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# 1 BUSINESS TRAINING

## How to Bridge the Gap Between Government and Business

Prosperity in Illinois is a dream that entrepreneurs still have. Regardless of conditions in this state, many employers and employees want to succeed. To make that happen, many businesses have joined the Illinois Prosperity Project (IP2).

The Illinois Prosperity Project is a coalition of employers and business organizations throughout the state. Their mission is to provide employees and associates with information about the political activities of elected state and federal officials. The coalition also wants to help more people get involved in the election process by becoming a resource that can help bridge the gap between government and business.

The coalition was founded in 2002. Since then, it has focused on promoting voter education, voter registration, and encouraging members to vote. While IP2 does not endorse any candidate for office, it does strive to educate employers and employees about the relationship between government and how it impacts economic growth, competitiveness, and job creation and retention.

"This organization can be very helpful to both employers and employees, said Amy Murphy, director of Corporate and Community Services for Joliet Junior College. "It provides a lot of useful information including contact information for state and federal elected representatives, as well as all levels of county and local government officials."

**Anyone interested in knowing more about IP2 can visit their website at <http://www.bipac.net>.**

## Food Sanitation

### Food Sanitation Certification Prep (FOOD 440)

Learn to identify the causes of food-borne illness, identify and apply correct procedures for cleaning and sanitizing, recognize problems and potential solutions associated with facility, equipment and layout, and understand the Illinois code related to food service establishments. Successful completion of this course prepares you to take the state of Illinois exam for Management and Sanitation Training. The exam is taken on the second day of class. Book is included in the class fee. Go to [www.trainingupdate.org](http://www.trainingupdate.org) then click on "career training" for additional course details.

T1	8a.m.-5p.m.	S	Main
Sept. 10 - 17			
T2	8a.m.-5p.m.	S	Main
Oct. 22 - Oct. 29			
T3	8a.m.-5p.m.	S	Main
Dec. 3 - 10			

### Food Sanitation Certification Prep Online (FOOD 4401)

This is the on-line version of FOOD 440. State of Illinois exam is administered on second day of FOOD 440 class schedules. You must call 815-280-1555 to schedule your test. A limited number of tests are available per session. If the scheduled sessions are full, you will be directed to the next available date.

Call 815-280-1555 to register and receive your class materials.  
Aug. 23 to Dec. 17 \$185

### Food Sanitation 5-Hour Refresher (FOOD 441)

In this course, you will refresh your knowledge of food-borne illness by identifying and applying correct procedures for cleaning and sanitizing; recognize problems and potential solutions associated with facility, equipment and layout; and understand the Illinois code related to food service establishments. Successful completion of this course provides the student with a renewed license. Student must bring current Illinois license to class.

T1	8a.m.-2p.m.	S	Main
Aug. 27			
T1	8a.m.-2p.m.	S	Main
Oct. 1			

## Purchasing and Procurement

The Department of Labor states that the employment of purchasing agents will experience faster than average growth, as more companies demand a greater number of purchased goods and services. Earn a certificate of completion from Joliet Junior College after successfully completing the three classes listed below. These classes will also prepare the student to take the Certified

Call (815) 280-1418 for more information about on-site training and grant funding.



Professional in Supply Chain Management (CPSM) examination offered by the Institute of Supply Chain Management (ISM). (See the ISM website [www.ism.ws](http://www.ism.ws) for additional work experience and educational requirements). All books and class material are included in the class fee. Go to [www.trainingupdate.org](http://www.trainingupdate.org) then click on "career training" for additional course details.

### CPSM Module One: Foundation of Supply Management (NAPM 511)

This module addresses topics such as cost control, financing, contracting, negotiation, international business, social responsibility, sourcing, and supplier relationship management. Understand the process for competitive bids, quotations and proposals with specifications, terms and conditions. Conduct negotiations with suppliers. Administer a department budget and cost management program. Perform cost/benefit analyses. Identify sources of goods and services both national and international. Manage effective relationships with suppliers.

T1	9a.m.-4:30p.m.	T & R	Main
Oct. 4 & 6			

### CPSM Module Two: Effective Supply Management Performance (NAPM 512)

Discuss subjects such as forecasting; logistics, materials and inventory management, organization and department assessment, planning, project management, product development and quality. Analyze data on current and future global/domestic market conditions. Develop supply forecasts. Implement a warehouse and inventory system. Resolve cost variances and establish performance criteria. Manage project management activities. Administer a supplier certification program.

T1	9a.m.-4:30p.m.	T & R	Main
Oct. 11 & 13			

### CPSM Module Three: Leadership in Supply Management (NAPM 513)

The main topics of this course include leadership, risk and compliance, strategic sourcing. Learn to implement a strategic supply management plan based on market conditions, business needs and available resources. Develop a risk profile in accordance with contracts, laws, regulations and organizational policy. Standardize strategic sourcing procedures. Determine in sourcing and outsourcing decisions.

T1	9a.m.-4:30p.m.	T & R	Main
Oct. 18 & 20			

## Forklift

### Forklift Training (FORK 201)

This two-week course consists of 64 hours of training that includes practical hands-on learning. Participants will receive 60 hours of drive time and earn a National Safety Council Certification. Classes are held at the JJC Weitendorf Facility, 17840 Laraway Rd, Joliet. For more information, call Kathy Dolosic at (815) 280-1429.

T1	8a.m.-4p.m.	MTWRF	WDF
Sept. 5-16			
T2	8a.m.-4p.m.	MTWRF	WDF
Sept. 26 - Oct. 7			
T3	8a.m.-4p.m.	MTWRF	WDF
Oct. 24 - Nov. 4			
T4	8a.m.-4p.m.	MTWRF	WDF
Dec. 5 -16			

## Quality Control

### ISO 9001:2008 Internal Quality Auditing (CQS 941)

This two-day seminar is designed for the internal quality auditors of an ISO 9001:2008 registered organization. Emphasis will be placed on the principles of ISO 9001:2008 and auditing compliance to the ISO standard. Individuals will gain skills needed to plan, prepare, and perform internal quality audits. This hands-on training simulates an actual audit environment. Some topics include procedure review, conducting interviews, audit performance, audit reporting, and closeout.

