

**Joliet Junior College – Operations Engineering & Technician
Supplemental Documents
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Advance CTE: State Leaders Connecting Learning to Work
c/o Advance CTE Excellence in Action Award
8484 Georgia Avenue
Suite 320
Silver Spring, Maryland 20910

November 14, 2017

To Whom It May Concern:

I am writing to show my support for the Operational Engineering and Technician Program offered by Joliet Junior College. I believe the program greatly benefits students, the community, and the companies taking part in the program. Having been a student and receiving a degree through the program, I can vouch for this exemplary program.

The Operational Engineering and Technician Program provided me with valuable experience and background while allowing me to fast track my career as an Operations Engineer. I was able to begin working for a company where I would be able to launch a lifelong career right after graduating with a degree in Applied Sciences for Operations Engineering. Joliet Junior College helped guide me along the way by ensuring I had the correct schedule, best professors, and hands-on experience I would need to succeed. The internship that is incorporated into the program was greatly beneficial because it gave me work experience and great insight as to what it means to be an Operating Engineer, along with a practical knowledge that employers look for.

The continuance of the Program will allow local industry to employ student applicants who have been given the knowledge and experience necessary for their mutual success.

Sincerely,


Jacob Butts

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8484 Georgia Avenue
Suite 320
Silver Spring, Maryland 20910

To Whom It May Concern:

The Operations Engineering and Technicians program at Joliet Junior College has profoundly helped me discover what career path I would like to pursue. In the OET program we have taken classes covering electrical basics, industrial maintenance basics, math, and physics. As the semesters continue on we have covered more advanced classes like Industrial Controls, Fluid Power, and Electrical Troubleshooting. Having a broad range of classes covering electrical, mechanical, and operations aspects, the program has broadened my view of the field I'm pursuing. I have learned an astounding amount through this program that will help me when applying for jobs and will help in my future career.

This past summer, we got the opportunity to intern at 1 of 3 companies; Aux Sable, LyondellBasell, and Exelon. We went through a resume class which led us into an interview process with all 3 companies. I myself, got the opportunity to intern at LyondellBasell in Morris, IL. It was a 12-week internship. The first 6 weeks I was with the Electrical/Instrumentation maintenance shop. Each day I was paired with an E/I technician and I was able to follow and assist them with their daily jobs. I got to experience a variety of jobs ranging from wiring/unwiring motors, running conduit, replacing light fixtures, to troubleshooting PLC programs and calibrating meters and gas detectors. For the final 6 weeks of the internship I got to experience the Mechanical maintenance shop. With Mechanical maintenance, I got to experience a variety of jobs ranging from removing pumps/motors and disassembling pumps/blowers, to crane work and removing the internals of a main compressor. My experience with the internship was above and beyond what I could've imagined.

I learned a variety of new skills and gained work experience that I was able to put to use in the classroom this semester and next, and that I will be able to put to use in the future. This program has been personally and professionally rewarding for me. Personally, through the program I have made multiple lifelong friendships with the students I have met in the classes. Professionally, I have gained work experience and a vast amount of knowledge I'll be able to put to use with my future career.

Thank You,

Lucas Mann

A handwritten signature in black ink, appearing to read "Lucas Mann", with a stylized flourish at the end.

November 2, 2017

To Whom It May Concern:

It is with great pleasure to write a letter of support for such a great program. The Operations Engineering and Technician degree program has benefitted me immediately upon entrance. Before starting the OET program, I was fortunate to receive an internship as a raw material intern upon high school graduation at LyondellBasell. This provided me with an opportunity to see how the industry worked. Throughout the summer, I was able to network with industry professionals who have backgrounds in what I want to study. This internship gave me an introduction to what I would be learning in the OET program.

Once the OET program began, I immediately connected the classroom learning with what I experienced in my summer internship. I was very fortunate that during my first semester we received tours of Aux Sable, Exelon and LyondellBasell. TransCanada came into our classroom and provided an overview of what their industry is about. Through the tours and classroom presentations, we got to learn what the companies who have invested into the program actually do. We met with company personnel and received basic plant knowledge which provided us a better perspective as to what to expect when we enter our summer internship through the OET program.

This past summer I was able to intern at Aux Sable Liquid Products, and the experience I received was extremely valuable for my future career. I was able to apply what I learned in the classroom to the work environment. My internship provided me with real-world experience including an actual schedule of an operator within the plant. I worked ten hour days with a rotating shift, and I was even able to work the night shift.

Now that I'm back in the classroom for my final year, it was so beneficial to have the work experience so we can connect the learning to the workplace. Since our program is done in a cohort, I was able to share my experience and the knowledge gained. It was nice to learn that my classmates had very similar experiences.

It was a privilege to be accepted into this program. The opportunities provided to me are invaluable. By being apart of the OET program, I have a better feel of what to expect as I start my career and the knowledge to be a better operations engineer. I wish future students the same experience as I am having, and I thank everyone who was involved in creating this program.

Sincerely,



Carly Murphy

To Whom It May Concern:

My name is Neil Schultz and I would like to discuss my time in the O.E.T. (Operations Engineering Technician) program at Joliet Junior College. Completing the O.E.T. program equipped me with all the necessary skills to be prepared and successful in my career as an Instrument Technician with Exelon Generation. The program created the ideal environment for my education with professors with genuine field experience, comprehensive and challenging labs, policies regarding dress code, superb grades, and acute punctuality, thorough course curriculum, and a summer internship. Upon completion of the program I was adequately prepared for the competition in the technical trades.

The professors brought a level of respect to the classroom that was earned from years of experience in the field. Daily my classmates and I were challenged to perform tasks much like the ones I now perform at Exelon Generation and problem solve solutions within a safe lab environment. The program policies about dress code, punctuality with the badge system, and maintaining a minimum 3.0 GPA was an excellent way to simulate high workplace expectations. While in the O.E.T. program I was provided with the opportunity to experience different trades as part of the curriculum. I had the opportunity to observe a plethora of trades such as electrical work with motors and PLCs and gear ratios, pipefitting, and pneumatic systems. By experiencing each technical path, I was able to discover what I most enjoyed, in which path I most excelled, and ultimately choose which area I wanted to specialize in. For me personally, it was an instrumentation class that led me to pursue a career in that field. I am thankful that I had a complete range of courses in the O.E.T. program because I left feeling confident that I was going to enjoy and excel in the area I had chosen after experiencing several fields. Lastly, the summer internship at Exelon Generation's LaSalle Station gave me the invaluable opportunity to see the knowledge I gained from my courses be applied in the workplace. Not only did the program prepare me in advance for the internship to be successful, but it undoubtedly helped me make a good first impression with Exelon Generation who would become my future employer immediately following graduation.

Thanks to the O.E.T. program and its professors, I believe that my classmates and I graduated with a complete set of priceless skills that provided each of us with the opportunity to become prepared, confident, and competitive technicians and operators in our future workplaces, and for that, I am exceedingly blessed and extraordinarily grateful.

Sincerely,


Neil Schultz

To Whom It May Concern:

The Operations Engineering and Technician program at Joliet Junior College has change my life for the good. When I first heard about this program, I knew this was something I would love to do. This program has given me the skills I need to obtain a career in the manufacturing industry.

The program first starts off with two semesters of in the class room training learning key things we would need to know. After that, we have summer long internships with one of the many top companies that sponsors the OET program. Then after the summer long internship we finish up our classroom training and get hired upon graduation. For me I completed my summer internship with a company called Aux Sable. They have one of the largest NGL extraction and fractionation plants in North America. Upon finishing up my internship they offered me a full-time position with great pay and benefits.

If it was not for the OET program there would be no way I could be in the position I am in right now.

Alex Simikoski

A handwritten signature in black ink, appearing to read "Alex Simikoski". The signature is fluid and cursive, written in a professional style.



November 6, 2017

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c/o Advance CTE Excellence in Action Award
8484 Georgia Avenue
Suite 320
Silver Spring, Maryland 20910

To Whom It May Concern:

Aux Sable is a significant player in North America's midstream gas processing business, with facilities and pipelines strategically placed in some of the continent's most active shale positions, providing access to its most attractive natural gas and natural gas liquids markets.

Throughout our seventeen year history, Aux Sable has and continues to deliver outstanding safety, environmental and operating results. The company continually strives to meet high standards in these areas, to comply with appropriate financial and regulatory controls, and to be a responsible participant in the local communities where it has operations.

Aux Sable is actively involved in the community, and we want to be an integral partner in developing the local talent. We were very fortunate to be part of the development of the Operations Engineering and Technician degree program. This program provides students the opportunity to take the operations or the maintenance track. The coursework is complimented with a summer internship, which we are proud to hire the students during the summer. In addition, we provide scholarships to students who are interested in pursuing this degree. Like other companies, Aux Sable serves on the program advisory board, provides classroom presentations, and tours of our plan.

Not only does this program provide us with the type of employees we are looking for, we were happy to be part of the creation of a program that incorporates the essential skills needed in the workforce today. As the program continues to grow, we look forward to continuing our relationship with Joliet Junior College as well as the OET program.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff White". The signature is written in a cursive style and is positioned above the printed name.

Jeff White
Head of Operations



November 13, 2017

Advance CTE: State Leaders Connecting Learning to Work
c/o Advance CTE Excellence in Action Award
8484 Georgia Avenue
Suite 320
Silver Spring, Maryland 20910

To Whom It May Concern:

This is a pivotal time for the energy industry—future energy demands must be met with less impact on our climate and with minimal burden on the nation's economy. To meet these challenges, the Exelon family of companies strives for the highest standards in all aspects of energy, from generation to marketing to delivery.

Exelon is committed to our vision to be the best group of electric generation and electric and gas delivery companies in the United States. Exelon is one of the best run and most profitable companies in the industry. We have the best low-cost, low-carbon generation fleet in the country, which we operate with world-class efficiency.

To be the best, you need to have the best employees. For many years, we have worked with Joliet Junior College (JJC) to educate a skilled workforce. Our workforce, like many other industries, is facing the retirement age. As we continue to strive to be the best, we initiated a discussion with JJC regarding the need for a local training program which would be structured to provide the necessary skills to obtain entry-level employment with Exelon.

The development of the Operations Engineering & Technician (OET) program will have a tremendous impact on students by providing them with a technical skill set that is in demand not only by the nuclear industry, but across multiple industries. Exelon may have been the industry leader in the creation of this degree program, but it was quickly decided to bring in other industries (manufacturing and petrochemical) who could also benefit from this program. Students will be able to gain an education locally for jobs readily accessible in their community rather than travel out-of-state to receive the knowledge and skill sets required to earn a well-paying career.

We are committed not only to our community but to our educational partner. We have and will continue to commit personnel to serve on advisory boards, review curriculum, share real world classroom examples, provide tours to the students, instruct courses, and evaluate the outcomes for this program and others at JJC. In addition to providing internships for the students in the OET program, Exelon also pledges support by offering scholarships to area students. We are extremely proud to be a partner in educating our local students to obtain well-paying positions in our community.

The OET program is truly a collaborative effort between industry and education, and we are excited to see how quickly it has progressed from idea to reality. This is truly a great example of industry and education working together to produce a skilled workforce.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Stanley".

Exelon Corporation

November 1, 2017

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c/o Advance CTE Excellence in Action Award
8484 Georgia Avenue
Suite 320
Silver Spring, Maryland 20910

To Whom It May Concern:

LyondellBasell is one of the world's largest plastics, chemical and refining companies, manufacturing products at 55 sites in 17 countries. LyondellBasell people, plants and products lead the way in petrochemical safety, reliability, operational excellence and product innovation.

We employ talented, results-oriented, team players who develop, manufacture, and market products that improve the quality of people's lives including packaging, electronics, automotive parts, home furnishings, construction materials and biofuels.

As a pipeline to being a global technology leader, LyondellBasell consistently strives to obtain top talent. Working with Joliet Junior College (JJC) through a variety of cross-functional opportunities, we are proud to collaborate the Operations, Engineering and Technician (OET) program at JJC, which provides necessary skills and training on to obtain potential employment with LyondellBasell.

The OET program is a two-way street for LyondellBasell and other local industries (nuclear and manufacturing). JJC prepares local students with hands on industrial experience, where they are precisely trained and educated -based on curriculum adapted by LyondellBasell. Students have the opportunity to be equipped with rewarding, well-paying careers in their community; while corporations like LyondellBasell have the opportunity to hire qualified, local talent.

LyondellBasell is proud to not only serve on the advisory board for the OET program, but we were at the table to develop and review curriculum, share classroom knowledge from experts within our industry to enhance the students learning experience, and provide internships for the students in the OET program. In addition, LyondellBasell also pledges support by offering scholarships to area students as well as foundational grants to purchase equipment for the program.

We are honored to be an active member of this program, which will provide the skills we need in our industry. We look forward to continuing our partnership with JJC to enhance the lives of local students, equipping them with the essential tools for sustainable careers.

Sincerely,

A handwritten signature in black ink, appearing to read "Tim Carnell".

Tim Carnell
Site Manager, Morris Complex
LyondellBasell

Equistar Chemicals, L.P.
8805 N. Tabler Road
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COMMUNITY UNIT SCHOOL DISTRICT NO. 1

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550 S Carbon Hill Road
COAL CITY, ILLINOIS 60416-9526

KENT A. BUGG, Ph.D. Superintendent

JASON SMITH, Chief School Business Official
TAMMY ELLEDGE, Director of Curriculum/Instruction
SANDY RAKES, Director of Special Populations

www.coalcity.k12.il.us

Building Administration

MITCHELL HAMANN, Principal
High School 815-634-2396
TRAVIS JOHNSON, Principal
Middle School 815-634-5039
TRACY CARLSON, Principal
Intermediate School 815-634-2182
CHRISTOPHER SPENCER, Principal
Elementary School 815-634-2334
CHRISTOPHER SPENCER, Principal
Early Childhood Center 815-634-5042

November 7, 2017

To Whom It May Concern:

I am excited to offer this recommendation in support of the Joliet Junior College "Operations Engineering and Technician" program's consideration for the "2018 Excellence in Action Award". As the Superintendent of Coal City Community Unit School District #1, I have been involved with the development of this program since its inception, and I consider its implementation one of the most impactful, innovative, and successful initiatives I have experienced as an educator.

The communities served by Joliet Junior College are very unique in that there exists a strong industrial base dominated by the energy industry. This energy-producing corridor includes three nuclear stations as well as various fossil fuel plants. As the Superintendent of my school district, I often expressed frustration that our high school graduates were not aware of the incredible employment opportunities these industries could provide. I was also dismayed at the lack of communication between these industries and our school district when it came to recruiting potential candidates for their employment positions. Our school district had discovered an educational opportunity that could prepare our students for employment in these industries, but the technical school was located in Missouri, which made it far less attractive to some of our interested students. It was a combination of these concerns that caused a group of educators, other community leaders, and one of our local State Senators, Sue Rezin, to reach out to Joliet Junior College.

