance. Everything in our industry is based on production and availability. Industry contracts call for 95 to 98 percent efficiency. That's what they expect."

Craig has a

"There is no doubt in my mind that Iowa Lakes is a key component of who we are and how we got here."

**– Ryan Craig
Service Site Supervisor,
Highland Wind Farm, Primghar, Iowa**



Ryan Craig in front of a demonstration turbine in the Iowa Lakes Sustainable Energy Resources Technologies Center on the Estherville campus.

couple dozen technicians to help in that regard. "There are several manufacturers of wind farm equipment. We're fortunate to work for Siemens, a company that has a very good reputation and very high quality products."

With advancements in technology, Craig and his staff can access operational information from anywhere in the world via smart phone.

IOWA LAKES EXPERIENCE BENEFICIAL

"The staff at Iowa Lakes was very supportive. They want you to succeed and make sure you have the tools to succeed," Craig explained recently. "With technology, things often change faster than you can keep up. I think Iowa Lakes does a good job with that, too."

"When you talk about a job in wind energy there are so many different aspects a person can get into. There's construction, commissioning

Siemens Corporation is a U.S. subsidiary of Siemens AG, a global technology enterprise founded in Berlin, Germany, in 1847. With approximately 348,000 employees in more than 190 countries, Siemens reported worldwide revenue of \$86.2 billion in fiscal 2015. Siemens reported U.S. revenues of \$22.4 billion, including \$5.5 billion in exports, and employs approximately 50,000 people through-out all 50 states and Puerto Rico.

– wiring, getting 'em ready to go – then service. Iowa Lakes gives you the tools and knowledge – a general understanding of the industry – so you can basically get a job in any of those positions."

"Something else they do a good job of at Iowa Lakes, is that classes start early in the morning. So you had to get up. You had to be on time. And the instructors notice that. They know who's coming on time and who's not. They're obviously going to recommend students who are showing up on time and are diligent about their work."

"Obviously Iowa Lakes wants to give its students an education so they can go out and get a job. The school does a good job of that. A lot of it comes down to the individual's attitude."

"Iowa Lakes also does a good job of investing in its communities and its students, whether they are traditional students, or as in my case, students who are in their mid to late 20s."

HIRES IOWA LAKES GRADS

When he's in hiring mode, Craig says he calls the Iowa Lakes staff. "I don't hesitate to call and ask their opinion."

"It can be a challenge to find the help we need. A lot of people don't have any intentions of moving to rural Iowa to work for a multinational company. I may be a little biased. But out of all the programs I see guys coming from, it seems like a better quality comes from Iowa Lakes as far as education and exposure to things that are relevant in the industry."

CAREER A GOOD ONE

Craig says he's happy with his career, "and happy with all the life experiences that have taken me everywhere." He and his wife Stephanie live near Milford with their two children.

Craig is also pleased for his family's situation. "Stephanie was in the nursing program at Iowa Lakes when I was in Wind Energy. She now works part-time as an OB nurse at the Spencer Hospital. It has worked out well with Stephanie being a nurse. My job has taken us everywhere.

And she has been able to get a job everywhere we've been."

"There is no doubt in my mind that Iowa Lakes is a key component of who we are and how we got here."

NONTRADITIONAL STUDENTS DO WELL AT IOWA LAKES.

Dan Lutat has headed up the Wind Energy program at Iowa Lakes since Ryan Craig's second year in the program, and has nothing but praise for Craig.

"What the nontraditional students do for our traditional students in the classroom cannot be overstated. Whether they know it or not, they become informal mentors to those traditional students."

"In the technical field, more than anything, kids these days have the opportunity to go out there and learn how to become productive working adults, have that good income at a young age, and figure what the next step will be."

"We're going through a mini-industrial revolution. But we have few workers to filled those skilled jobs."

"People think that because they have some mechanical background, that's enough. And it's not. They're going out there unprepared. They need to make a commitment to themselves. Once we can get them to commit, and once they graduate, they come back six months later and say, 'Yup, you were right.'"



Iowa Lakes instructor Michael Gengler shows off the control panel on the demonstration turbine in Estherville.

story continues on
page 22

FOCUS ON SAFETY

Within OSHA top four focused priorities is **DROPPED OBJECT PREVENTION**.

Iowa Lakes is the Energy Leadership School for the **National Coalition Certification Center (NC3)**. Train the Trainer Event for **Tools at Height Certification** is held annually in October. Individual certification classes are held the first week of each month.

GWO Certification is available at the Sustainable Energy Resources and Technologies Center, 2421 7th St. S, Estherville. This week long certification course is offered monthly and can be scheduled for exclusively for your company, if that is your preference.

NATE Certifications are available. Iowa Lakes has trainers certified to deliver the Authorized Climb Certification. Collaboration with TES allows us to host Competent Climb Certifications.

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At Iowa Lakes, you can earn an **Associate in Applied Science degree in Engineering Technology** with an emphasis in Industrial Automation in just two years!



The Engineering Technology Program at Iowa Lakes Community College provides students with a strong foundation in electronics, programmable logic control, and pneumatics so that graduates are able to design, program and install many different automation platforms. The program incorporates renewable energy, together with lean manufacturing principles, thus equipping students with a broad knowledge base to pursue entry-level positions in the advanced manufacturing sector.

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SORENSEN MORE SERIOUS 'THE SECOND TIME'

Tom Sorenson grew up on a farm near Terril. Like Ryan Craig, his boss at Siemens, Sorenson became a nontraditional student at Iowa Lakes. While he had initially enrolled in the broadcasting program right out of high school, Sorenson says he did better as a nontraditional student years later. "I took it more seriously the second time."