T1 8a.m.-5p.m. F Main  
Sept. 23 - 30 \$395

### 8D Problem Solving (CQS 1030)

A two-day seminar designed to help participants learn root cause problem solving techniques utilizing the 8D approach. Some include: developing a problem statement, utilizing teams, and discussion on different types of problem solving tools to use. Some of the tools include Brainstorming, diagramming, charting, the 5 why's, Change Analysis & Mistake proofing to prevent recurrence. The class concludes with work on a case study to utilize the tools to solve a simulated problem.

T1 8a.m.-5p.m. F Main  
Oct. 21 - 28 \$395

## Safety Compliance

### 10 Hour OSHA Voluntary Compliance Course (SAF 841)

An overview of the basic OSHA safety standards presented in a compact two-day format. This class teaches vital safety and health information to all personnel responsible for a safe working environment on the job site. Topics include Personal protective equipment, fire safety, lockout-tagout, blood borne pathogens, machine guards, and emergency action plans. After completing the required ten hours, participants will receive the OSHA Certification Card.

T1 8a.m.-2p.m. R-F Main  
Oct. 6 - 7 \$299

### Construction Work Zone Flagger Training (SAF 915)

This course is for novice construction work zone flaggers in both one- and two-person flagging operations. Experienced flaggers can attend this course as a refresher. This National Safety Council's Flagger Training Course meets federal industry guidelines as outlined in the Manual on Uniform Traffic Control Devices (MUTCD) guidelines and the ANSI standard ISEA-107-1999. The course has been reviewed by the Office of Highway Safety, the Federal Highway Administration, and the Illinois Departments of Transportation. All attendees receive a certificate of course completion.

T1 8a.m. - Noon M Main  
Sept. 19 \$75  
T2 8a.m. - Noon M Main  
Nov. 14 \$75

## Lean Six Sigma

You don't need to be a Black Belt in statistical methods to start making big efficiency gains in your organization. Learn a few key methods and tools to solve numerous problems and achieve significant business improvements. Understand how to laser-focus your improvement teams for breakthrough results. Discuss key tools for measurement/analysis to drive breakthrough improvement in your mission critical processes. Register for the class best suited for your organization.

### Lean Six Sigma Simplified for the Manufacturing Organization (MGT 7861)

This takes the Six Sigma course and applies it specifically to the manufacturing organization. You will learn techniques that will keep your product moving smoothly down the assembly line and to the consumer.

T1 9a.m.-4:30p.m. F Main  
Sept. 9 \$249

### Lean Six Sigma Simplified for the Healthcare Organization (MGT 7862)

This takes the Six Sigma course and applies it specifically to the health care industry. You will learn techniques that will keep costs down and provide better care to your patients.

T1 9a.m.-4:30p.m. F Main  
Nov. 4 \$249

### Lean Six Sigma Simplified for the Service Organization (MGT 7863)

Even the service organization can benefit from the ideas of Six Sigma. You will learn techniques that will keep your organization lean and operational even in tough times.

T1 9a.m.-4:30p.m. F Main  
Nov. 18 \$249

## Supervision Training

The Frontline Supervision Certificate Program is designed to help the front line supervisor develop the skills, and insights required to excel as a manager. The program is orientated towards specific skill development versus theoretical approaches to management.

### Frontline Supervision Certification Training (MGT 1030)

The first seven-weeks of this unit covers topics such as the supervisor's role in management, the environment of the supervisor, planning and goal setting, organizing, delegating and motivating the work force, human behavior, and leadership skills. The last seven weeks addresses the techniques, strategies, and legal aspects that should be considered when communicating with employees. Topics include interviewing, conducting performance reviews, training, administering discipline, and employee counseling.

T1 6-9p.m. T Main  
Sept. 6 - Dec. 6 \$995

### Leadership and Goal Setting (MGT 7856)

Successful leaders know how to set direction and keep focused on goal achievement. Participants in this daylong session will have the opportunity to assess their current leadership practices, examine qualities that make good leaders, and identify techniques to enhance individual leadership skills. Key topics include tapping into the three sources of leadership power, creating and communicating a vision for success, goal setting and accountability, working together to achieve common goals and fostering teamwork, and managing change.

T1 9a.m.-3p.m. F Main  
Sept. 16 \$125

### Winning Customer Service (MGT 7855)

Knowing how customers judge quality and understanding basic customer needs can help you be more successful (and reduce stress) on the job. In this daylong program, you'll focus on developing and enhancing skills to work more effectively with customers and fellow employees in your organization: meeting and exceeding customer needs, communicating effectively with customers, handling complaints and difficult people, and keeping customers coming back.

T1 9a.m.-3p.m. F Main  
Oct. 14 \$125

### Building Effective Teams (MGT 7857)

Effective teamwork is crucial to the success of all organizations. In this daylong program, you'll identify the key factors that help make teams successful and learn key principles and techniques to build and maintain successful teams. Topics include team-centered leadership, management structure and support to build a strong foundation for effective teamwork, communication and problem solving, building trust, and coaching team members.

T1 9a.m.-3p.m. F Main  
Nov. 18 \$125

## Supply Chain Management

Joliet Junior College allows supply chain management personnel the opportunity to complete all five of the Association of Operations Management (formerly the American Production and Inventory Control Society) (APICS) certification review courses in less than one year. These courses prepare the individual to successfully complete the examinations and earn the prestigious Certification of Production and Inventory Control (CPIM). Go to [www.trainingupdate.org](http://www.trainingupdate.org) then click on "career training" for additional course details.

### Basics of Supply Chain Management (APIC 473)

This introductory course for production and inventory management personnel and CPIM candidates provides basic definitions and concepts for planning and controlling the flow of materials into, through, and out of an organization. Some topics include manufacturing systems, forecasting, master planning, materials requirements planning, capacity management, purchasing, inventory management, distribution, and Just-in-Time manufacturing. Books are included in the class fee.

T1 8a.m.-Noon M-W-F Main  
Sept. 12 - 23 \$549

### Master Planning of Resources (APIC 480)

In this course, participants explore processes used to develop sales and operations plans, identify and assess internal and external demand and forecasting requirements and formulate an achievable master schedule consistent with business policies, objectives, and resource constraints. The course focuses on developing and validating a plan of supply, relating management of demand to environment, and developing and validating the master schedule. Textbook included.