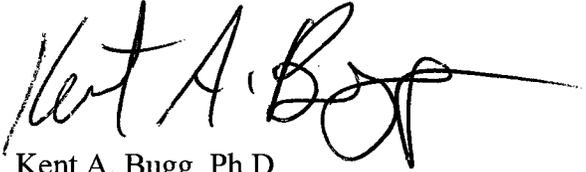
Joliet Junior College understood our hopes and dreams for our high school students and embraced the challenge. They assembled a committee of educators, community leaders, Senator Rezin, and representatives from the various energy industries to come together with the purpose of developing an educational program that would prepare our students for local employment. Thanks to the leadership of JJC, the "Operations Engineering and Technician" program was born, and to say it has been a success would be a serious understatement.

Since the program started, my school district has had multiple graduates from this two-year post-secondary program. These are students who were not necessarily interested in attending a traditional four-year degree program, but were nonetheless very talented and motivated young men and women. This program provided them with an opportunity to seamlessly and successfully progress from secondary to post-secondary education and then transition to the local workforce. These students are employed in highly technical positions that used to be filled from a workforce located outside of our immediate geographical area. This program has allowed us to keep some of our best and brightest students in our community. It has also allowed our local industries the opportunity to hire local talent that will be life-long contributors to their companies. The program is a collaboration between local high schools, local industries, and JJC that is producing real, tangible results that benefit everyone involved.

It is the Mission of the Coal City Community Unit School District #1 to prepare today's learners for tomorrow's challenges.

I hope you will consider the Joliet Junior College “Operations Engineering and Technician” program for this award. This program is truly making a significant difference in the lives of our high school graduates, while improving the quality and stability of the candidate pool for our local industries. Please feel free to contact me should you like any further information on this innovative and successful program.

Educationally Yours,

A handwritten signature in black ink, appearing to read "Kent A. Bugg". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Kent A. Bugg, Ph.D.

Superintendent

Coal City Community Unit School District #1



Grundy Area Vocational Center

"DISCOVER A FUTURE THAT WORKS"

Serving the communities of Coal City, Gardner-South Wilmington, Minooka and Morris

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To Whom it May Concern,

The Grundy Area Vocational Center welcomes the opportunity to speak in support of the Operations, Engineering, and Technician Program at Joliet Junior College. The OET program provides a logical next step for many of our CTE driven students, and it has proven to be valued by our industry partners. We highly value the opportunities made possible by this program and look forward to continued collaboration in establishing clear pathways from high school, to post secondary education and training, and finally entrance into the workforce in this booming industry.

The OET program has provided invaluable opportunity to GAVC students and students throughout Grundy County. Students are immersed in coursework and hands-on learning activities directly influenced by the cutting edge industry they will one day serve. The program was built on a solid foundation of advising industry and educational partners, which no doubt, has led to its advanced success. From the earliest stages of program development, Joliet Junior College reached out to the educational community, GAVC included, for guidance and planning. The effort made to ensure the school community was not only consulted, but heard and valued, was crucial to the success of the program. For these reasons, and many more, GAVC fully supports its nomination for the "2018 Excellence in Action Award".

The students of the Grundy Area Vocational Center benefit so greatly from the Operations, Engineering, and Technician program at Joliet Junior College, and we welcome further opportunity to discuss its merits. Thank you for your consideration of this noteworthy program.

Sincerely,

Lance Copes, Director
Grundy Area Vocational Center

Jeanne Skube, Assistant Director
Grundy Area Vocational Center



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8484 Georgia Avenue
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To Whom It May Concern:

The Grundy Economic Development Council (GEDC) would like to recommend Joliet Junior College's "Operations Engineering and Technician" program for your "2018 Excellence in Action Award". The GEDC has been involved in getting the program started in cooperation with local educators and businesses throughout our County. The "Operations Engineering and Technician" program has proven to be valued by our industry partners and is considered extremely successful.

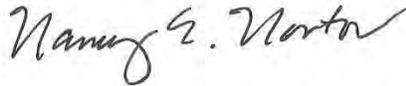
The GEDC organizes retention and expansion visits biennially with major employers throughout Grundy County. When visiting these businesses, the number one complaint was the lack of a qualified workforce to replace retiring employees. As a county with a strong industrial base dominated by the energy industry, all involved knew we needed to tap into our high school students. We needed to show students the incredible employment opportunities in their own backyard. There are many students that are not necessarily interested in attending a traditional four-year college. This program gives those students a great way to learn skill and obtain a great career. Joliet Junior College's "Operations Engineering and Technician" program provides opportunities for students from secondary to post-secondary education and then prepares them for the transition into the workforce.

One of the top concerns in the business world is workforce, both skills and availability. Joliet Junior College listens to the business community and responds. There was a technical school that could prepare our students, but it was located out of state. A collaboration with Joliet Junior College, local businesses, our state senator, and the GEDC gave life to the "Operations Engineering and Technician" program. The business community expressed a need for training operators and engineers in both technical and soft skills. Working with local industry the curriculum was designed and the program is the first of its kind to require a dress code, students punch a time clock in and out, and there is an attendance policy. In return, each student is promised a summer internship at a local business. The program has become so successful that the GEDC awarded Joliet Junior College with the 2016 Partnership Award at its annual dinner for its strides in workforce development. There are so many moving parts that all need to come together to be successful in economic development and Joliet Junior College is

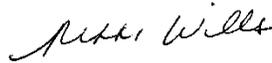
always at the forefront. Joliet Junior College also provides many other classes designed to meet the needs of local business.

We hope that you will award Joliet Junior College the "2018 Excellence in Action Award" for their "Operations Engineering and Technician" program. The program has been incredible for our local students and businesses that benefits all involved. Please feel free to contact the GEDC if you would like any additional information on this successful program.

Sincerely,



Nancy Norton
President & CEO



Nikki Wills
Business Director

Committees:

Republican Spokesman
Energy & Public Utilities

Member:

Appropriation
Education
Executive
Financial Institutions
Transportation



**STATE SENATOR
Sue Rezin**

Assistant Senate Republican Leader

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November 1, 2017

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To Whom It May Concern:

After hearing from local industry and energy leaders about the growing trend of skilled employees retiring from the workforce, I teamed up with key stakeholders and Joliet Junior College to develop the new Operations & Engineering Technician degree program. This innovative program at JJC incorporates industry feedback into its curriculum to meet the demands for more skilled employees.

The goal of the OET program is to bridge the gap between high school and industry in the 38th Senate District. I always consider this area the energy and chemical corridor of America. The OET program will help provide that pipeline for students. With anticipated industry growth and an increasing number of retirees in the coming years, many openings for well-paying, stable jobs are expected at energy and manufacturing companies, especially in my district.

The jobs students will go for in petrochemical, nuclear and manufacturing industries are expected to be lucrative. The earning potential for operation engineers ranges between \$65,000 to \$95,000 a year. The growth for those jobs, as well as operation technicians, is expected to grow at an estimated 15 percent or more in several years.

One major benefit to the OET program is that students no longer have to travel out of state to receive training. In turn, we will be able to provide industry with a larger talent pool of qualified, local employees. This program is huge for our district! I look forward to the prosperity that will result from our partnerships between industry and education.

Sincerely,

A handwritten signature in blue ink that reads "Sue".

Techniques

MARCH 2016

CONNECTING EDUCATION AND CAREERS

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Employer Engagement

Industry's Role in CTE Program Delivery

Finding and Engaging
Business Partners

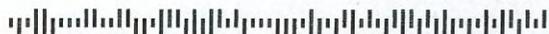
Juvenile Court and CTE:
Partnering for Education and Justice

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79*2

405810
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INDUSTRY AND EDUCATION: BRIDGING THE SKILLS GAP

By Melissa Lachcik

FOR MANY EMPLOYERS IN THE NUCLEAR AND MANUFACTURING

industries, hiring qualified and skilled workers from a talented labor pool used to come easy. For decades, there seemed to be more workers than jobs. However, that scenario has changed in recent years. With baby boomers nearing retirement age and companies developing plans to expand in their respective markets, there is major concern about the shortage of skilled workers. This topic has become a critical focal point as industry leaders and educators prepare for the future.

Industry and Education Partnership

In Illinois, Exelon Generation (Braidwood, Dresden and LaSalle Stations) has taken a proactive approach to ensure that the energy company will have qualified can-

didates to replace its retiring workforce. Exelon Generation, in conjunction with Joliet Junior College (JJC), was a driving force behind the development of an innovative degree program. The initial concept for the program was geared specifically toward bridging the skills gap in the nuclear industry. However, after several strategic discussions the team decided that the scope of the degree program should be broadened to include the petrochemical and manufacturing industries.

Other Illinois-based companies, Aux Sable Liquid Products, Inc., a gas-processing and natural gas company, and Lyondell-Basell, a plastics, chemicals and refining company, were eager to be a part of the new program. By combining efforts across multiple industries, the team believed this approach would be the optimal way to ensure the program's sustainability. With that,

the development of the Operations Engineering and Technician (OET) program, the first of its kind, was underway.

Sen. Sue Rezin was also instrumental in advocating the development of this new degree program. "A program like this does two really important things. One, it keeps our talented students interested in this field here, instead of studying in another state. Also ... it creates a bridge for high school students to jobs in the industry in our area," Rezin said.

JJC President Debra Daniels shared her perspectives on the OET program: "We are proud to introduce this new program that articulates a clear career pathway for our students."

Program Overview

The OET program, which began in the fall of 2015, has two associate degrees avail-

able: Operations Engineer and Operations Technician. These career pathways will prepare students for an entry-level career in the nuclear, petrochemical or manufacturing industries.

While both the operations engineering and operations technician positions have different responsibilities, both offer challenging careers and the potential for advancement.

Operations engineers are responsible for the monitoring and operation of plant equipment. They evaluate a unit's operating status and perform troubleshooting of processes and equipment in order to maximize unit reliability and quality production.

An operations technician maintains and repairs equipment and industrial machinery. Technicians install, dismantle, repair, reassemble and move machinery in manufacturing facilities and power plants.

Amy Murphy, JJC director of corporate and community services, said, "The OET program has so many positive aspects to it. Students will receive training locally that will prepare them for rewarding career opportunities close to home. Our industry partners will have more skilled workers from a local talent pool to meet their employment needs." This factor alone should have positive ripple effects on local economic development.

Even though the program is in its inaugural year, it has already received notable accolades. The OET program received the 2015 Illinois Council of Community College Administrators Innovation Award, "Partnering with Business/Industry to Design Programs to Fill the Labor Shortage." Also, formal congressional recognition was given by Rep. Adam Kinzinger in October 2015.

Since the program's launch this past fall, industry partners have continued to team up with JJC's program by providing financial resources and internship opportunities. TransCanada, an international energy company, donated \$55,000 to purchase new equipment for the program. Exelon Generation provided two scholarships this spring to students in the current program. Students in the OET program will also be placed in summer internships at local companies—Exelon Generation, Lyondell Bassell, Manhattan Mechanical and Starcon, to name a few. Several companies

“The OET program received the 2015 Illinois Council of Community College Administrators Innovation Award, “Partnering with Business/Industry to Design Programs to Fill the Labor Shortage.””

have also committed to provide scholarships for students in the fall 2016 program.

Program Curriculum

The OET program is targeted toward high school seniors. Students need to go through an application process in order to participate in this program. A unique aspect is that students will attend their classes as a cohort.

In addition to the classroom setting, students will also participate in a summer internship after their freshman year. This hands-on learning opportunity will give them real-world experiences, as well as opportunities to apply what they learned in the classroom.

The program is also designed to have students learn the soft skills that are so important to employers. For example, to emphasize the importance of punctuality, students will be required to wear a badge and clock in/out like employees have to do on the job. They will also learn the value of teamwork and how to work together to troubleshoot a problem. In addition, students will need to complete a background check and drug screening, similar to the employment process.

JJC worked closely with its industry partners, as well as Grundy Area Vocational Center, Coal City School District and Grundy Economic Development Council, to develop a curriculum that will prepare

▼ Estefany Govea-Moreno is a student in the Operations Engineering and Technician program at Joliet Junior College.



Photos courtesy of Melissa Lachcik

“JJC worked closely with its industry partners, as well as Grundy Area Vocational Center, Coal City School District and Grundy Economic Development Council, to develop a curriculum that will prepare students with the exact skills employers are looking for.”

students with the exact skills employers are looking for.

The curriculum places an emphasis on skills in math, physics and chemistry. Many of the technical classes in the degree program were already in existence; however, a few classes, such as the all-new Introduction to Plant Operations and Thermo Dynamics, were created in order to equip students with additional knowledge and insight. One of the program's core classes is taught by an Exelon Generation employee, who can relate real-world applications to textbook theory.

Another notable highlight is that curriculum for this program was developed and approved through the Illinois Community College Board in less than a year. The accelerated pace at which this program went through the approval process is admittedly quick, but it speaks volumes to the significance of this type of program.

Partnering With Educators

Educators from local school districts were also pleased about the opportunity to be involved with the development of this new degree program. As stated previously, high school seniors serve as the primary





▲ Patrick Mills, chemistry professor at Joliet Junior College, demonstrates an experiment that Coal City High School senior Carly Murphy will learn as part of the new OET program.

pipeline into this program, and it's a valuable opportunity for them to train for a rewarding career.

Lance Copes, director of Grundy Area Vocational Center, said, "When you can be a part of linking high school students to further training/education that leads directly to employment opportunities, I get very excited." He added, "Career and college readiness is a big conversation point today, and this program is a perfect model."

Illinois State Secretary of Education Elizabeth Purvis expressed her gratitude toward businesses who have partnered with educators to invest in our youth. In regard to JJC's new program, she said, "Here we have a model of a community college responding to the needs of the community in much the [same] way they were designed." She added, "It is through partnerships like this that we can continue the proud tradition of the state."

What can't be stressed enough is the benefit of creating career opportunities where students reside. "After watching our graduates make the trip out of state for many years, I began to advocate for a similar program to be offered at one of our

local educational institutions. JJC was the logical fit ...," said Kent Bugg, superintendent of Coal City School District #1.