Now 28, Sorenson worked at a series of jobs for a few years before re-enrolling and entering the wind energy program. He started out as a level one tech at a North Dakota wind farm immediately after graduation. His career path took him from North Dakota to a wind farm in Massena, Iowa, before joining a group of traveling techs in the Pacific Northwest, California, and Brazil, before he returned to Iowa and eventually joined the staff at the Highland project when it opened in 2015.

Today Sorenson is a service site lead in O'Brien County, handling day-to-day operations, dispatching crews, getting service plans together, doing safety audits, ordering tooling, and dealing with landowners.

He says he's very content with his current situation. "I like this job. I like the different challenges. And I'm pretty close to my family now."

"I'm not doing just one thing. Iowa Lakes was a good starting point to get an understanding of the industry, seeing how things work, strengthening my mechanical work, strengthening my mechanical skills, electrical skills and hydraulic skills."



Iowa Lakes Wind Energy graduate Tom Sorenson at a wind turbine site in Brazil

Heating, Ventilation & Air Conditioning

Who do home and business owners call when their heating or air conditioning system is not working properly? Of course, they want a qualified technician with knowledge of the latest technology and diagnostic procedures.

The Heating, Ventilation, Air Conditioning (HVAC) program at Iowa Lakes Community College can educate individuals to meet the needs of home and business owners for repair and servicing their systems.

The HVAC program provides students with the technical knowledge and

skills to not only diagnose and repair faulty systems but also to design and install new systems. They also obtain a background which will enable them to become business managers or owners.

Don Edwards, program instructor, brings a broad professional background to share with the

students. He graduated from technical school and worked in the industry for several years before becoming the self-employed owner of a successful HVAC business which he has operated for more than 20 years.

Employment opportunities for graduates continue to grow.

"There is a shortage of qualified technicians and a need for trained technicians to enter the industry," stressed Edwards.

The internship component of the curriculum provides the students with 400 hours of on-the-job opportunities to experience the

requirements of the industry under the mentoring of a certified technician. Graduates of the 21-month program earn an Associate in Applied Science degree.

The technology of HVAC is constantly changing. Electronic controls and sensors have increased the need for technical skills. One of

the most recent examples is 'smart buildings' which sense the presence of occupants and then adjusts the climate controls accordingly.

Advisory committees are essential to the success of any career and technical program and the HVAC program is no exception.

The advisory committee members provide the program instructor with information about the latest trends and technology in the industry. They also are a valuable resource as liaisons with manufacturers to obtain donations of test equipment and instructional units. As a result of their efforts, the HVAC program has received donations from Lennox, Ruud, Amana, Maytag and Coleman.

Additional information is available at www.iowalakes.edu and by contacting the instructor at dedwards@iowalakes.edu. Campus visits to the Estherville Campus may be arranged by contacting Admissions at (712) 362-2604 or 800-521-5054.

"The advisory committee reviews our curriculum to ensure we teach the skills that employers want." - Don Edwards

Heating, Ventilation, Air Conditioning & Refrigeration Technology

Excellent employment opportunities are available in this high demand career. Trained technicians will see job growth of nearly 35 percent in the next 5+ years. With two years of professional training – including a paid summer internship – graduates of this program are qualified for immediate employment. At Iowa Lakes you receive a two-year degree – including valuable apprenticeship hours. The median annual wage for journeymen is typically more than \$40,000.



Iowa Lakes offers one of the most affordable, cost-effective programs in the state!

Call for a campus visit today!

Admissions (800) 521-5054
or (712) 362-7945
www.iowalakes.edu



Iowa Lakes Celebrating 50 YEARS



Your Community, Your College



THE FUTURE...

Over the last 50 years, Iowa Lakes has grown and evolved as the community college system in Iowa has matured. The college, which began with just two campuses, in Estherville and Emmetsburg, currently has a campus in the economic center of each county it serves. The college employs over 500 people (full and part-time faculty and staff). As Iowa Lakes looks to the future, its decisions will be shaped by the same mission that has successfully guided it in the past: **to provide opportunities for quality lifelong learning and promote economic development for our communities.**

Iowa's Network



IT | Health | Utilities | Manufacturing

Iowa Lakes Community College continues to align curricula with national industry credentials, align non-credit certification offerings with credit course offering, and expand work-based experiential learning. All materials developed throughout the grant period are open educational resources, available with the general public, to help enhance education and career in Wind, Electrical, Engineering, Water Quality, and HVAC. To date, we've served 48 college students since the 2015-2016 fall and spring semesters. The College purchased a robotic trainer for Engineering Tech, a simulator for Electrical Tech, a simulator for HVAC, as well as equipment for Water Quality.

Iowa's Community Colleges Collaboration Yields \$15 million TAACCCT Grant

In pursuit of greater economic strength **Iowa's Information Technology, Healthcare, Utilities, and Manufacturing (IHUM)** Network education and training opportunities vary by college.

Iowa Lakes Community College focus is to provide Utilities Sector companies with workers.

Strategies to recruit individuals to these high-skill, high-wage occupations include

- Career pathways,
- Simulation labs
- Technology integration
- Career Coaching
- Resume development
- Workplace readiness preparation
- Integration of industry-recognized certifications

A project website has been established, to view grant outcomes: <http://www.enhanceiowa.com/>

This workforce solution is funded by the IHUM Consortium which is 100% financed through a \$15,000,000 grant from the U.S. Department of Labor's Employment & Training Administration.

The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

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ALGONA | EMMETSBURG | ESTHERVILLE | SPENCER | SPIRIT LAKE