T1 8a.m.-Noon M-W-F Main  
Sept. 26 - Oct. 7 \$549

### Detailed Scheduling and Planning (APIC 481)

This course focuses on the material and capacity scheduling and planning. It includes a detailed explanation of material requirements planning (MRP), a technique suitable for use in job shops. The course also introduces another material planning technique, material-dominated scheduling, which is applicable to process industries and other mature production environments. Textbook included.

T1 8a.m.-Noon M-W-F Main  
Oct. 10 - 21 \$549

### Execution and Control of Operations (APIC 482)

This course focuses on three main areas: prioritizing and sequencing work: executing work plans, implementing controls, and reporting results; and evaluating and providing feedback on performance. The course explains techniques for scheduling and controlling production and process operations, and the execution of quality initiatives, as well as controlling and handling inventories, evaluating performance, and data collection. Books are included in the class fee.

T1 8a.m.-Noon M-W-F Main  
Oct. 24 - Nov. 4 \$549

### Strategic Management of Resources (APIC 483)

Determine the relationship of existing and emerging processes and technologies to manufacturing strategy and supply chain related functions. Address three main topics: aligning resources with the strategic plan, configuring and integrating operating processes to support the strategic plan, and implementing change. Textbook included.

T1 8a.m.-Noon M-W-F Main  
Nov. 7 - 21 \$549



# 2 COMPUTER TRAINING

## IT support jobs showing signs of growth despite economy.

According to [money.usnews.com](http://money.usnews.com), a website published by US News and World Report, the Labor Department is projecting a 14 percent increase for Information Technology (IT) support specialists through 2018. While lower level IT positions may get outsourced, jobs to support more complex products are expected to grow dramatically. The health care industry will also drive growth in this area.

According to US News, median annual wages for computer support workers were \$44,300 in 2009, with the lowest 10 percent at \$27,200 and the highest 10 percent at \$72,690.

While a degree in computer science or related field is preferred, it is not essential, according to US News. The reason is due to the need for some employers to hire applicants with a background in their industry. For example, an employer in the accounting industry may value a person with an accounting degree and some computer knowledge over a person with a computer science degree.

"For many people with backgrounds in business or technology, a few computer courses can give them an edge," said Mike Sillar, seminar coordinator for Joliet Junior College's (JJC) Corporate and Community Services. "Our computer courses are relevant and hands-on programs that help people be more productive."

**To learn more about computer courses at JJC, call Mike at (815) 280-1423, or e-mail [msillar@jjc.edu](mailto:msillar@jjc.edu). You can also visit [www.trainingupdate.org](http://www.trainingupdate.org).**

## AutoCAD

### Introduction to AutoCAD (GRAF 1031)

This hands-on class provides an introduction to the Computer Aided Design Drafting (CADD) industry. Learn the procedures for setting up and developing two-dimensional AutoCAD drawings. Focus on coordinating input systems, basic drafting, editing, and detailing methods. Discuss scaling, annotation, and dimensioning. Determine the responsibilities of a CADD designer in today's industrial and architectural environments. The class is limited to 14 students. Prerequisites: Basic understanding of computers with Windows 2000/XP operating system. Knowledge of blue prints and drafting is not required but helpful.

T1	9a.m. - 4p.m.	F	Main
Oct. 14 - 21			\$199
T2	9a.m. - 4p.m.	F	Main
Dec. 2 - 9			\$199

### AutoCAD Tips and Tricks for Business (GRAF 1024)

Design draftsmen, engineers, and CAD supervisors will learn many valuable tips and shortcuts that will increase their AutoCAD productivity. Identify useful tracking features such as Polar, Object, Temporary, and Auto Tracking. Discuss the use of the extension and parallel object snaps, entity cycling, control elements, and context menus. Learn to use drafting shortcuts, auxiliary snap systems and several methods to plot design drawings unattended overnight! Examine electronic scaling techniques for multiple scale factors when used on the same drawing. Assess dimensioning commands, special text characters, and raster image proportion techniques. Develop an understanding of the AutoCAD's advanced topics such CAD Standards checking, Design Center, Publishing, and Sheet Set Manager.

T1	9a.m. - 4p.m.	F	Main
Oct. 28 - Nov. 4			\$199

## Hands-On Computer Training

### Microsoft Office 2010 Access: Level 1 (IDAY 241)

Topics include: Creating databases; sorting records; designing queries; using filters; generate reports; and database maintenance.

NC1	8:30a.m.-4p.m.	T	North
Sept. 6			\$119
T1	8:30a.m.-4p.m.	W	Main
Oct. 5			\$119

Call (815) 280-1418 for more information about on-site training and grant funding.

### Microsoft Office 2010 Access: Level 2 (IDAY 243)

Topics include: Controlling data entry; joining tables; creating flexible queries; sharing data across applications; and database management.

NC1	8:30a.m.-4p.m.	T	North
Sept. 13			\$119
T1	8:30a.m.-4p.m.	W	Main
Oct. 12			\$119

### Microsoft Office 2010 Access: Level 3 (IDAY 245)

Topics include: Structuring existing data; simplifying tasks with macros; writing advanced queries; make forms and reports more effective; and maintain an Access database.

NC1	8:30a.m.-4p.m.	T	North
Sept. 20			\$119
T1	8:30a.m.-4p.m.	W	Main
Oct. 19			\$119

### Microsoft Office 2010 Excel: Level 1 (IDAY 251)

Topics include: create a basic worksheet; performing calculations; insert and delete cells, columns and rows; format a worksheet; printing; and format worksheet tabs.

NC1	8:30a.m.-4p.m.	R	North
Sept. 8			\$119
T1	8:30a.m.-4p.m.	T	Main
Oct. 4			\$119

### Microsoft Office 2010 Excel: Level 2 (IDAY 253)

Topics include: Calculate data with advanced formulas; working with multiple worksheets; formatting graphics and diagrams; creating and editing charts; utilize PivotTables & Pivot Charts.

NC1	8:30a.m.-4p.m.	R	North
Sept. 15			\$119
T1	8:30a.m.-4p.m.	T	Main
Oct. 11			\$119

### Microsoft Office 2010 Excel: Level 3 (IDAY 255)

Topics include: Creating Macros; add data validation criteria; set revision tracking; protect files; merge workbooks; import and export data; create a workspace; and use Excel with the Web.