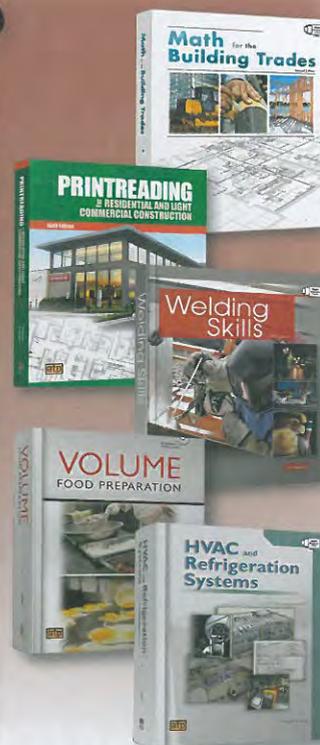
Preparing for the Future

A further objective of this program is to provide local students with the education and skills they need to become qualified job candidates when they are competing against applicants from other institutions. As a part of educating students about the program, we encourage them to come in and explore the various components of the program.

Since today's workforce is ever-changing, it has become increasingly important for industry and educators to collaborate and discover the best approach to adapt and respond. The Operations Engineering and Technician program is one initiative that is driven by the needs of industry to bridge the skills gap and prepare for the road ahead. **Tech**

Melissa Lachcik is the continuing education development coordinator at Joliet Junior College in the Corporate & Community Services Department. E-mail her at mlachcik@jcc.edu.

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Competency Based Education

The Importance Of Competency Based Education and the Role it Plays in the Completion Agenda
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2015 Annual Conference Highlights

Spurring us forward!
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2015 Exemplary Award Recipients

BEST PRACTICES
CORPORATE TRAINING
COMPLETION AGENDA
CUSTOMIZED TRAINING
CERTIFICATION
COMMUNITY EDUCATION
EMPLLOYER ENGAGEMENT
NON-CREDIT INSTRUCTION
PERSONAL DEVELOPMENT

THROUGH

CREDENTIALS
 LEADERSHIP
 RELEVANT
WORKFORCE
 PROFESSIONAL DEVELOPMENT
 INDUSTRY RECOGNIZED
 WORKFORCE EDUCATION
 CERTIFICATION
 COMPLETION AGENDA
 CONTINUING EDUCATION

Partnerships Between Industry and Education Provide Opportunities for Success

by Melissa Lachcik, Continuing Education Development Coordinator, Joliet Junior College



There have been numerous discussions among industry professionals and educators about the growing need for skilled workers.

The synergy created by working together

was at the foundation of a strategy to take a collaborative approach. Joliet Junior College (JJC) partnered with local companies to develop the new Operations Engineering & Technician (OET) program.

Amy Murphy, JJC Director of Corporate & Community Services explained that partnerships between industry and education are essential to successfully prepare the next generation of workers.

Murphy said, *"We are so thankful to the industry partners who have supported our OET program. This collaborative effort will ensure that students are prepared with the skills that employers need."* She added, *"The common theme among employers has been their need to have a talented labor pool that are workforce ready. Our new OET program is taking a proactive approach towards this initiative."*

The OET program was designed to prepare students for challenging careers in the petrochemical, nuclear, and manufacturing industries. Local companies were at the forefront of driving this initiative. JJC worked closely with Exelon Generation (Braidwood Station, Dresden Station and LaSalle Station), Aux Sable Liquid Products, LyondellBassell, Grundy Area Vocational Center, Coal City School District, Grundy Economic Development Council, and State Senator Sue Rezin to develop this innovative degree program.

TransCanada also showed their support to the OET program when company representatives visited JJC this past July to present a donation of \$10,000 to college officials that will be used to purchase new equipment. The event affirmed that the partnerships established between industry and education are essential in order to meet industry's need for a skilled workforce in sectors such as energy. TransCanada Government Relations Director, Peter Jaskowski said, *"TransCanada supports these types of programs and that's really why we're here today to help support this particular program at Joliet Junior College."*



Joliet Junior College Technical Professor Jeff Bradford monitors equipment in the industrial pump lab where students will be able to simulate real-world applications in the new OET Program at JJC.

He added, *"What we're finding in the marketplace out there as employers is that we need to have skilled employees ready to come to the job to perform the increasingly sophisticated duties that are related to the energy industry."*

Illinois State Secretary of Education Elizabeth Purvis attended the presentation event. She expressed gratitude toward businesses who have partnered with educators to invest in

youth. In regard to JJC's new program, she said, *"Here we have a model of a community college responding to the needs of the community in much the way they were designed."* She added, *"It is through partnerships like this that we can continue the proud tradition of the state."*

ABOUT THE OET PROGRAM

The Operations Engineering & Technician (OET) program, which begins Fall 2015, has two associate degree tracks available that prepare students for an entry-level career in the nuclear, petrochemical or manufacturing industries.

Training is available to earn Associate of Applied Science (A.A.S.) degrees in either the Operations Engineer or the Operations Technician career pathways. Each of these positions has different responsibilities but both offer challenging careers with the potential for advancement.

Operations Engineers are responsible for the monitoring and operation of plant equipment. They evaluate the unit's operating status and perform troubleshooting of processes and equipment in order to maximize unit reliability and quality production. The average salary range is \$65,000 to \$95,000. Employment of operations engineers is projected to grow 15 percent from 2012 to 2022, faster than the average for all occupations.¹

An Operations Technician maintains and repairs equipment and industrial machinery. Technicians install, dismantle, repair, reassemble, and move machinery in manufacturing facilities and power plants. The average salary range is \$45,000 to \$75,000. Employment of industrial machinery mechanics and maintenance workers

Continued on page 18

is projected to grow 17 percent from 2012 to 2022, faster than the average for all occupations.¹

With the evolution of this new program, students will now be able to train locally for well-paying careers that are available in their local communities. Students will no longer have to travel out of state to receive training or find jobs. This factor alone should have positive ripple effects on local economic development.

At a kick-off meeting held earlier this year to announce the program's launch, JJC President Dr. Debra Daniels shared her perspectives about the positive impact of this program. Dr. Daniels said, "We are proud to introduce this new program that articulates a clear career pathway for our students." She added, "We are grateful for the valuable relationships we have with our local legislators and area employers that were essential to the development of this program."

PROGRAM CURRICULUM

The Operations Engineering & Technician (OET) program is targeted towards high school seniors and will provide them with a viable option to a career in one of these industries. Students need to go through an application process in order to participate in this program. A unique aspect to this inaugural program is that students will attend their classes as a cohort.

In addition to the classroom setting, students will also participate in a summer internship after their freshman year. This hands-on learning opportunity will provide students with real-world experiences and provide them with an opportunity to apply what they learned in the classroom.

The program is also designed to have students learn soft skills that are so important to employers. For example, to emphasize the importance of punctuality students will be required to wear a badge and clock in/out like employees have to do on the job. The students will also learn the value of

teamwork and how to work together to troubleshoot a problem. In addition, students will need to complete a background check and drug screening, similar to the employment process.



JJC Technical Instructor Cheryl Upshaw (right) leads a tour through the Electrical/Electrical Automated Systems lab where students in the OET Program will learn electrical concepts through hands-on activities.

The curriculum places heavy emphasis on technical skills in math, physics and chemistry. Many of the technical classes in the degree program were already in existence. However, a few classes such as the all-new Introduction to Plant Operations and Thermo Dynamics were created in order to prepare students with additional knowledge and insight.

One notable highlight is that curriculum for this program was developed and approved through the Illinois Community College Board (ICCB) in less than a year. The accelerated pace at which this program went through the approval process is virtually unheard of, but speaks volumes to the significance of this type of program.

PARTNERING WITH EDUCATORS

Educators from local school districts were also very excited about the opportunity to be involved with the development of this new degree program. High school seniors will serve as the primary pipeline into this program and it's a valuable opportunity for them to train for a rewarding career.

Lance Copes, Director of Grundy Area Vocational Center said, "When you can be a part of linking high school students to further training/education that leads directly to employment opportunities, I get very excited." He added, "Career and college readiness is a big conversation point today and this program is a perfect model."

Kent Bugg, Superintendent of Coal City School District #1, added, "After watching our graduates make the trip out of state for many years, I began to advocate for a similar program to be offered at one of our local educational institutions. JJC was the logical fit, and I am very pleased that our students can now stay closer to home to receive this training."

PREPARING FOR THE FUTURE

Another objective of this program is to prepare local students with the training and skills they need to become qualified job candidates when they are competing against applicants from other institutions.

Russell Coon, Exelon Nuclear Vice President of Accreditation and Training Strategy, explained, "The JJC program will help us build the next generation of nuclear professionals by preparing local students to enter the industry armed with the knowledge and skills to meet our workforce needs."

Since today's workforce is ever-changing, it has become increasingly important for industry and educators to collaborate and discover the best approach to adapt and respond. The Operations Engineering & Technician program is one initiative that's driven by the needs of industry to bridge the skills gap and prepare for the road ahead.

REFERENCES:

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2014-15 Edition, <http://www.bls.gov/ooh/>

For more information about the OET program, call (815) 280-1418 or email engineertech@jic.edu. Visit www.jic.edu/info/operationsengineeringtech for program details.



OPERATIONS ENGINEERING & TECHNICIAN (OET)

The petrochemical, nuclear, and manufacturing industry needs skilled-workers! With growth and the retiring workforce, that means these major employers will need more new workers over the next decade.

Prepare for these well-paying, stable, challenging careers at Joliet Junior College. This is a selective program, and individuals will need to apply to gain entrance.

OPERATIONS ENGINEER

Earning Potential: \$65,000-\$95,000

Operations Engineers are responsible for the monitoring and operation of plant equipment used in the petrochemical, nuclear and manufacturing industry. They evaluate the unit's operating status and perform troubleshooting of processes and equipment in order to maximize unit reliability and quality production. Many jobs require a background check, and workers are subject to drug and alcohol screenings.

Job outlook: Employment of operations engineers is projected to grow 15 percent from 2012 to 2022, faster than the average for all occupations. (Source: Department of Labor)

Operations Engineering Associate Degree Sequence			
First Semester		Second Semester	
OET 101-Intro Operations & Risk	4	IMT 101-Industrial Maintenance Fundamentals	3
ENG 101-Rhetoric	3	OET 291-Operations Career Development	1
EEAS 101-Basic Wiring and Circuit Design	4	EEAS 111-Industrial Controls I	4
MATH 138* or Math 142	5	CHEM 101-General Chemistry I	5
Semester Hrs.	16	Semester Hrs.	13
*MATH 139 if needed			
Summer		Fourth Semester	
Internship 295	5	PHYS 102-General Physics	5
Social & Behavioral Sciences Elective	3	IMT 112-Rotating Equipment	3
Third Semester		EEAS 215-Process Control & Instrumentation	4
PHYS 101-General Physics	5	EGR 160-Thermo Dynamics	3
IMT 111-Mechanical Power Transmission	3	Semester Hrs.	15
EEAS 113-Industrial Controls II	4	TOTAL HRS.	67
IMT 121-Industrial Fluid Power	3		
Semester Hrs.	15		

LOCAL CAREERS

WELL-PAYING CAREERS

STABLE CAREERS

CHALLENGING CAREERS

CAREERS WITH GROWTH OPPORTUNITY



OPERATIONS TECHNICIAN

Earning Potential: \$45,000-\$75,000

Operations Technicians maintain and repair equipment and other industrial machinery, such as conveying systems, production machinery, and packaging equipment. Technicians install, dismantle, repair, reassemble, and move machinery in manufacturing facilities and power plants. Many jobs require a background check, and workers are subject to drug and alcohol screenings.

Job outlook: Employment of industrial machinery mechanics and maintenance workers is projected to grow 17 percent from 2012 to 2022, faster than the average for all occupations. The need to keep increasingly sophisticated machinery functioning and efficient will drive demand for these workers. Job prospects for qualified applicants should be very good. (Source: Department of Labor)

Operations Technician Associate Degree Sequence			
First Semester		Second Semester	
OET 101-Intro Operations & Risk	4	IMT 101-Industrial Maintenance Fundamentals	3
ENG 130-Technical Report Writing or ENG 101-Rhetoric	3	PHYS 103-Technical Physics	4
EEAS 101-Basic Wiring and Circuit Design	4	EEAS 111-Industrial Controls I	4
MATH 119-Mathematics for Technical Students	5	Social & Behavioral Sciences Elective	3
Semester Hrs.	16	OET 291- Operations Career Development	1
		Semester Hrs.	15
Summer		Fourth Semester	
Internship 295	5	IMT 112-Rotating Equipment	3
Third Semester		EEAS 215-Process Control & Instrumentation	4
IMT 111-Mechanical Power Transmission	3	EEAS 221-Industrial Circuits Basic PLC	4
EEAS 113-Industrial Controls II	4	MFG 101-Precision Machine Tool Technology I	4
EEAS 115-Electrical/Electronics Troubleshooting	4	Semester Hrs.	15
IMT 121-Industrial Fluid Power	3	TOTAL HRS.	65
Semester Hrs.	14		

For more information or to apply, email engineertech@jjc.edu or call (815) 280-1418.

www.jjc.edu

to a new career!

*Train now for a career in the
petrochemical, nuclear or
manufacturing industry.*



Thank you to our corporate partners:

AUX SABLE



Operations Engineering & Technician

*Applications for Fall 2018
program will be accepted
February 1-28, 2018.*

www.JJC.edu/info/OET



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Email: engineertech@jjc.edu



Open the door



OET Promotional Video



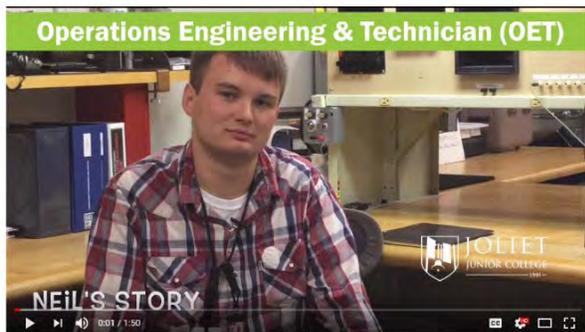
WATCH VIDEO! <https://youtu.be/lvNHkCD4M4M>

Student Perspective



WATCH VIDEO! <https://youtu.be/PHR0SjmJpwk>

Student Perspective



WATCH VIDEO! <https://youtu.be/Vmph6oHzjWI>

Employer Perspective – Exelon Generation



WATCH VIDEO! <https://youtu.be/do3dtDDUswM>

Internship Program



WATCH VIDEO! <https://youtu.be/cXbkRQNKyUY>

Employer Perspective - LyondellBasell



WATCH VIDEO! <https://youtu.be/RuDcg1lGso8>

Operations Engineering & Technician (OET) Program

Meet our First-Class students...



Jacob Butts
Channahon, Illinois

"I chose this degree program to pursue a meaningful and purposeful career. After completion of my degree, I would like to go to work in a power plant. I also want to continue my education to become a mechanical engineer."



Gustavo Castillo
Joliet, Illinois

"This program will enable me to have a great career and be able to start a family. I'm hoping one day to run a power plant."



Shane Harty
Gardner, Illinois

"This program will allow me to pursue a career locally with a well-established company. Upon graduating, I would like to become employed at Exelon as either a rad tech or a mechanical/electrical technician."



Baley Lejawa
Seneca, Illinois

"I am interested in working at a plant that will provide me with a stable and well-paying career, and this program is designed to do just that. While working, I plan to further my education so I can advance in my career."



Alexander Mann
Morris, Illinois

"This program provides an industry expert to teach one of the core classes. Instructor, Joe Ruth – Exelon, has been vital to sharing the "real" aspect of what these careers are all about. I plan to apply what I'm learning in the classroom to my career."



Estefany Govea-Moreno
Seneca, Illinois

"I chose this program to gain the education that I need to start my career in a chemical or nuclear plant. While working, I intend to continue my education to earn a chemical engineer degree."



Alex Peterson
Seneca, Illinois

"I chose this program because it will provide me an opportunity for a local career with stability and growth. My goal is to become an equipment operator upon completion, and I would like to continue my education."



Louis "Eddie" Pogliano
Wilmington, Illinois

"I aspire to obtain a steady career after completing this two year OET program. My goal is to become an operator at a local company."



Zack Scerine
Coal City, Illinois

"I heard about this program from my dad, and he recommended this career path to me. My goal is to acquire a steady paying career with benefits and have the opportunity to advance within a company."



Neil Schultz
Plainfield, Illinois

"I applied to the OET program because I would like to work locally, but I would also like to have the flexibility to transfer to other areas within the company. When I finish the program, I would love to start as a technician and through hard work, move up within the company."



For more information, visit
www.JJC.edu/info/OET

Operations Engineering & Technician Program

Meet our OET students from Cohort 2



Colton Briley
Channahon

“I was interested in the OET program because it seemed like a great program that fit my strengths and interests. The internship will also be a very good learning experience because it will allow me to show my work ethic and drive to the company where I intern.”



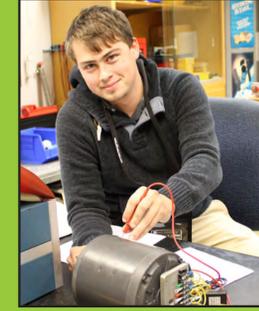
Nate Chapman
Coal City

“This program will impact my career by providing me with the skills I need to be successful in this industry. The internship opportunity also appealed to me because it will give me great experience and an understanding of what it's like to work in a plant.”



Seth Johnson
Morris

“I am looking forward to the educational opportunities that the OET program will provide. The technical classes in this program will prepare me with the knowledge and hands-on experiences that I need to pursue my career.”



Eddie Korosa
Minooka

“I have always been interested in building things and understanding how to make things work. Engineering has always been in my future plans and this program will give me an opportunity to get connected with prospering companies that suit my interest.”



Luke Mann
Wilmington

“The aspect that appeals to me the most is the hands-on experience. I'm able to build things in class and it gives me the knowledge and experience on how to do it. These hands-on, practical applications in class will definitely prepare me for my future career.”



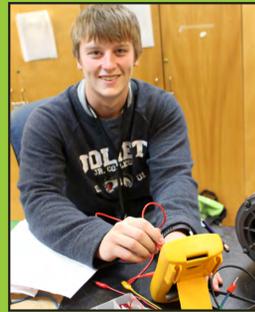
Michael McGinn
Coal City

“I have always wanted to be an engineer. What interested me in the OET program was the fact that after only two years of college, I will earn my associates degree and be on my way to a rewarding and well-paying career with great benefits.”



Carly Murphy
Diamond

“I was interested in the OET program because I plan to pursue a chemical engineering degree. This program will provide me with a valuable opportunity to meet with potential employers in the industry and learn the technical skills that I need to be successful in my career.”



Jared Rice
Coal City

“My dad works in the nuclear industry and I've always been curious about what he does. This program will provide me with an opportunity to learn first-hand through an internship about the various positions in a plant. It will really help me to decide which position I'd like to pursue.”



Nic Rodriguez
Plainfield

“The amount of exposure to real-world scenarios and hands-on applications is what appeals to me the most. Whether it's taking site visits or learning from knowledgeable industry guest speakers and JJC instructors, the OET program will ensure that I graduate with as many skill sets as possible.”



Jacob Rohder
Shorewood

“The hands-on experiences and technical education offered in the OET program are the main reasons that continue to drive my interest. I enjoy learning and expanding my skills in the technical field, and this program will provide me with a solid foundation.”



Alex Simikoski
Lockport

“I became interested in the OET program through my current role as a meter prover in the petrochemical industry. I fell in love with this industry and I truly enjoy every minute of it. I believe this program will tremendously impact my career by giving me the knowledge I need to grow in this industry.”



Michael Steffes
Diamond

“I always excelled in math and science in high school, so when my dad explained the OET program to me it really caught my attention. And when I learned more about the program, including the internship opportunity and small class sizes, it seemed like a great way to start my career.”



Kayla Storme
Joliet

“The opportunity to pursue a technical degree in a program that partners with successful and well-known industries in our area is what caught my interest. I also enjoy learning about the industrial processes, especially in the petrochemical and manufacturing industries.”

For more information, visit
www.JJC.edu/info/OET



JOLIET JUNIOR COLLEGE
—1901—

Operations Engineering & Technician (OET) Program



INTERNSHIP OPPORTUNITY!

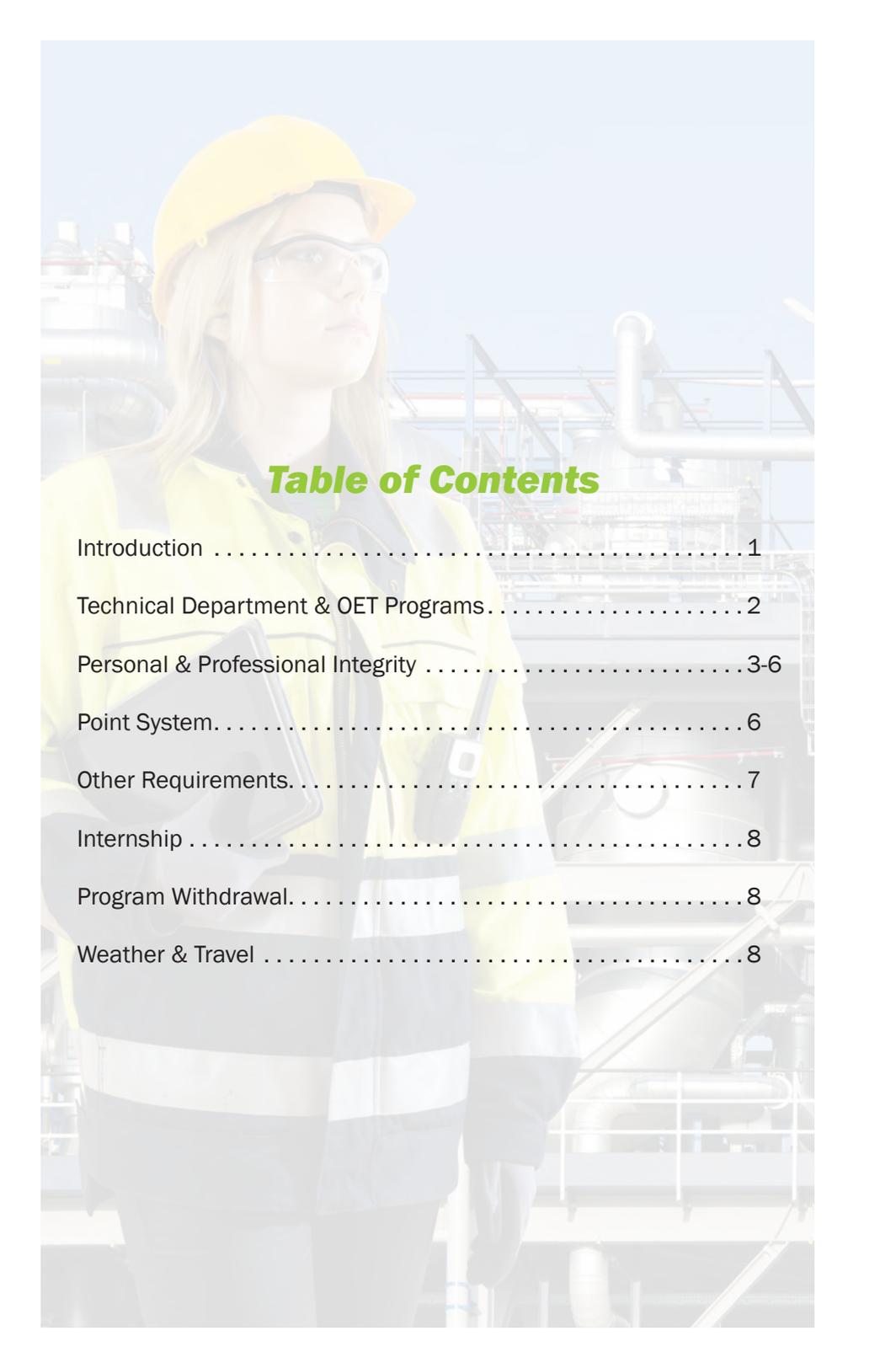


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Operations Engineering & Technician Program



Introduction

The intent of this handbook is to familiarize students with the policies and procedures specific to the Operations Engineering and Technician Program at Joliet Junior College (“JJC”).

The OET Program is a closed program accepting applications once a year for entry in to the program. The program is run in a cohort model having 12 students in a cohort consisting of six (6) individuals in each area of study. This program follows the guidelines set forth by the local industry and the Industry Advisory Board regarding curriculum.

In order to facilitate your OET education, the faculty encourages you to familiarize yourself with the information found within JJC’s College Catalog, Student Handbook and Weekly Planner, and Website (<http://www.jjc.edu/info/students>). For additional information about College policies and services, refer to the above listed sources.

We wish you every success in the time you are here with us. We are committed to your education and assisting you on developing the skills needed by industry.

Joliet Junior College
Technical Department

Technical Department & OET Programs

Mission Statement for Technical Department:

Vision

The JJC Technical Department will be the innovative leader in developing and enhancing careers for individuals, the community and industry.

Mission – Lifelong learning

The Technical Department's mission is to enable personal and economic growth by providing the opportunities for lifelong learning.

Goals

1. Promote excellence in technical instruction and related learning.
2. Prepare our diverse multicultural student population for career or advancement in industry.
3. Meet the technical education needs of the regional industry and community to maximize the opportunity for economic growth.
4. Be responsive to changes in industry through the inclusion of new technology in our curriculum.
5. Enhance community partnerships through resource development, public relations, continuing education and involvement in public service projects.
6. Provide an educational pathway from middle school through higher education based on the individual's needs.
7. Provide professional development opportunities for faculty and staff to enhance their skills.

Philosophy

The purpose of the OET program is to prepare students for an entry career in industry plant operations with the technical and occupational skills needed to be successful.



Personal & Professional Integrity

OET student, as part of the JJC student community, is expected to demonstrate qualities of integrity, fair-mindedness, honesty, civility, tolerance, and respect (as stated in the JJC's Student Code of Conduct). The OET student is accountable for his/her own behavior and is expected to maintain professional, ethical, and legal standards used in industry. The OET student is also expected to conduct him/herself according to the legal and ethical standards of the community and society. He/she is expected to follow established lines of authority and communication in the college and industry internship setting. Due to the OET program philosophy and standards, it is necessary to adhere to certain policies that are not common for students in other majors.

He/she is expected to adhere to the stated standards of the JJC Academic Honor Code (as found on the *JJC Website* and in the *Student Code of Conduct Booklet*).

1. General Conduct

As a representative of the OET, OET students shall conduct themselves in a respectful manner at all times when on campus or at a college event.

2. Acts of academic dishonesty include:

- a. Cheating- Intentionally using or attempting to use unauthorized materials, information or study aids; use of any unauthorized assistance, resources, materials or electronic/cellular devices with or without photographic capability in taking quizzes, tests or examinations and the acquisition, without permission, of a test or other academic material belonging to JJC, to any department, or to any staff.
- b. Plagiarism - The reproduction of ideas, words or statements of another person as one's own without acknowledgement or use of an agency engaged in the selling of term papers or other academic materials.
- c. Unauthorized Collaboration - Intentionally sharing or working together in an academic exercise when such actions are not approved by the course instructor.
- d. Falsification and Fabrication -Intentional and unauthorized falsification or invention of any information or citation furnished to any college official, faculty member or office.

- e. Facilitation of Academic Dishonesty - Permitting or attempting to help another to violate the academic honor code; Alteration or sabotage of another student's work, such as tampering with laboratory experiments.

If a faculty member or college staff member suspects that there is a violation of one of the above standards, she/he will confer with the student (and the appropriate faculty member if applicable) before deciding what course of action to take.

Depending on the student's misconduct and the judgment of the faculty, a failing grade may be given for the assignment and/or course, and dismissal from the course/ OET program.

3. Dress Code for Students

OET majors are expected to wear work appropriate clothing at all times when at JJC. Dress code during the internship is set by the company. The JJC dress code consists of:

- a. A collared shirt having short or long shirt with no phrases or images on the shirt.
- b. Pants shall be either jeans material or Docker type pants with no rips, holes or tears.
- c. Comfortable shoes with that are suitable to the class. The shoe must be in good condition with no holes or tears.
- d. All clothing worn on the internship shall conform to the company's dress policy.
- e. A JJC student ID with picture taken in ID services will serve as the student's name badge. This badge must be worn on a lanyard at all times when attending class at JJC.
- f. The student shall maintain a professional appearance while attending classes. Hair should be appropriately groomed to maintain. Beards and moustaches shall be groomed while at JJC. Many companies do not allow facial hair during the internships.
- g. Instructors reserve the right to send any student home from who is not in the appropriate attire or who is not properly groomed. This will count as an absence.

4. Course Attendance

- a. Students shall attend all classes on time.
- b. Attendance in the technical courses will be monitored by the use of a time clock in the classroom. It is the student's responsibility to clock in and out of every class. The time clock date/time stamp will be used to determine if a student is on time.
 - i. If a student has to miss class, they need to arrange prior to the class date or it will be considered a miss.
 - ii. If a student is going to be late, it is the student's responsibility to contact the instructor and the program coordinator.
- c. The instructor has the right not to admit a student if are they late to class.