NC1	8:30a.m.-4p.m.	R	North
Sept. 22			\$119
T1	8:30a.m.-4p.m.	T	Main
Oct. 18			\$119

### Microsoft Office 2010 Outlook: Level 1 (IDAY 211)

Topics include: creating and sending email, organizing messages, customizing message options, setting up contacts and using address books, and scheduling appointments.

T1	8:30a.m.-4p.m.	M	MAIN
Oct. 10			\$119

### Microsoft Office 2010 PowerPoint: Level 1 (IDAY 261)

Topics include: creating presentations manually or using templates; modify presentations by rearranging, copying, and deleting slides; import and format text; insert and modify objects, diagrams, clipart, and WordArt; and utilize charts, and tables.

T1	8:30a.m.-4p.m.	F	Main
Sept. 16			\$119
NC1	8:30a.m.-4p.m.	F	North
Dec. 2			\$119

### Microsoft Office 2010 PowerPoint: Level 2 (IDAY 263)

Topics include: customizing PowerPoint environment; formatting presentations with design templates and customizing slide backgrounds; comparing and merging presentations, add multimedia elements; and publish a presentation as a Web Page.

T1	8:30a.m.-4p.m.	F	Main
Sept. 23			\$119
NC1	8:30a.m.-4p.m.	F	North
Dec. 9			\$119

### Microsoft Office 2010 Word: Level 1 (IDAY 271)

Topics include: creating and saving documents; selecting, formatting, and editing text; change font appearance; add borders and shading; utilize tables; insert graphic objects; proofing spelling and grammar.

NC1	8:30a.m.-4p.m.	W	North
Sept. 7			\$119
T1	8:30a.m.-4p.m.	R	Main
Oct. 6			\$119

### Microsoft Office 2010 Word: Level 2 (IDAY 273)

Topics include: managing lists; customizing tables and charts; formatting with styles and themes; modifying pictures; customized graphic elements; insert content using quick parts; text flow; mail merges; using macros to automate tasks; and templates.

NC1	8:30a.m.-4p.m.	W	North
Sept. 14			\$119
T1	8:30a.m.-4p.m.	R	Main
Oct. 13			\$119

### Microsoft Office 2010 Word: Level 3 (IDAY 275)

Topics include: Use Word with Excel and PowerPoint; review and compare document changes; insert bookmarks, footnotes, captions and hyperlinks; add indexes, tables, and table of contents; hide text; set formatting and editing restrictions.

NC1	8:30a.m.-4p.m.	W	North
Sept. 21			\$119
T1	8:30a.m.-4p.m.	R	Main
Oct. 20			\$119

## Computer Graphics

### Fundamentals of Photoshop Level One (GRAF 1006)

Add excitement to your digital photographs with Photoshop. Learn how to use curves and levels to adjust and correct color. Have fun using filters to enhance the look and feel of your photographs and you will learn how to combine images to create stunning composite images.

T1 6-9p.m.	W	Main
Sept. 7-28		\$195
T2 6-9p.m.	M	Main
Sept. 12-Oct. 3		\$195

### Advanced Photoshop Level Two (GRAF 1007)

Get past the basics and learn about layer masks, clipping paths, filters, and channels. You learn more advanced color correction techniques, too. Completion of GRAF 1006 or proficiency in basic Photoshop skills is required.

T1 6-9p.m.	W	Main
Oct. 5-26		\$195

### Advanced Photoshop Level Three (GRAF 1055)

This course focuses on creating quality images for high-end business printers and commercial printing. Students will learn color management/color space concepts and explore various photographic adjustments including color correction, curves and color replacement. Students will discover how to work with the camera raw and HDR images. Outputting images for print and web will be covered including CYMK separations, spot-color, duotones and web optimization.

T1 6-9p.m.	W	Main
Nov. 2-30		\$195

### Adobe Dreamweaver (COMP 312)

Web site creation is a lot easier with Adobe Dreamweaver. You will learn the basics of good web design, how to put together a web page, create a site map, and edit HTML. You will also learn how to create style sheets and work with tables. Dreamweaver is a popular web design software used by professional designers.

T1 6-9p.m.	R	Main
Sept. 8-Oct. 13		\$235

### Web Design with HTML (COMP 4012)

If you want to get serious about designing Web sites, you need a solid understanding of HTML. This course will simplify this mark-up language and show you how to create your Web site using text you create in Word or Notepad. No special software is required. Workbook is provided.

T1 6-9p.m.	R	Main
Oct. 20-27		\$125

### Fundamentals in InDesign (GRAF 1009)

Get a quick overview of this relatively new page design software. Learn how to use InDesign's story editor, nested style sheets, and information pallet. Improve your layouts with InDesign's image editing tools that let you customize graphics with features like transparency and mixed ink color controls.

T1 1p.m. - 4p.m.	W	Main
Oct. 5-26		\$195

### Photoshop Elements (GRAF 1047)

Students will learn how to organize, enhance, and manipulate images using practical hands on projects. Learn how to import images, enhance photos, lighten shadows, restore faded photos, retouch photos, repair photos, remove red-eye, adjust color, organize images, and edit an image using selections and layers. Create slide shows, albums with captions, and insert artwork and effects.

T1 6-9p.m.	M	Main
Oct. 10-31		\$195

### Premiere Elements (GRAF 1048)

This course teaches basic video editing techniques and provides users of Premiere Elements with a hands-on overview while doing practical projects. Learn to import video, assemble a project, edit footage and clips, enhance video sequences with transitions, effects, titles, and composites, work with audio, organize clips, and export a video.

T1 6-9p.m.	M	Main
Nov. 7-28		\$195

### Introduction to Illustrator (GRAF 1004)

This is a comprehensive overview of the features and commands of Adobe Illustrator. Topics covered include discussing various graphic formats, starting Illustrator, reviewing the Adobe Illustrator environment and user interface, creating and editing basic vector graphics, vector paths, use drawing tools to draw and edit geometric objects, manipulating objects, applying color, and working with type to create eye-catching type effects.

T1 6p.m. -9p.m.	F	Main
Sept. 2-23		\$195

### Advanced Illustrator (GRAF 1052)

This course covers advanced techniques for working with paths, masks, fills, and strokes. Learn how to use transformation tools, envelopes, filters, 3D effects, and graphic styles. Additionally you will learn how to use Autotrace to convert raster images to vector art and how to manage color settings, color separations, and print specifications. Finally, students will learn how to draw in perspective and create graphs.