5. Course Work

- a. All homework is due on the date assigned and assignments turned in late shall not be counted in the course grade unless it was approved by the instructor prior to the due date.
- b. All projects whether they are in-class or out of class projects are due on the date and time assigned. Projects turned in late shall not be counted in the course grade unless it was approved by the instructor prior to the due date.
- c. Missed Exam Policy: Any student who misses a scheduled exam or final exam will be allowed to make up the exam ONLY if all of the following conditions are met:
 - i. The instructor must be notified of the absence before the scheduled exam time. The student must then receive permission to reschedule the exam time.
 - ii. Permission will be given for only legitimate excuses, and only when notification of absence was made.
 - iii. Any student who does not arrange within one week following return to class to make up the exam will automatically receive a zero for the exam.
 - iv. Any student who does not arrange within one week following return to class to make up the exam will automatically receive a zero for the exam unless there is extenuating documentation.

6. Grade Point Average

A student considered in good standing in the OET Program shall maintain an overall GPA of 3.00. If a student's GPA falls below 3.00 they will have one semester to raise the GPA to the 3.00 standard. If they do not meet the standard at the end of the probation period, they will be terminated from the program. GPA will be calculated from the start of the program and previous course grades will not enter into the GPA calculation.

7. Cell Phone

During the class the use of cell phones during a class for communication, texting or web surfing is prohibited. Cell phones shall be in mute mode during the class period.

8. Computer Usage

The computers in the classroom are provided for instructional use. Unless otherwise directed by the instructor surfing the web during class time is prohibited.

Point System

Points will be assessed for any infraction of the student responsibilities listed above. The points accumulate during the student's time in the program, and there are remedial measures taken before dismissal from the program.

1. Upon receiving a total three (3) points, the student will receive a letter stating their situation and are required to meet with the program coordinator to implement a corrective plan of action.
2. Upon receiving a total of six (6) points, the student will receive a letter stating their situation and are required to meet with the Department Chair to implement a corrective plan of action.
3. A student accumulates nine (9) points, they will be dismissed from the OET Program. The student will have an exit meeting with the Program Coordinators and receive a letter stating their dismissal situation.
4. The point system is as follows:

	Action	Points
1	Late attendance (first 3)	.25 @
	Late attendance (4,5, 6)	.50 @
	Late attendance (after 6)	1.00 @
2	Unexcused absence (first 3)	.50 @
	Unexcused absence after 3	1.00 @
3	Dress code violation	.25 @
4	Cell Phone violation	.25@
5	Inappropriate computer usage	.25@
6	Academic Dishonesty	9.00
7	Failure to pass drug screening	9.00
8	Failure to pass background check	9.00
9	Possession of drugs or alcohol	9.00
10	GPA less than 3.00 after probation period	9.00

Other Requirements

Criminal Background Check

A criminal background check on file is required of all candidates entering the OET program. Information and instruction on criminal background checks is made available to the candidate student during information session. Failure to comply with this requirement will result in the student being removed from the OET program. Certain offenses within the candidate's criminal background check may result in the denial of entry into the OET program.

Drugs and Testing

All candidates are required to take and pass a drug screening test for entry into the program. Information and instruction on drug screening tests is made available to the candidate during information session. A positive drug screening test will result in the candidate being denied entry into the OET program. An OET student possessing, consuming, providing or selling recreational drugs or found under the influence of alcohol or drugs, will be dismissed from the OET Program.

Internship Testing

All companies participating in the OET internship have differing requirements for acceptance into an internship and the student shall adhere to that company's policies. All companies require their own Background Check and Drug Testing as a condition for an internship. A student failing the company administered background check and drug test will not be placed in an internship and shall be removed from the OET program.



REAL-WORLD EXPERIENCE!

Internship

The student will intern in the first summer in the program and need to complete the internship to remain in the program. There are a limited number of internships available and the students need to follow the procedure to apply for the internship.

1. OET students must complete the required applications for the internship by the posted deadlines. They need to indicate their internship choice by company and prioritize their choice by 1, 2 or 3. The individual partner companies will review the applications and select the individuals that will interview for the intern position.
2. Once accepted by a company for the internship, the OET student shall complete the required employment applications, security and employment screening required by the company. Failure to pass these screening will result in the loss of the internship and removal from the program.
3. During the internship, OET majors shall adhere to the policies and employment procedures of the company sponsoring the internship.

Program Withdrawal

A student may withdraw from the OET Program and request to reenter the program. They will have to reapply for the OET Program during the next cycle. A review of the student's application by the program coordinators will determine if they can re-enter the program and the conditions that need to be met.

Weather & Travel

In cases when the college closes due to extreme weather, students, faculty and staff will be notified through the JJC Emergency Alert system. Students are reminded that an official closing of the college would be announced on several radio stations in the area. Students doing internship need to contact the company for weather related decisions.

**Contact Information for the
OET Program**

Amy Murphy, Program Coordinator

(815) 280-1418

amurphy@jjc.edu

Mike Wolverton, Program Coordinator

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mwolvert@jjc.edu

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(815) 280-1418

Email: engineertech@jjc.edu

www.jjc.edu/info/technical



JOLIET JUNIOR COLLEGE
1901

Operations Engineering & Technician (OET)

Course Description/Prerequisites



1215 Houbolt Rd. Joliet, IL 60431

(815) 280-1418

Email: engineertech@jjc.edu

www.jjc.edu/info/oet

Operations Engineer - Course Descriptions/Prerequisites

Semester 1:

OET 101 - Intro to Industrial Plant

This course is a study of the basic concepts and processes necessary for successful industrial operations. The course will educate operators, maintenance technicians, laboratory analysts, skilled trade-person, and engineers in the principles and skills of systematic industrial operation. Prerequisite: Consent of the department. The student must be admitted to the OET Program and be pursuing one of its degrees or certificates.

ENG 101 - Rhetoric

This course is designed to teach writing skills necessary for success in college. It is required for students intending to continue in a baccalaureate program. Special emphasis is placed upon summary writing, exposition, and argumentation. Prerequisite: Appropriate placement score; or minimum grade "C" in one of the following: ENG 021 and ENG 099, or ENG 022 or ENG 099, or the EAP course sequence ENG 079 and ENG 089 or ENG 096.

EEAS 101 - Basic Wiring and Circuit Design

This course covers the fundamentals of electrical and electronic circuits, including the calculation and measurement of voltage, current, resistance and power. Emphasis is placed on safe meter usage, print reading and exposure to a variety of electrical technologies currently used in industry. Topics include: introductory residential wiring, operation of AC motors, industrial solid-state devices, variable frequency drives, industrial controls, and single-phase/three-phase power distribution.

MATH 138 - Pre-Calculus I: Algebra

Pre-Calculus I is a study of those topics in algebra which are essential in calculus. Topics include the following functions: linear, quadratic, polynomial, rational, exponential and logarithmic functions. Conic sections, sequences, and the Binomial Theorem are also studied. Students cannot receive credit for both MATH 138 and MATH 142. Prerequisite: Appropriate placement score or minimum grade "C" in MATH 095 and MATH 098 or equivalent.

OR

MATH 142 - Accelerated Trigonometry/Pre-Calculus

This is an accelerated course that completes the objectives for both MATH 138 and MATH 139 in one semester. This is a fast-paced course intended only for highly motivated students. Students cannot receive credit for MATH 142 if they have already received credit for MATH 138 and MATH 139. Prerequisite: Appropriate placement score or minimum grade "C" in MATH 095 and MATH 098 or equivalent. An "A" in MATH 098 is recommended.

Semester 2:

MATH 139 - Pre-Calculus II: Trigonometry

Pre-calculus II is the study of the trigonometric functions using the unit circle approach. Topics of study include the following: graphs of trigonometric functions, inverse trigonometric functions, trigonometric identities, trigonometric equations, right angle trigonometry, polar coordinates, complex numbers in trigonometric form, vectors and parametric equations. Students cannot receive credit for both MATH 139 and MATH 142. Prerequisite: Appropriate placement score or minimum grade "C" in MATH 138 or equivalent.

IMT 101 - Industrial Maintenance Fundamentals

A course designed to provide a theoretical framework for the understanding of industrial mechanical systems with hands-on activities to reinforce the concepts introduced. Students will learn about OSHA safety programs, maintenance physics, hand and power tools, precision measuring, technical diagrams and assembly prints, fastening devices, lubrication, basic pump operation, and basic pipefitting procedures.

OET 291 - Operations Career Development

This course is designed to help the OET graduating student in preparing for and acquiring employment in the industrial plant industry. The course focuses on the skills necessary to conduct a job search, develop a resume and write a cover letter as well as interview skills with professional industry. The course also covers additional items used in employment selection such as drug testing, background checks, qualifying tests and hiring procedures specific to the industry. Prerequisite: OET 295 or consent of department.

EEAS 111 - Industrial Controls I

Fundamentals of industrial controls. This course is designed to provide the student with skills in basic electrical theory including electron relationship, Ohm's Law, Power Law, and Series and Parallel circuit characteristics. The student will develop hands-on skills using transformers, motors, magnetic control devices, relays, time-delay circuits, reversing circuits and other control input devices. Also covered are the application and installation of controls for pressure, temperature, flow, and level circuits.

CHEM 101 - General Chemistry I

This course is the first semester of a two-semester sequence of general chemistry intended for students in chemistry, physics, biology, engineering, pre-dentistry, pre-medicine, pre-pharmacy, pre-veterinary medicine, or anyone planning to take two years of chemistry. This course covers the principles of chemistry which

Term By Term Degree Tracker

OPERATIONS ENGINEER

Operations Engineers are responsible for the monitoring and operation of plant equipment used in the petrochemical, nuclear and manufacturing industry. They evaluate the unit's operating status and perform troubleshooting of processes and equipment in order to maximize unit reliability and quality production. Many jobs require a background check, and workers are subject to drug and alcohol screenings.

Fall Semester

Class Name	Credit Hours	Date Taken	Grade Received
OET 101-Intro Operations & Risk	4		
ENG 101-Rhetoric	3		
EEAS 101-Basic Wiring & Circuit Design	4		
MATH 138* or MATH 142	5		
Semester Hours	16		

Spring Semester

Class Name	Credit Hours	Date Taken	Grade Received
IMT 101-Industrial Maintenance Fundamentals	3		
OET 291-Operations Career Development	1		
EEAS 111-Industrial Controls I	4		
MATH 139	4		
CHEM 101-General Chemistry I	5		
Semester Hours	17		

*MATH 139 if needed

Summer Semester

Class Name	Credit Hours	Date Taken	Grade Received
OET 295-Internship	5		
Social & Behavioral Sciences Elective	3		
Semester Hours	8		

Fall Semester

Class Name	Credit Hours	Date Taken	Grade Received
PHYS 101-General Physics	5		
IMT 111-Mechanical Power Transmission	3		
EEAS 113-Industrial Controls II	4		
IMT 121-Industrial Fluid Power	3		
Semester Hours	15		

Spring Semester

Class Name	Credit Hours	Date Taken	Grade Received
PHYS 102-General Physics	5		
IMT 112-Rotating Equipment	3		
EEAS 215-Process Control & Instrumentation	4		
EGR 160-Thermo Dynamics	3		
Semester Hours	15		

Total Hours 67

Operations Technician - Course Descriptions/Prerequisites

Semester 1:

OET 101 - Intro to Industrial Plant

This course is a study of the basic concepts and processes necessary for successful industrial operations. The course will educate operators, maintenance technicians, laboratory analysts, skilled trade-person, and engineers in the principles and skills of systematic industrial operation. Prerequisite: Consent of the department. The student must be admitted to the OET Program and be pursuing one of its degrees or certificates.

ENG 101 - Rhetoric

This course is designed to teach writing skills necessary for success in college. It is required for students intending to continue in a baccalaureate program. Special emphasis is placed upon summary writing, exposition, and argumentation. Prerequisite: Appropriate placement score; or minimum grade "C" in one of the following: ENG 021 and ENG 099, or ENG 022 or ENG 099, or the EAP course sequence ENG 079 and ENG 089 or ENG 096.

EEAS 101 - Basic Wiring and Circuit Design

This course covers the fundamentals of electrical and electronic circuits, including the calculation and measurement of voltage, current, resistance and power. Emphasis is placed on safe meter usage, print reading and exposure to a variety of electrical technologies currently used in industry. Topics include: introductory residential wiring, operation of AC motors, industrial solid-state devices, variable frequency drives, industrial controls, and single-phase/three-phase power distribution.

MATH 119 - Mathematics for Technical Students

The course is designed to provide the necessary foundation in algebra, geometry, and trigonometry for success in technical courses. It is more rigorous than TMAT 107 (previously MATH 107)-TMAT 108 (previously MATH 108). Prerequisite: Appropriate placement score or minimum grade "C" in MATH 095 and MATH 098 or equivalent.

Semester 2:

IMT 101 - Industrial Maintenance Fundamentals

A course designed to provide a theoretical framework for the understanding of industrial mechanical systems with hands-on activities to reinforce the concepts introduced. Students will learn about OSHA safety programs, maintenance physics, hand and power tools, precision measuring, technical diagrams and assembly prints, fastening devices, lubrication, basic pump operation, and basic pipefitting procedures.

OET 291 - Operations Career Development

This course is designed to help the OET graduating student in preparing for and acquiring employment in the industrial plant industry. The course focuses on the skills necessary to conduct a job search, develop a resume and write a cover letter as well as interview skills with professional industry. The course also covers additional items used in employment selection such as drug testing, background checks, qualifying tests and hiring procedures specific to the industry. Prerequisite: OET 295 or consent of department.

EEAS 111 - Industrial Controls I

Fundamentals of industrial controls. This course is designed to provide the student with skills in basic electrical theory including electron relationship, Ohm's Law, Power Law, and Series and Parallel circuit characteristics. The student will develop hands-on skills using transformers, motors, magnetic control devices, relays, time-delay circuits, reversing circuits and other control input devices. Also covered are the application and installation of controls for pressure, temperature, flow, and level circuits.

PHYS 103 - Technical Physics

An introduction to the basic concepts of physics with an emphasis on applications to modern technology. The major topics are mechanics, heat and sound. Designed for students in career education, particularly the technical programs. Prerequisite: Placement into ENG 101 or minimum grade of "C" in one of the following: ENG 021 and ENG 099; or ENG 022 and ENG 099; or the EAP course sequence ENG 079 and ENG 089, or ENG 096; and placement into MATH 094 or minimum grade "C" in MATH 090 or equivalent. Recommended: TMAT 107 (previously MATH 107) or TMAT 108 (previously MATH 108).