T1 6p.m. -9p.m.	F	Main
Nov. 18-Dec. 16		\$195
(No class Nov. 25)		



# INDUSTRIAL TECHNOLOGY 3

## DCEO releases grant money to train Illinois workers at JJC

The Illinois Department of Commerce and Economic Opportunity (DCEO) has announced the release of \$82,500 in grant funding to Joliet Junior College's (JJC) Corporate and Community Services division. The money will be used to provide employee training to companies in the JJC area.

Because of this support, at least 500 local workers at 15+ Illinois businesses will receive training at JJC. The funding is part of the Employee Training and Investment Program (ETIP) block of grants that will be used to advance workforce skills to meet the demands of the new global marketplace. "This is an important funding initiative by the state," said Corporate and Community Services Director, Amy Murphy. "ETIP funding has a long history of providing funds to train Illinois workers."

JJC offers many programs including courses in Advanced Digital Multimeter, Basic Gas Tungsten Arc Welding, Electrical Diagrams and Circuits, Mechanical Power Transmission, Low Pressure Boilers Operation, Landscaping Maintenance, and Programmable Logic Controllers, to name a few. Other classes teach quality assurance, standardization guidelines, and safety measures. An experienced instructor who is deeply involved in his or her industry teaches each JJC course.

**For information on participating in this grant, please contact Amy Murphy at (815) 280-1418 or e-mail her at [amurphy@jjc.edu](mailto:amurphy@jjc.edu). Additional information can be found on our website at [www.trainingupdate.org](http://www.trainingupdate.org) under grant opportunities.**

## Electrical/Electronic Industrial Maintenance Technology

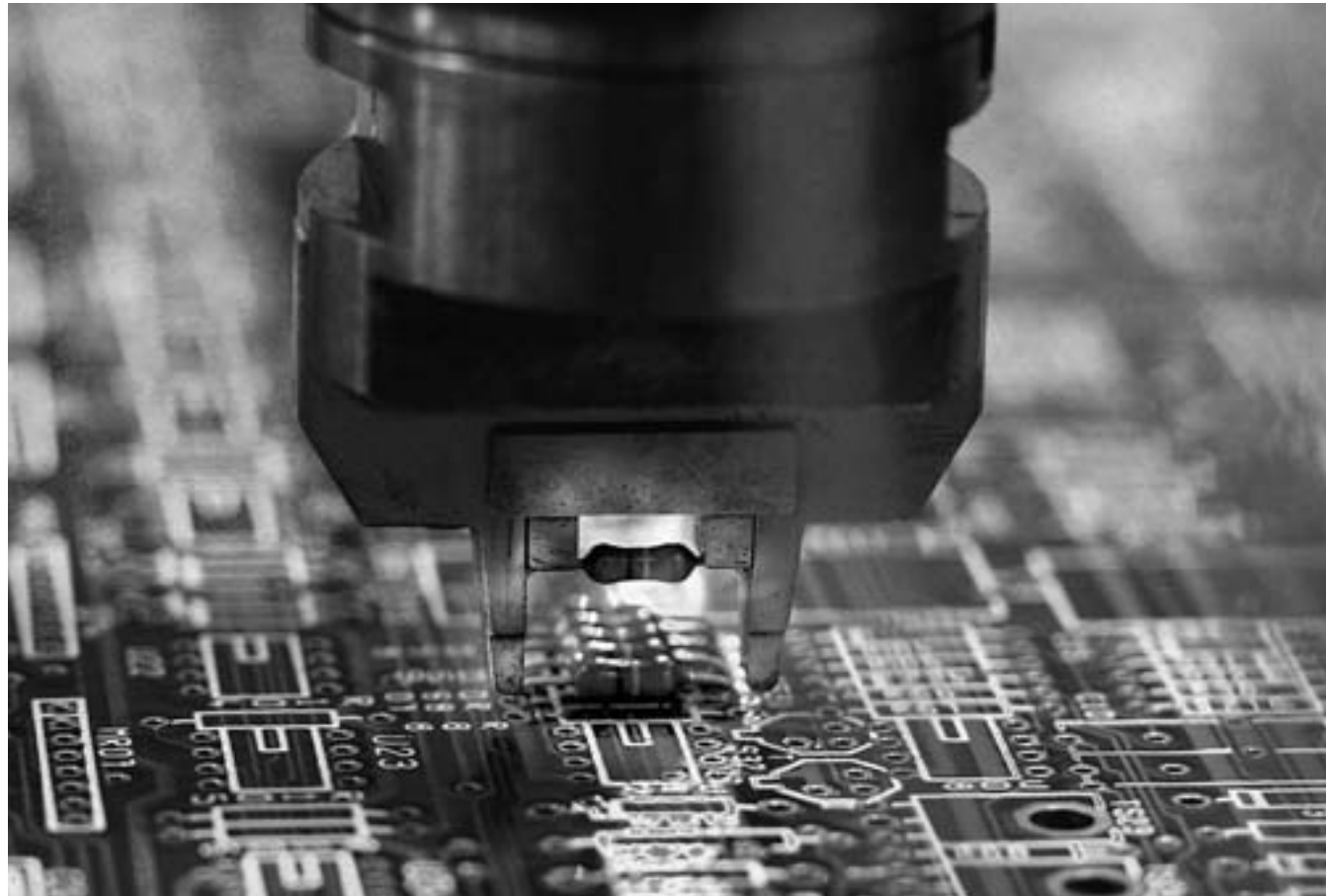
### Basic Electrical Circuits (ELC 101)

T1 8a.m.-4p.m.	F	Main
Sept. 16		\$295

This seminar is for the maintenance person with no electrical experience. It is designed to give a day of hands-on training, building and testing the most common electrical circuits used in residential and industrial applications. It is also designed for maintenance personnel who are looking for some cross training in the electrical field. Theory and math are kept to a minimum, with emphasis placed on electrical safety, component usage, and the identification of circuit problems. The first part will cover standard residential circuits to allow the participant to get familiar with working around electrical circuits and taking standard measurements when testing an electrical circuit. The second part will cover standard industrial power and control circuits.

#### You will learn:

- 1 How to connect two-way, three-way, and four-way switches to control lamps and standard receptacles in a typical 120/240 V, single-phase residential service.
- 2 How to connect 120 V and 240 V single-phase motors typically used in residential circuits.
- 3 How to use a voltmeter in testing and troubleshooting standard lamp circuits, receptacles, and motors.
- 4 How to test fuses and circuit breakers in standard single-phase and three-phase panels and disconnect switches.
- 5 How to check for proper circuit grounding, wire size, and fusing.
- 6 How to connect and test a standard start/stop control circuit that is controlling a three-phase motor.
- 7 How to use an electrical industrial print to help identify component usage, circuit operation, and key troubleshooting points.
- 8 How to look for potential problems and test for problems in electrical circuits that include several different components and different voltage types and levels.



**Electrical Principles & Practices (ELC 103)**

T1	8a.m.-4p.m.	F	Main
Sept. 23			\$295

This seminar is for electrically inexperienced maintenance personnel who need to be trained, or cross-trained, in working with (or around) electrical circuits. Principles are taught through hands-on exercises using standard industrial components and test equipment.

**You will learn:**

- 1 How to test an electrical circuit to make sure it is grounded.
- 2 How to measure VAC, VDC, AC and DC current, and resistance, using several different types of meters.
- 3 How to take measured circuit values and apply Ohm's Law and the Power Formula to determine circuit-operating characteristics.
- 4 How to select the correct wire size for a given application, and proper methods of connecting conductors.
- 5 How to connect and test basic residential circuits.
- 6 The different types of commercial distribution systems including 120/240 V, single-phase, 3-wire; 120/206 V, three-phase, 4-wire; 120/240 V, three-phase, 4-wire; and 277/480 V, 4-wire services.
- 7 How to use the laws of series and parallel circuits when troubleshooting a circuit.

**Electrical Diagrams and Circuits (ELC 104)**

T1	8a.m.-4p.m.	F	Main
Sept. 30			\$295

This seminar is for electricians (or maintenance personnel) who work with electrical/electronic drawings and circuits. Circuit requirements, logic and applications are covered. Includes converting standard ladder (line) diagrams into PLC diagrams. Troubleshooting using prints and circuit modifications is also covered.

**You will learn:**

- 1 How to read and understand architectural drawings, ladder diagrams, wiring diagrams and other types of electrical diagrams.
- 2 How to draw and understand electrical symbols and abbreviations.
- 3 How to connect and troubleshoot circuits that include two-way, three-way, four-way, motion sensing and other types of switches.
- 4 How to connect and troubleshoot circuits that include lamps and receptacles.
- 5 How to connect and troubleshoot the control and power circuit of basic single-phase and three-phase motor circuits.
- 6 How to convert standard line diagrams into PLC diagrams.

**Digital Multimeter (ELC 105)**

Certification (FLUKE® Corporation)

T1	8a.m.-4p.m.	F	Main
Oct. 14			\$295

This seminar is designed for maintenance personnel who work with electrical test equipment. Fluke®'s 80 Series high performance meters will be used throughout the seminar. The Fluke® 80 Series meters are one of the most common industrial digital multimeters in the industry, with several million meters in use. In addition to measuring AC and DC voltage and current, resistance and testing diodes, the 80 Series meters include MIN/MAX/AVERAGE recording mode, relative mode, frequency/duty cycle measurement and capacity measurement. All meter functions will be covered.

**You will learn:**

- 1 How to safely connect and use electrical test equipment.
- 2 The meaning of symbols and abbreviations used on electrical test equipment.
- 3 How to use a voltage tester, multimeter, clamp-on ammeter, megohmmeter, tachometer and digital logic probe.
- 4 How to test for opens, shorts and grounds.
- 5 How to use special meter functions, such as the MIN/MAX, relative and hold mode when troubleshooting.
- 6 How to avoid making common measurement errors.
- 7 How to read and use bar graph displays on DMMs.
- 8 How to use meter attachments.
- 9 How to interpret meter specifications.

**Advanced Digital Multimeter (ELC 3150)**

T1	8a.m.-4p.m.	R	Main
Oct. 21			\$295

Make the BEST use of the power that is coming into your facility. Get your money's worth!

- Increase uptime. Avoid line shut down due to electrical spikes, damage to equipment.
- Lengthen the life of your equipment. Determine why motors, wires, conductors and machinery are overheating.
- Increase productivity. Prevent your employees from working with computers that keep losing memory, dim computer screens and dim lighting in general.

**You will learn:**

- 1 How to use a Power Quality Analyzer FLUKE® 43 to take voltage, current power, harmonic, transient and power factor measurements.
- 2 How to measure voltage sags and swells over time.
- 3 The difference between a true power, apparent power and reactive power measurement.
- 4 The difference between a power factor and displacement power factor measurement.
- 5 The effects that poor power quality will have on equipment and distribution systems.

- 6 The different parts (transformers, power panels, etc.) of a power distribution system, and common points for taking measurements.
- 7 The different types (Wye, Delta, etc.) of power distribution systems.

**Electrical Motors and Motor Control Circuits (ELC 112)**

T1	8a.m.-4p.m.	F	Main
Oct. 28 & Nov. 4			\$545

This seminar is for maintenance personnel who work with (or around) electric motors. Standard motors and typical motor control circuits are covered. Hands-on exercises allow you to build and troubleshoot circuits using standard industrial components.

**You will learn:**

- 1 The different types of single-phase, three-phase and DC motors and how to connect and trouble shoot them.
- 2 How to understand and apply motor nameplate information.
- 3 How to connect and troubleshoot common motor control circuits.
- 4 How to connect and troubleshoot control a transformer, fused disconnects and other common components.
- 5 How to connect and apply timers to motor control circuits.
- 6 How to connect motors using forwarding and reversing circuits.
- 7 How to connect multi-speed motors using speed control circuits and variable frequency drives.
- 8 How to select and protect motors and motor control circuits.

# NFPA 70E and ELECTRICAL AWARENESS

**NFPA 70E: Electrical Practices: Workplace Safety (ELC 1102)**

This workshop is designed to train those who are responsible for operating and maintaining 600 volts or less electrical equipment on the requirements of the Electricity Act, Regulations and Codes of Practice. The workshop simplifies the OSHA Electrical standard and criteria and specifically addresses safe work practices to be used during the operation and maintenance of electrical equipment. Compliance is met for 29 CFR 1910.269 (Electrical Power Generation, Transmission and Distribution).