Summer Semester:

OET 295 - OET Internship

This course gives the student an opportunity to work in industry. The student gains job experience in a structured environment with supervision and guidance provided by industry professionals and the JJC faculty. The student will be required to demonstrate and apply the skills learned in the OET Program at JJC. The internship may also serve as a tool to find employment opportunities after graduation. Prerequisite: OET 101 or consent of department.

serve as an organizing basis for all chemistry: atomic theory, atomic and molecular structure, chemical bonding, chemical reaction, stoichiometry, thermochemistry, gases, liquids, and solids. The laboratory complements these topics. Students who are pregnant or may become pregnant during the course of the semester are strongly advised to consult their doctor before enrolling in this course. Prerequisite: One year of high school chemistry or minimum grade "C" in CHEM 100 ; and placement into ENG 101 or minimum grade of "C" in one of the following: ENG 021 and ENG 099 ; or ENG 022 and ENG 099 ; or the EAP course sequence ENG 079 and ENG 089 , or ENG 096 ; and appropriate placement score or minimum grade "C" in MATH 098 .

Summer Semester:

OET 295 - OET Internship

This course gives the student an opportunity to work in industry. The student gains job experience in a structured environment with supervision and guidance provided by industry professionals and the JJC faculty. The student will be required to demonstrate and apply the skills learned in the OET Program at JJC. The internship may also serve as a tool to find employment opportunities after graduation. Prerequisite: OET 101 or consent of department.

Semester 3:

PHYS 101 - General Physics I

An introduction to the central ideas, principles and relationships of matter and energy. These are applied to the phenomena of our environment through lectures, demonstrations and laboratory exercises. Topics normally covered are motion, gravitation, friction, work, energy, power, momentum, rotation, oscillatory motion, states of matter, and heat. Computer technology will be employed to collect, analyze and display data. Prerequisite: Placement into ENG 101 or minimum grade of "C" in one of the following: ENG 021 and ENG 099 ; or ENG 022 and ENG 099 ; or the EAP course sequence ENG 079 and ENG 089 , or ENG 096 ; and placement score into MATH 170 , or minimum grade "C" in MATH 139 .

IMT 111 - Mechanical Power Transmission

This course introduces power transmission equipment and machinery components, including belt/chain driven equipment, speed reducers, variable speed drives, couplings, clutches, and conveying equipment. Students will learn the operation, maintenance, and troubleshooting of these types of equipment. Equipment alignment is also covered.

EEAS 113 - Industrial Controls II

A continuation of EEAS 111 . This course includes solid-state controls, proximity, photoelectric, thermistors/thermocouples, S.C.R., triacs, thyristors, transistors, timers, counters, and advance motor controls. Industrial process control is covered including reduced voltage starting and methods for motor braking. Prerequisite: EEAS 111 .

IMT 121 - Industrial Fluid Power

A study of the principles of hydraulics and pneumatics as applied to the basic theory of fluidics and typical industrial circuits. Students will build fluid power circuits as applied to industrial applications.

Semester 4:

EEAS 215 - Process Control & Instrumentation

This course provides a broad perspective of industrial measurement and control. Methods of sensing, measuring and transmitting data obtained from industrial processes are covered. Principles and theory of automatic control, measurement concepts, programmable controller, and distributed control also will be covered. Prerequisite: EEAS 113 .

PHYS 102 - General Physics II

A continuation of PHYS 101 . Topics normally covered are waves, sound, light, electricity, magnetism, relativity, nuclear atoms, nucleus, and radioactivity. Prerequisite: Minimum grade C in PHYS 101 and placement into ENG 101 or minimum grade of "C" in one of the following: ENG 021 and ENG 099 ; or ENG 022 and ENG 099 ; or the EAP course sequence ENG 079 and ENG 089 , or ENG 096 .

IMT 112 - Rotating Equipment

This course introduces rotating machinery, including pumps, turbines, compressors, bearings, and seals. Students will learn the operation, maintenance, and troubleshooting of these types of equipment. Equipment alignment is also covered.

EGR 160 - Applied Thermodynamics

This course provides an introduction thermodynamics and its practical application in industry. Topics will includes a review of terminology, the first law of thermodynamics, work, heat, properties of substances and the second law of thermodynamics. Problem solving and industry applications will be emphasized including problem formulation, analytical and computational solutions. This course is a closed courses and for students in the OET Program only. Prerequisite: MATH 139 or MATH 142 and PHYS 102 .

Recommended to take Semester 1, 2 or during the Summer Semester:

Social & Behavioral Sciences Elective

Semester 3:

IMT 111 - Mechanical Power Transmission

This course introduces power transmission equipment and machinery components, including belt/chain driven equipment, speed reducers, variable speed drives, couplings, clutches, and conveying equipment. Students will learn the operation, maintenance, and troubleshooting of these types of equipment. Equipment alignment is also covered.

EEAS 113 - Industrial Controls II

A continuation of EEAS 111 . This course includes solid-state controls, proximity, photoelectric, thermistors/thermocouples, S.C.R., triacs, thyristors, transistors, timers, counters, and advance motor controls. Industrial process control is covered including reduced voltage starting and methods for motor braking. Prerequisite: EEAS 111 .

EEAS 115 - Electrical/Electronics Troubleshooting

A course designed to provide the student with the essential techniques of troubleshooting relating to electrical and electronic circuits. Use of test equipment and instrumentation will be covered. Preventive maintenance and cutting troubleshooting time is emphasized. Lab work includes hands-on troubleshooting of common circuits. Prerequisite: EEAS 111 and EEAS 113 , which may be taken concurrently.

IMT 121 - Industrial Fluid Power

A study of the principles of hydraulics and pneumatics as applied to the basic theory of fluidics and typical industrial circuits. Students will build fluid power circuits as applied to industrial applications.

Semester 4:

IMT 112 - Rotating Equipment

This course introduces rotating machinery, including pumps, turbines, compressors, bearings, and seals. Students will learn the operation, maintenance, and troubleshooting of these types of equipment. Equipment alignment is also covered.

EEAS 215 - Process Control & Instrumentation

This course provides a broad perspective of industrial measurement and control. Methods of sensing, measuring and transmitting data obtained from industrial processes are covered. Principles and theory of automatic control, measurement concepts, programmable controller, and distributed control also will be covered. Prerequisite: EEAS 113 .

EEAS 221 - Industrial Circuits Basic Programmable Logic Controllers

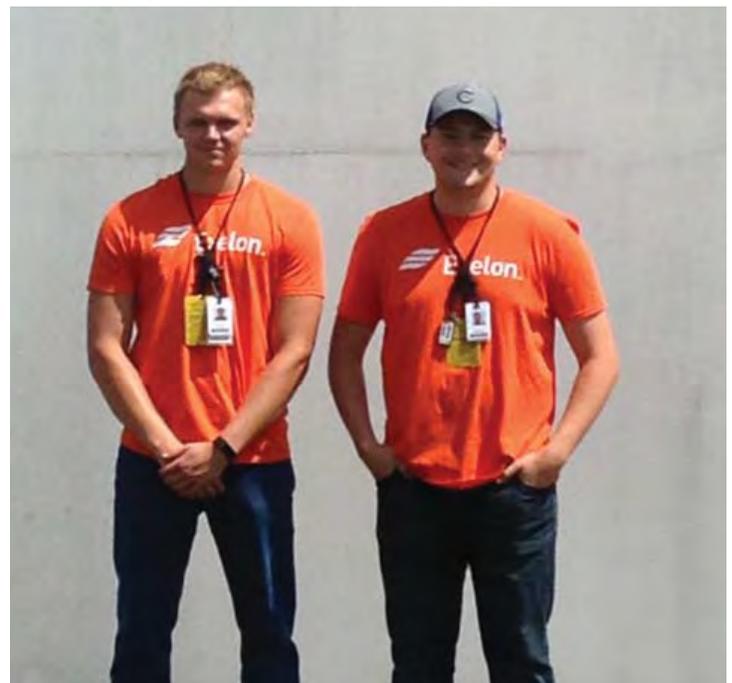
This course deals with the basic operation, application and programming industrial control system concentrating on industrial microprocessor programmable logic controller (PLC). The course covers historical background, uses of PLCs, product ranges, numbering systems, and logic concepts pertaining to PLCs. It develops an understanding of the PLC central processing unit, input-output systems and peripheral devices. The course provides skills in programming and document on a cross section of industrial PLCs. Much time will be spent in the lab working on different kinds of industrial PLC applications. Prerequisite: EEAS 113 .

MFG 101 - Precision Machine Tool Technology I

MFG 101 is designed to include both classroom and hands-on shop experience. In the shop, emphasis is placed on exercises and projects that embody the basic processes and operations in using hand tools, layout tools, and machine tools, such as vertical saw, drill presses, engine lathes, vertical milling machines, and surface grinders. In the classroom, emphasis is placed on the theory-related information that is essential to set up and operate machine tools and to perform basic processes and operations in the machine shop.

Recommended to take Semester 1, 2 or during the Summer Semester:

Social & Behavioral Sciences Elective



Term By Term Degree Tracker

OPERATIONS TECHNICIAN

Operations Technicians maintain and repair equipment and other industrial machinery, such as conveying systems, production machinery, and packaging equipment. Technicians install, dismantle, repair, reassemble, and move machinery in manufacturing facilities and power plants. Many jobs require a background check, and workers are subject to drug and alcohol screenings.

Fall Semester

Class Name	Credit Hours	Date Taken	Grade Received
OET 101-Intro Operations & Risk	4		
ENG 130-Technical Report Writing or ENG 101-Rhetoric	3		
EEAS 101-Basic Wiring & Circuit Design	4		
MATH 119-Mathematics for Technical Students	5		
Semester Hours	16		

Spring Semester

Class Name	Credit Hours	Date Taken	Grade Received
IMT 101-Industrial Maintenance Fundamentals	3		
PHYS 103-Technical Physics	4		
EEAS 111-Industrial Controls I	4		
Social & Behavioral Sciences Elective	3		
OET 291-Operations Career Development	1		
Semester Hours	15		

Summer Semester

Class Name	Credit Hours	Date Taken	Grade Received
OET 295-Internship	4		
Semester Hours	4		

Fall Semester

Class Name	Credit Hours	Date Taken	Grade Received
IMT 111-Mechanical Power Transmission	3		
EEAS 113-Industrial Controls II	4		
EEAS 115-Electrical/Electronics Troubleshooting	4		
IMT 121-Industrial Fluid Power	3		
Semester Hours	14		

Spring Semester

Class Name	Credit Hours	Date Taken	Grade Received
IMT 112-Rotating Equipment	3		
EEAS 215-Process Control & Instrumentation	4		
EEAS 221-Industrial Circuits Basic PLC	4		
MFG 101-Precision Machine Tool Technology I	4		
Semester Hours	15		

Total Hours 64

Social & Behavioral Sciences Elective Choices:

- AGRI 103 - Agriculture Economics
- ANTH 101 - Introduction to Anthropology
- ANTH 275 - Cultural Anthropology
- BUS 114 - International Business
- CDEV 208 - Child Growth and Development
- CRJ 200 - Criminology
- ECON 103 - Principles of Economics I (Macroeconomics)
- ECON 104 - Principles of Economics II (Microeconomics)
- FIN 100 - Personal Finance
- GEOG 102 - World Regional Geography
- GEOG 104 - Introductory Economic Geography
- GEOG 106 - Cultural Geography
- HIST 103 - History of the United States to 1865
- HIST 104 - History of the United States, 1865 to Present
- HIST 107 - World History to 1500
- HIST 108 - World History Since 1500
- HIST 109 - North American Indian History
- HIST 111 - History of Horticulture
- HIST 201 - Modern Europe Since 1815
- HIST 205 - French Revolution
- HIST 220 - History of Soviet Russia
- HIST 240 - History of Latin America
- HIST 250 - The Civil War and Reconstruction
- HIST 260 - History of the Middle East
- HIST 270 - History of War II
- HIST 290 - History of Africa
- HIST 293 - History of Black America
- HUS 102 - Cultural Awareness
- PSCI 101 - American National Government
- PSCI 102 - American State and Local Government
- PSCI 103 - Introduction to Comparative Government
- PSYC 101 - General Psychology
- PSYC 205 - Abnormal Psychology
- PSYC 207 - Psychology of Personality
- PSYC 208 - Social Psychology
- PSYC 209 - Child Psychology
- PSYC 210 - Child and Adolescent Development
- PSYC 215 - Life Span: Survey of Human Development
- PSYC 220 - Adult Developing and Aging
- SOC 101 - Introduction to Sociology
- SOC 110 - Introduction to Rural Sociology
- SOC 220 - Sex, Gender and Power
- SOC 265 - Sociology of War, Conflict and Peace
- SOC 270 - Marriage and the Family
- SOC 280 - Sociology of Social Problems
- SOC 290 - Cultural Diversity in America
- SOC 293 - Human Sexualities
- SOC 295 - Sociology of Black America



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“I was interested in the OET program because I plan to pursue a chemical engineering degree. This program will provide me with a valuable opportunity to meet with potential employers in the industry and learn the technical skills that I need to be successful in my career.”

Carly Murphy, Student
Operations Engineering & Technician Program

www.jjc.edu/info/OET



JOLIET JUNIOR COLLEGE
1901

Presentations:



BREAKOUT SESSION IV

Wednesday, September 20, 2017 – 11:00 AM – 12:00 PM

Bridging the Gap Between Industry and Education

Fell A

Amy Murphy, Joliet Junior College
Melissa Lachcik, Joliet Junior College
Megan Borchers, LyondellBasell

Partnerships are the foundation to successful education and bridging the workforce gap. Joliet Junior College has decades of experience in working with industry partners to develop programs that will fulfill the needs of labor shortage. A recent partnership endeavor with JJC included the concept and development of the Operations Engineering and Technician (OET) program which exemplifies their commitment to the local community. The OET program is an innovative idea that originated with our industry partners to generate a highly skilled labor pool that meets the rigorous industry standards.



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Career & Technical Education Webinar Series

How to Build Career & Technical Education Programs That Work!

We are pleased to announce our Career and Technical Education Webinar Series! Our presenters will provide valuable insights on how to connect your CTE programs to the industry/job demands in your area through partnerships and apprenticeship programs. Join us for our first session with presenters Melissa Lachcik and Amy Murphy.

Industry & Education: Bridging the Skills Gap
Thursday, September 15, 2016
12 PM Eastern Time

[Register Now](#)

FREE! Space is limited so sign up now.

Partnerships are the foundation to successful education and bridging the workforce gap. Joliet Junior College, the oldest public community college, has decades of experience in working with industry partners to develop programs that will fulfill the needs of labor shortage. During this webinar, we will discuss the importance of establishing partnerships, identifying key personnel, and satisfying the needs of the community.



United States
of America

Congressional Record

PROCEEDINGS AND DEBATES OF THE 114th CONGRESS, FIRST SESSION

House of Representatives

HONORING THE JOLIET JUNIOR COLLEGE OPERATIONS ENGINEERING AND TECHNICIAN PROGRAM

HON. ADAM KINZINGER
OF ILLINOIS
IN THE HOUSE OF REPRESENTATIVES

Thursday, September 24, 2015

Mr. KINZINGER of Illinois: Mr. Speaker, I rise today to recognize Joliet Junior College and the launch of their Operations Engineering and Technician (OET) Program.

In today's workforce and economic environment, being career ready is more important than ever. With the number of retirees increasing almost daily, companies and employers are searching for talented individuals who can hit the ground running on day one in their new roles. The skills students will learn and develop in OET are first class and as a result, the Joliet Junior College OET program will ensure graduates from the program will spur competition, productivity, and ingenuity in the next generation of workers. Programs like OET and similar technical education programs are vital to leading our economy and our workforce into the future.

I have witnessed firsthand the quality education that Joliet Junior College provides my constituents and our surrounding communities, and I am proud to represent many of these wonderful individuals in Congress. On behalf of the 16th District of Illinois, I wish to express our deepest thanks to Joliet Junior College for their commendable service and constant dedication to higher education.

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President

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Director, Corporate and
Community Services

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Contract Training
Specialist

Bruce Kuzmanich
Contract Training
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Melissa Lachcik
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LyondellBasell Donates \$10,000 to Joliet Junior College
Newly Purchased Equipment to Enhance Classroom Experience

LyondellBasell, one of the world's largest plastics, chemical and refining companies, recently awarded \$10,000 to Joliet Junior College. The grant allows the college's **Process Control Instrumentation Technician (PCIT) program** to purchase new equipment for classroom use.

"Joliet Junior College continues to lead the way in training future employees for our industry," said LyondellBasell Morris Complex Site Manager Brian Angwin. "Their students get hands-on experience with the same equipment found at our facilities and that gives them a big advantage when they enter the workforce."

Before the grant, students were forced to use donated equipment with mismatched parts. This left students unable to complete projects as a team and in a timely manner. This new equipment resolves that issue and provides a complete learning process.

We are grateful for the investment LyondellBasell has made in our PCIT program and ultimately in our college," said Dr. Debra Daniels, Joliet Junior College president. "The relationships we have with area employers are invaluable and they are essential to the development of our technical programs and to the success of our students."

Since 2013, LyondellBasell has donated \$24,000 towards the PCIT program. Morris



Students in the Process Control Instrumentation Technician (PCIT) program perform tasks on new equipment that was purchased through a donation from LyondellBasell.

Complex employees are active participants in the program, mentoring students and serving on the program's advisory board.

About LyondellBasell

LyondellBasell (NYSE: LYB) is one of the world's largest plastics, chemical and refining companies. The company manufactures products at 56 sites in 19 countries. LyondellBasell products and technologies are used to make items that improve the quality of life for people around the world including packaging, electronics, automotive parts, home furnishings, construction materials and biofuels. More information about LyondellBasell can be found at www.lyb.com.

For more information about the PCIT program, visit www.jjc.edu/technical ■

Operations Engineering & Technician (OET) Program Continues to Receive Industry Support

Since the OET program's launch this past Fall, industry partners have continued to team up with JJC by providing financial resources and internship opportunities.

TransCanada donated a total of \$55,000 to purchase new equipment for the program. **Exelon Generation** provided two scholarships for the Spring semester to students in the current program. Students in the OET program will also be placed in summer internships at local companies, Exelon Generation, LyondellBasell, Manhattan Mechanical, and Starcon, to name a few. Several companies have also committed to provide scholarships for students in the Fall 2016 program.

The OET Program also received the 2015 Illinois Council of Community College Administrators (ICCCA) Innovation Award, "Partnering with Business/Industry to Design Programs to Fill the Labor Shortage." Formal congressional recognition was also given by U.S. Representative Adam Kinzinger in October 2015.

EXELON GENERATION PROVIDES SCHOLARSHIPS

Two students in the current OET Program received scholarships for the Spring 2016 semester from Exelon Generation's Dresden Station. The dollars were made available through a networking event held last summer by Exelon. The OET students were invited to attend this event and meet with Exelon management and employees.

The selected students were Baley Lejawa, engineering degree, and Shane Harty, technician degree. The scholarship was able to be used to assist with the cost of tuition, fees or books.

The pair found out the exciting news in a letter sent from Shane Marik, site vice president and Leah Kutches, diversity council community outreach lead at Exelon Generation. Exelon Corporation, the world's foremost energy service companies, is committed to encouraging students who plan to pursue careers in science, engineering, health physics and similar fields. They also recognize the importance of diversity in all aspects of its operation.



TransCanada, an international energy company, recently donated \$45,000 to the OET Program for the purchase of new equipment. Joan Muzzey (left), TransCanada's community investment coordinator presented a check to Amy Murphy (right), JJC's director of Corporate & Community Services. TransCanada has donated a total of \$55,000 to the OET program which launched this past Fall.



OET program students Baley Lejawa (left) and Shane Harty (right) each received a scholarship from Exelon Generation's - Dresden Station to assist with the cost of tuition, fees or books during the Spring 2016 semester.

Shane said, "I am truly grateful to Exelon. This scholarship will help take away the burden of having to come up with all of that money to pay for school." Baley added, "This scholarship will really help me out with paying for my education. It also shows me how much Exelon really cares and wants us to succeed."

For more information about the OET program, visit www.jjc.edu/info/OET ■

Frontline Supervision Certificate Program



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Real-World Engineering Experience for Students

Joliet Junior College partnered with Caterpillar, Inc. to host NFPA Fluid Power Challenge

For the second straight year, JJC along with corporate sponsor **Caterpillar, Inc.** partnered to host the National Fluid Power Association's (NFPA) Fluid Power Challenge. Ten local middle schools participated in the event at JJC.

The Fluid Power Challenge provided eighth grade students with an opportunity to solve a real-life engineering program. Students worked together with their classmates, in teams of four, to design and build a fluid power mechanism. Area middle schools in the competition were: Aux Sable Middle School, Chaney-Monge Junior High, Crone Middle School, Heritage Grove Middle School, Hufford Junior High, Manhattan Junior High, Minooka Junior High, Richard Ira Jones Middle School, Richland Junior High and Washington Junior High.

Caterpillar Inc.'s Engineering Technical Steward, Frank Breier, said, "One of the things that Caterpillar is very interested in is the S.T.E.M. program and getting students more involved in Science, Technology, Engineering and Math."

Continued on the back page...



Joliet Junior College partnered with Caterpillar, Inc. to host the second annual National Fluid Power Association's (NFPA) Fluid Power Challenge this past November. Ten local middle schools participated in the event at JJC. Eighth grade students had to use their designs and tool kits to recreate their fluid power mechanisms during a timed competition.

Continued from page 3...

He added, “The NFPA Challenge is a great hands-on experience for students in our local area.” As a new component this year, engineers from Caterpillar, Inc. went to each school and met with teams prior to the competition. The engineers were able to provide students with valuable knowledge and expertise before the competition day.

Mark Landers, senior design engineer at Caterpillar, Inc. and JJC alumnus discovered his passion for engineering in college and is always eager to share his real-world experiences with students.

Mark said, “Engineering is a lot of fun. It involves teamwork, individual work, problem-solving, prototyping, trial and error. Those are just some of the cool things about engineering!”

Teachers and students were once again excited about the opportunity to participate in the Fluid Power Challenge. This experience provided a hands-on learning environment that emphasized the areas of Science, Technology, Engineering and Mathematics.

Another encouraging sign was the increased number of female students that participated compared to last year’s event. In fact, an all-girls team from Crone Middle School actually won the 2015 Overall Champion award.

Molly Trafton, eighth grade science teacher at Heritage Grove Middle School, said, “Coming from my own perspective and being a woman who teaches science, I think it’s really great that we’re trying to get more girls involved at a younger age to show them they can do it and that science is for everybody.”

Student Jennifer Gaw, from Heritage Grove Middle School added, “What I liked best about the competition was that everything was hands-on and we didn’t have anybody helping us.”



ABOVE: An all-girls team from Crone Middle School won Overall Champion at the 2015 Fluid Power Challenge. Members of Team 2 included: (L-R) Instructor Sue Ellen Gerchman, Muskan Sidhu, Apurva Iyengar, Nivedita Pai, Angela Ye. Eric Lanke, chief executive officer of the NFPA, presented the trophy.



LEFT: Frank Breier (back), engineering technical steward at Caterpillar Inc., explains the project details with a team of students during Workshop Day.

Shaniyah Hinton, an eighth-grader from Minooka Junior High added, “I learned about teamwork and how important it is. If you work as a group you can get anything done.”

The NFPA started the Fluid Power Challenge about seven years ago with the intention of introducing middle school students to fluid power technology.

Amy Murphy, director of Corporate & Community Services at JJC said, “We are very grateful to Caterpillar, Inc. for their sponsorship of this program. The Fluid Power Challenge continues to be an important outreach initiative to raise awareness and generate excitement about S.T.E.M.-related subjects as students continue their education.

If your company is interested in partnership opportunities with upcoming JJC programs, contact Amy Murphy at amurphy@jjc.edu or visit www.trainingupdate.org. ■

2015 NFPA FLUID POWER CHALLENGE WINNERS:

BEST PORTFOLIO
Minooka Junior High, Team 3

BEST DESIGN
Richard Ira Jones Middle School, Team 1

BEST MACHINE PERFORMANCE
Aux Sable Middle School, Team 3

BEST TEAMWORK
Minooka Junior High, Team 1

OVERALL CHAMPION
Crone Middle School, Team 2

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**Partnerships between Industry and Education
Provide Opportunities for Success**

There have been numerous discussions among industry professionals and educators about the growing need for skilled workers. The synergy created by working together was at the foundation of a strategy to take a collaborative approach. Joliet Junior College partnered with local companies to develop the new **Operations Engineering & Technician (OET) program**.

Amy Murphy, JJC Director of Corporate & Community Services explained that partnerships between industry and education are essential to successfully prepare the next generation of workers.

Murphy said, "We are so thankful to the industry partners who have supported our OET program. This collaborative effort will ensure that students are prepared with the skills that employers need."

She added, "The common theme among employers has been their need to have a talented labor pool that are workforce ready. Our new OET program is taking a proactive approach towards this initiative."

**TransCanada Supports
OET Program**

Representatives from TransCanada visited Joliet Junior College on the morning of July 29, 2015 to provide a generous donation of

\$10,000. This contribution will be used to purchase new equipment for the OET program which begins this Fall.

Guest speakers at the event included: Dr. Debra Daniels, JJC President, Peter Jaskowski, TransCanada Government Relations Director, State Senator Sue Rezin, Illinois Secretary of Education Elizabeth Purvis and Greg Pakieser, JJC Technical Department Chairperson.

The event highlighted the partnerships established between industry and education in order to meet industry's need for a skilled workforce in sectors such as energy.

Continued on page 2...



TransCanada representatives visited Joliet Junior College to provide a generous donation that will be used to purchase new equipment for the Operations Engineering & Technician (OET) Program. Attendees on a tour of the Industrial Maintenance pump lab included:

(Left to Right): Judith Thorman-Director, American Petroleum Institute, Central Region, Lance Copes-GAVC, Nikki Wills-GEDC, Joan Muzzey- TransCanada, Illinois Secretary of Education Elizabeth Purvis, State Senator Sue Rezin, Peter Jaskowski-TransCanada, Tim Treece-TransCanada, Jeff Bradford - JJC Technical Professor, Greg Pakieser - JJC Technical Department Chairperson and Jim Prescott-TransCanada.

...Continued from page 1

TransCanada Government Relations Director, Peter Jaskowski said, “TransCanada supports these types of programs and that’s really why we’re here today to help support this particular program at Joliet Junior College.”

He added, “What we’re finding in the marketplace out there as employers is that we need to have skilled employees ready to come to the job to perform the increasingly sophisticated duties that are related to the energy industry.”

In the OET program, two associate degree options are available: Operations Engineer and Operations Technician. In addition to technical skills, students will also learn soft skills that are important to employers. For example, there is an emphasis with being on time to class. Students will have a badge to swipe in/out using a timeclock that will monitor their attendance and timeliness.

Illinois State Secretary of Education Elizabeth Purvis expressed her gratitude towards businesses who have partnered with educators to invest in our youth.

In regards to JJC’s new program, she said, “Here we have a model of a community college responding to the needs of the community in much the way they were

designed.” She added, “It is through partnerships like this that we can continue the proud tradition of the state.”

The event concluded with a tour of the technical department labs where classes for the OET program will be held. JJC Technical Department professors Jeff Bradford (Industrial Maintenance) and Cheryl Upshaw (Electrical/Electrical Automated Systems) also provided hands-on demonstrations to show how students will learn in a hands-on environment through the utilization of real-world applications.

The OET program was designed to prepare students for challenging careers in the petrochemical, nuclear and manufacturing industries. Local companies were at the forefront of driving this initiative. JJC worked closely with Exelon Generation (Braidwood Station, Dresden Station and LaSalle Station), Aux Sable Liquid Products and LyondellBassell, Grundy Area Vocational Center, Coal City School District, Grundy Economic Development Council and State Senator Sue Rezin to develop this innovative degree program.

The OET program will begin this Fall but partnership opportunities are always available. Whether it’s in the form of scholarships, internships or monetary donations to purchase new equipment, there are a variety of ways

for companies to show their support and sustain the longevity of the OET program.

For more information about the OET program or to become an industry partner, please contact Amy Murphy at (815) 280-1418 or engineertech@jjc.edu ■

www.jjc.edu/info/operationsengineeringtech



ABOVE: JJC Technical Instructor Cheryl Upshaw (right) leads a tour through the lab where students in the OET Program will learn electrical concepts through hands-on activities.

RIGHT: Peter Jaskowski, TransCanada Government Relations Director addresses the audience as JJC President Dr. Debra Daniels looks on.



Renewable Energy for Educators Workshop Presented at JJC

Local educators of students in grades 7-12 from the math, science, industrial technology, engineering and related subject disciplines had an exciting opportunity to attend a one-day workshop at Joliet Junior College.