T1	8a.m.-4p.m.	F	Main
Sept. 30			\$295
T2	8a.m.-4p.m.	F	Main
Dec. 2			\$295

**Electrical Practices: Workplace Safety for the Non Electrician (ELC 1101)**

The workshop provides an understanding of electricity focused on increased awareness and prevention of industrial and home accidents.

T1 8a.m.-Noon F Main  
Oct. 14 \$165

# Mechanical Industrial Maintenance Technology

**Pneumatics Level I (INDT 111)**

T1 8a.m.-4p.m. F Main  
Sept. 9 & 16 \$545

These seminars are designed for maintenance personnel who need to be trained, or cross-trained, to work with (or around) pneumatic circuits. Principles are taught through hands-on exercises using standard industrial components and circuits. Complete coverage of fluid power component symbols used with typical industrial circuits is included.

**You will learn:**

- 1 How area, pressure, flow, volume, force and torque are related in fluid power circuits.
- 2 How to interpret fluid power schematics.
- 3 How to connect and apply two-way, three-way and four-way directional control valves.
- 4 How to control the speed of cylinders and fluid power motors.
- 5 How to control the pressure in a fluid power system.
- 6 How to connect and troubleshoot manually operated fluid power circuits.
- 7 How to connect and troubleshoot electrically controlled fluid power circuits.

**Who will benefit:**

- Maintenance personnel who need to be trained or cross trained to work with (or around) pneumatic circuits
- Those familiar with the basics of fluid power but have limited experience with electrical control circuits
- Maintenance supervisors and managers

**Topics for Pneumatics Level I**

1. Fluid Power Principles  
Area and volume  
Pressure and flow  
Force and torque

2. Component Symbols and Usage  
Fluid pumps and conditioners  
Linear  
Rotary actuators  
Directional control valves  
Pressure control  
Flow control valves  
Motors and pumps  
Pressure relief valves  
Pilots  
Accumulators  
Air compressors
3. Fluid Power Circuits  
Two-way valve circuits  
Three-way valve circuits  
Four-way valve circuits  
Five-way valve circuits  
Force control circuits  
Speed control circuits  
Acceleration/deceleration circuits
4. Troubleshooting Procedures  
Identifying common problems  
Testing of components

**Pneumatics Level II (INDT 312)**

T1 8a.m.-4p.m. F Main  
Sept. 23 \$295

Topics for Pneumatics Level II

1. Component Symbols and Usage  
Motors and pumps  
Pilots  
Volume tanks  
Air compressors
2. Fluid Power Circuits  
Two-way valve circuits  
Three-way valve circuits  
Four-way valve circuits  
Five-way valve circuits  
Two-hand control circuits  
Sequencing with interlock circuits  
Electrical circuits
3. Troubleshooting Procedures  
Identifying common problems  
Testing of components

**Mechanical Power Transmission (INDT 126)**

T1 8a.m.-4p.m. F Main  
Sept. 30 & Oct. 7 \$545

This two-day seminar provides the attendee with a crash course on mechanical power transmission systems. Topics covered include lubrication; bearings; belt, gear, and

chain drive systems; couplings and brakes. Hands-on activities consist of connecting speed increaser & speed reducer gearbox assemblies, setting of belt tension, adjusting variable-pitch pulleys, and operating clutches. Students will be provided with instruction that will be relevant when they return to the workplace. Mathematics will be kept to a minimum; knowledge and skills enhancement will be maximized.

**You will learn:**

- 1 Which lubricants are suitable for various applications?
- 2 How to properly lubricate mechanical power transmission equipment
- 3 How to install various gearbox assemblies to include speed increasing and speed decreasing
- 4 How to determine correct belt replacement
- 5 How to properly set belt tension on equipment
- 6 How to easily attach, detach, and repair chains on chain-driven equipment
- 7 How typical mechanical clutches operate

**Who will benefit:**

- Maintenance mechanics
- Electrical maintenance personnel needing to cross-train
- Industrial equipment salespersons
- Operators wanting to move into maintenance positions
- Supervisors and managers responsible for maintenance personnel

**Basic Pipefitting Skills (INDT 124)**

T1 8a.m.-4p.m. F Main  
Oct. 21 & 28 \$545

This two-day seminar focuses on the fundamentals of pipefitting. It is an introductory seminar designed for maintenance personnel who have relatively little or no previous pipefitting experience. Topics include: reading single-line and isometric diagrams; piping types and dimensions; uses and types of fittings; thread types; and pipe length determination. Participants practice pipefitting skills by reproducing actual piping runs from an isometric drawing.

**You will learn:**

- 1 To read single-line and isometric diagrams.
- 2 To determine pipe length.
- 3 To use dimensional tables.
- 4 To properly cut pipe.
- 5 To construct a straight offset.
- 6 To construct a rolling offset.
- 7 To correctly thread pipe.
- 8 To apply sealants.
- 9 To assemble test and troubleshoot pipe.

**Who will benefit:**

- Maintenance mechanics without pipefitting experience
- Electrical maintenance personnel needing to cross-train
- Industrial supply salespersons
- Operators wanting to move into maintenance positions
- Supervisors and managers responsible for maintenance personnel

**How Pumps Work (INDT 129)**

*(Not for Mechanics!)*

T1 8a.m.-4p.m. F Main  
Nov. 4 \$295

How Pumps Work provides a simple, straightforward overview of pump purposes, types and operation. If you need a basic understanding of how pumps work but are not a maintenance mechanic who actually installs and repairs pumps, you need Joliet Junior College's How Pumps Work.

**You will learn:**

- 1 What the terms "suction head," "suction lift" and "net positive suction head" mean.
- 2 How centrifugal pumps work.
- 3 What each component of a centrifugal pump does.
- 4 How positive displacement pumps work.
- 5 What each component of a positive displacement pump does.
- 6 How to properly start and stop industrial pumps.

**Who will benefit:**

- Supervisors of maintenance personnel who repair pumps
- Maintenance managers
- Sellers of industrial equipment or supplies
- Process operators
- Anyone needing a basic understanding of pump purposes, types and operation

**Low Pressure Boiler Operation (INDT 131)**

T1 8a.m.-4p.m. F Main  
Oct. 14 \$295

This seminar covers the components and operation of low pressure (15 or less psi) boiler systems used in hotels, apartment buildings, schools and other large institutions. Participants receive a 328-page manual, Low Pressure Boilers, which includes 181 well-defined illustrations plus the workbook containing questions similar to those found on a typical boiler operator's licensing exam.