The **Renewable Energy for Educators** workshop, held on June 30, 2015, was offered through a National Science Foundation grant awarded to JJC that focuses on Integrating Sustainability Through Technical Education.

The workshop offered curriculum resources, teacher professional development, technical assistance, and instructional equipment in order to help middle school and high school educators bring renewable energy topics into the classroom.

Topics of renewable energy technologies included: wind energy, solar energy, biomass and biothermal energy, energy storage systems, energy efficiency and Smart Grid. The workshop also addressed the New Illinois Learning Standards for Science (i.e. NGSS) by making connections to many of the Disciplinary Core Ideas within the NGSS and Common Core State Standards.



Three presenters shared their knowledge and expertise with participants. They were: Matt Aldeman - Senior Energy Analyst, Center for Renewable Energy; Jeritt Williams - STEM Education Coordinator, Center for Renewable Energy and David Loomis, Ph.D. - Economics and Director, Center for Renewable Energy.

The educators were very impressed with the workshop's content and the number of resources available to assist them in their classroom. Science instructor Catherine Sieber said, "I run Environmental Action at Lincoln-Way Central. I've always been looking for resources, and it's kind of too much at times, but this workshop helped me gear what I want to talk about from now on in my club."



A Renewable Energy for Educators workshop was held at JJC on June 30, 2015. This one-day workshop was funded by a grant from the National Science Foundation.

Maria Wilson, Science instructor from Lincoln-Way North added, "How exciting to have real data and something that we can easily show to our students; and have them answer some questions on basic graph analysis with something that's so fantastic."

For more information about the Renewable Energy for Educators, contact Brenda Large at (815) 280-1504 or email blarge@jjc.edu. ■

MEG DAY™

Manufacturing Day

In partnership with TRMA & JJC

Tuesday, Oct. 6, 2015

9:15a.m.-12:45p.m. • JJC – Main Campus

EXHIBITORS NEEDED!

If your company would like to participate and raise awareness among local high school students about the exciting career pathways and opportunities in manufacturing, call (815) 280-1418 or email amurphy@jjc.edu



This material is based on work supported by the National Science Foundation under Grant Number DUE-1400565, July 2014 - June 2017. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect those of the National Science Foundation.

Industrial Maintenance Technology Careers in High-Demand

One thousandth of an inch might not seem like that much to the average person. But to a manufacturing company whose equipment isn't properly aligned, that small number could make a huge difference.

That's why skilled workers such as maintenance mechanics, who repair equipment and keep things running smoothly are still in such high-demand.

According to the Bureau of Labor Statistics, "Employment of industrial machinery mechanics and maintenance workers and millwrights is projected to grow 17 percent from 2012 to 2022, faster than the average for all occupations.*"

An ongoing industry dilemma continues to be the large number of retiring workers. The demand in these occupations still remains but there seems to be more jobs than qualified candidates to fill them.

However, Joliet Junior College's Industrial Maintenance Technology program is readily preparing students for an exciting career in this industry. JJC Technical Professor Jeff Bradford takes a well-rounded approach to prepare his students in areas such as pipefitting, pump operation, and shaft alignment, to name a few.

Bradford said, "My program tries to give students a really broad set of skills." He explains that employers cast a really wide net when it comes to the skill sets they are looking for in prospective employees.

Bradford said, "From the technical side, one of the things that we try to do is make sure that the students have a solid foundational base of knowledge." For instance, he starts at the basics when it comes to measurements and terminology. Classes also provide hands-on exercises that give students an opportunity to actually run pipe, troubleshoot circuits and align equipment.



JJC Technical Professor Jeff Bradford monitors equipment in the industrial pump lab. Students in the Industrial Maintenance program learn in a hands-on environment that replicates real-world applications.

Soft skills are another area of focus in Bradford's classes. Whether it's coming to class on time or communicating ideas to others, he explains how these soft skills are so important, but often don't receive the same type of attention as technical skills.

The IMT program offers an A.A.S. degree. Bradford also works closely with local companies to provide industry training about topics such as pipefitting, shaft alignment and pneumatics.

Professor Jeff Quigley recently joined the technical department team to assist Bradford with teaching classes in the high-demand IMT program.

For more information about the IMT program, contact Jeff Bradford at (815) 280-2403 or jbradfor@jjc.edu ■

SKILLED TRADES

CAREER FAIR

Here is an opportunity for employers to connect with JJC students and alumni, veterans and community members who have a mechanical or technical skill set or who have worked in a skilled trades environment. This event is free to employers.

Wednesday, October 21 • 1-4p.m.

Location: JJC Main Campus, T-Building,
1215 Houbolt Road, Joliet, IL 60431

REGISTER ONLINE TODAY AT:

www.jjc.edu/info/skilledtrades



QUESTIONS?

Contact the Career Services Center at (815) 280-2756 or careers@jjc.edu



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Local Companies Drive Development of New JJC Program to Meet Industry Needs

The new **Operations Engineering & Technician (OET) program** at Joliet Junior College will provide students with an opportunity to train for a rewarding career in the petrochemical, nuclear or manufacturing industry.

All of these industries are experiencing tremendous growth as well as a retiring workforce which means that employers are in need of more skilled workers.

Local companies were at the forefront of driving this initiative. Exelon Generation (Braidwood Station, Dresden Station and LaSalle Station), Aux Sable Liquid Products and LyondellBassell partnered with JJC and State Senator Sue Rezin, R-Morris, to develop this innovative degree program.

Russell Coon, Exelon Nuclear Vice President of Accreditation and Training Strategy, said, "The JJC program will help us build the next generation of nuclear professionals by preparing local students to enter the industry armed with the knowledge and skills needed to meet our workforce needs."

Students will be able to train locally for jobs that are right here in their community. Russell added, "Exelon partnered with



JJC based on the school's academic excellence and reputation. Being in the same geographic area as many of our plants will provide an opportunity to receive a

relevant degree and obtain rewarding jobs locally. It's a "win-win" partnership for the students and Exelon Generation."

The OET program, which begins in Fall 2015, has two associate degree options available: Operations Engineer and Operations Technician.

Continued on page 2...



A kick-off event was recently held for the new Operations & Engineering Technician program at Joliet Junior College. Representatives from the local community include:

(Front row): Amy Murphy-JJC, Russell Coon-Exelon, Dr. Debra Daniels-JJC President, Senator Sue Rezin, Barbara Adams-JJC (Second row): Greg Pakieser-JJC, Chris Fonck-AuxSable, Tricia Joyner-Exelon, Senator Jennifer Bertino-Tarrant, Nancy Norton-Ammer-GEDC, Megan Borchers-Exelon, Brent Connett-LyondellBasell (Back row): Phil Cunningham-LyondellBasell, Jon Rosenberg-LyondellBasell, Stephanie Marum-Exelon, Sue Klen-JJC, Shane Marik-Exelon, Missy Durkin-formerly GEDC, Lance Copes-GAVC

...Continued from page 1

Operations Engineers are responsible for the monitoring and operation of plant equipment while Operations Technicians maintain and repair equipment and industrial machinery. Even though these positions have different responsibilities, both careers are well-paying, stable and challenging.

Students in the OET program will receive the education and hands-on training they need to pursue a career in this sector. Each position has its own specific set of requirements.

There are 12 openings in the program and individuals need to apply to gain entrance. Applications are being accepted through March 31, 2015.

Educators from local school districts are also very excited about the opportunity to be involved with this program. Area high school students will serve as a primary pipeline into this program and it's an opportunity to open doors to a rewarding career.

Lance Copes, Director of Grundy Area Vocational Center explained how several area students were enrolled in a program at Linn State in Missouri. They recently returned to the area and were successfully employed with Exelon. When Lance heard about the new OET program that was developing at JJC, he knew that was something he wanted to be part of.

Lance said, "When you can be a part of linking high school students to further training/education that leads directly to employment opportunities I get very excited." He added, "Career and college readiness is big conversation point today and this program is a perfect model."

Kent Bugg, Superintendent of Coal City School District #1, expressed similar sentiments about the need to have local training opportunities available for students. He said, "After watching our graduates make the trip out of state for many years, I began to advocate for a similar program to be offered at one of our local educational institutions. JJC was the logical fit, and I am very pleased that our students can now stay closer to home to receive this training."

A kick-off event for the OET program was held on February 26, 2015 at JJC's Main Campus. Representatives from JJC, local industry partners and educators along with Senator Rezin attended the event.

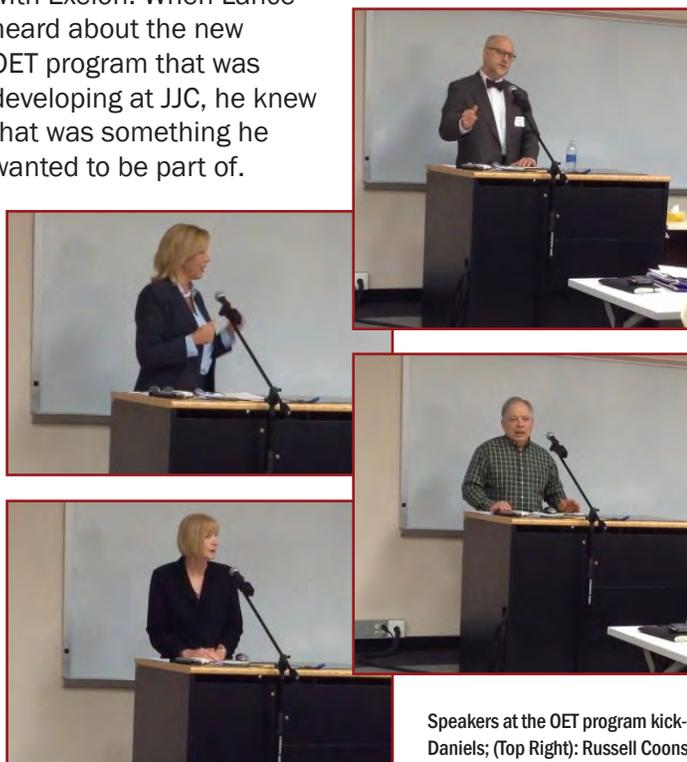
Amy Murphy, JJC Director of Corporate & Community Services said, "We are so excited about the opportunity to collaborate with local industry partners on this program."

She added, "This program has so many positive aspects to it. Students will receive training locally that will prepare them for rewarding career opportunities close to home. Our industry partners will have more skilled workers from a local talent pool to meet their employment needs.

For more information about the OET program, call Amy Murphy at (815) 280-1418 or email engineertech@jjc.edu ■

www.jjc.edu/info/operationsengineeringtech

If your company is interested partnering with us to hire an intern, sponsor a scholarship or serve on an advisory committee, please contact Amy Murphy at (815) 280-1418 or amurphy@jjc.edu



Speakers at the OET program kick-off event were: (Top Left): State Senator Sue Rezin; (Bottom Left): JJC President Dr. Debra Daniels; (Top Right): Russell Coons, Exelon Nuclear Vice President of Accreditation and Training Strategy and Greg Pakieser, JJC Technical Department chairman.

New Technical Program Aimed at Advanced Manufacturing

The new **Advanced Integrated Maintenance (AIM) program**, offered in partnership with JJC, is designed exclusively for high school seniors. This innovative program provides students with the core education and technical hands-on skills needed to pursue careers in the advanced manufacturing sector.

Students will participate in four college-level courses for a total of 13 credits. Courses include: Industrial Maintenance Fundamentals (IMT 101), Industrial Fluid Power (IMT 121), Electrical Controls for HVAC/R (HVAC 120) and Basic Wiring and Circuit Design (EEAS 101).

Students will be dual-enrolled, earning high school and college credit. Classes will be held at JJC's Main Campus. Since the demand for highly skilled technicians continues to grow, especially in our district, the AIM program provides students with a solid foundation into this career pathway.

Companies that are interested in hiring students for internships in Summer 2016, please call Amy Murphy at (815) 280-1418 or email amurphy@jjc.edu. ■



Photos from Manufacturing Day 2014



SAVE THE DATE!

Manufacturing Day

In partnership with TRMA & JJC

Tuesday, Oct. 6, 2015

9a.m.-1p.m. • JJC Main Campus

Watch for details.

Apprenticeship Programs Provide Earn and Learn Training

Have you considered creating an apprenticeship program for your company? There are several reasons that might help you decide if the time is right to develop such a program.

One of the biggest challenges facing companies today is the need for skilled workers. Many skilled workers are retiring and there is a need to fill their positions. In addition, companies that are experiencing growth and expansion also have a need to hire additional skilled workers to their team. However, there is a shortage of qualified, skilled workers to choose from.

Many companies would greatly benefit from developing an Apprenticeship program but it can sometimes seem like a daunting task. Here's a quick overview about Apprenticeships.

WHAT ARE APPRENTICESHIPS?

The U.S. Department of Labor defines apprenticeship as an "earn and learn" training model that combines work-based learning with related classroom instruction using the highest industry standards.

Apprenticeships may be registered or unregistered. "Registered Apprenticeships are managed by the U.S. Department of Labor, which publishes nationally approved training models and verifies the credentials of individual learners."* The U.S. Department of Labor recognizes over 1,000 different apprenticeable occupations. Apprenticeship programs can include both union and non-union positions.

Companies may also set up their own unregistered apprenticeships to meet their individual needs. The important components include a structured learning pathway that combines learning both in the classroom and on the job.

WHO BENEFITS FROM APPRENTICESHIPS?

It's essentially a win-win situation for both the employer and the apprentice because everyone benefits. An



apprentice will receive quality, on-the-job training from a mentor. While the classroom provides an excellent foundation, the added skills learned in real-world applications are invaluable. An apprentice will learn from an experienced journeyman who can prepare the employee with actual skills and experiences that are needed to be successful. Apprentices can also add skills and credentials to make them more marketable while earning a paycheck. Many apprentices are able to continue their educational goals by earning additional certificates or credentials.

Employers will have a new and diverse talent pool of skilled workers to choose from. This will help to make companies more viable and competitive in an ever-changing economy.

HOW DO WE START AN APPRENTICESHIP PROGRAM?

If your company is interested in developing an apprenticeship program, please contact Joliet Junior College. As a resource to the local community, JJC is here to meet your training needs.

JJC currently partners with many local companies to provide training opportunities and develop Apprenticeship programs. All of our training programs combine classroom instruction and hands-on experience. Our instructors have professional work experience in their respective fields and are able to provide real-world scenarios.

For more information about developing an Apprenticeship program, contact Amy Murphy at (815) 280-1418 or email amurphy@jjc.edu ■

*Source: U.S. Department of Labor Apprenticeship - <http://www.dol.gov/apprenticeship/>