**You will learn:**

- 1 To safely start up and shut down low-pressure boilers.
- 2 To blow down a boiler.
- 3 To react to low water conditions.
- 4 To minimize the possibility of furnace explosions.

- 5 To hydrostatically test boilers.
- 6 To repair gauge glasses.
- 7 To lay up a boiler.
- 8 To correct a steam bound pump.

**High Pressure Boiler Operation (INDT 132)**

T1 8a.m.-4p.m. F Main  
Nov. 18 \$295

This seminar includes the latest information on safe and efficient operation of high-pressure boilers (above 15 psi) and related equipment. You will receive a 265-page manual, High Pressure Boilers, which includes 187 well-defined illustrations, a comprehensive, illustrated glossary and updated computer-controlled boiler operation information.

**You will learn:**

- 1 To safely start up and shut down high-pressure boilers.
- 2 To blow down a boiler.
- 3 To react to low water conditions.
- 4 To minimize the possibility of furnace explosions.
- 5 To hydrostatically test boilers.
- 6 To repair gauge glasses.
- 7 To lay up a boiler.
- 8 To correct a steam bound pump.

**Shaft Alignment (INDT 127)**

T1 8a.m.-4p.m. F Main  
Dec. 2 & 9 \$545

This seminar teaches the skills needed to align two-shaft systems accurately (such as motors and pumps). Because there is no single way to align machinery correctly, the advantages and disadvantages of several methods will be taught. Accurate alignment of equipment will result in increased bearing life, reduced downtime and savings on maintenance costs. Additionally, correctly aligning these types of systems can save you money on electrical bills. Misalignment of just a few millimeters could cost thousands of dollars.

**You will learn:**

- 1 To recognize equipment not properly aligned.
- 2 To recognize and correct for pipe stress.
- 3 To check shaft run out.
- 4 To determine if soft foot is present and correct it.
- 5 To correct bar sag.
- 6 To align rotating equipment using multiple alignment methods including rim-and-face and reverse dial.

**Who will benefit:**

- Maintenance mechanics
- Electrical maintenance personnel needing to cross-train
- Industrial equipment salespersons
- Operators wanting to move into maintenance positions
- Supervisors and managers responsible for maintenance personnel



**Programmable Controllers**

**Programmable Controllers Level I (ELC 181)**

T1 8a.m.-4p.m. F Main  
Nov. 18 - Dec. 16 \$945

(No class on Friday, Nov. 25)

This hands-on seminar introduces the attendee to Programmable Logic Controllers and develops skills using the PLC for basic control design, troubleshooting, and relay requirements. Attendees develop skills in reading PLC ladder logic and wiring diagrams, including numbering systems as they apply to PLCs. No PLC background is required; however, a basic understanding of industrial control circuits is essential. The pace of the seminar will be keyed to attendees' needs. Allen Bradley PLCs are used for hands-on instruction; however, the seminar format is generic.

**You will learn:**

- 1 To power up a computer and PLC, format a disk, choose PLC software, set up and run a PLC program, save and download a program to the PLC.
- 2 How to wire PLC discrete input and output (I/O) for electromechanical and solid-state.
- 3 To understand PLC numbering systems (Binary, Octal, Hexadecimal).
- 4 To operate the force, search and emulate functions on the PLC.
- 5 To code a hard-wire ladder logic diagram with the proper addressing for I/O, internal relays, timers and counters.
- 6 How to apply the PLC logic functions (And, Or, Not, Nand, Nor) to a given application.
- 7 To understand PLC start-up, installation and maintenance procedures.
- 8 How to apply timing and counting functions to a given application, build ladder logic to meet a given operational description for that application and incorporate all steps required for a large application.
- 9 To create and interpret a complete set of documentation for a given application.

**Programmable Logic Controllers Level II (ELC 182)**

T1 8a.m.-4p.m. M-R Main  
Dec. 19 - 22 \$945

Designed for individuals who have some background with PLCs or have completed the PLC Level I seminar, this seminar will upgrade attendees' knowledge of PLCs. Focus is on the development of PLC control applications for troubleshooting and non-relay functions (data transfer, data manipulation, math, etc.). Also, attendees will look at new technologies in the PLC marketplace. The pace of the seminar will be keyed to attendees' needs. Allen Bradley PLCs are used for hands-on instruction; however, the seminar format is generic.

**You will learn:**

- 1 How to wire external devices to input and output numerical and alphanumeric data from the data table to demonstrate knowledge of multi-bit I/O.
- 2 How to use analog I/O to program and wire both analog-in and analog-out modules.
- 3 How to modify the size of the data table both manually and automatically, summarizing data table layout and memory mapping.
- 4 How to program scan modifiers available on a given PLC.
- 5 How to solve control problems using math functions available on a given PLC.
- 6 How to solve control problems using PLC data manipulation functions (>, <, =, etc.) on a given PLC.
- 7 How to solve control problems using PLC data transfer functions (Move, Mask Move, File Fill, etc.) on a given PLC.
- 8 How to solve control problems using PLC compare functions (Sequence Compare, etc.) on a given PLC.
- 9 How to solve control problems using sequencing and shift register functions (Sequence Out, Sequence Load, Bit Shift, etc.).
- 10 How to generate a complete documentation package for a given PLC, identifying how the documentation is to be used for troubleshooting and summarizing the application of each piece of hard copy documentation.
- 11 How to use PLC search, force and emulate capabilities to solve control problems or troubleshoot a given application.

## Motors and Drives

### Understanding A.C. & D.C. Motors (ELC 1130)

T1 8a.m.-4p.m. W-F Main  
Oct. 19 & 21 \$545

This seminar is for electricians (or maintenance personnel) who work with electric motors. If you are involved with the selection, installation, maintenance or troubleshooting of electric motors this seminar will be of use to you. The two-day seminar will consist of a series of hands-on exercises, demonstrations, and lecture designed to help the participant learn through doing and observing. There is enough theory explained that someone with a very limited electrical background will be able to master the seminar material.

#### You will learn:

- 1 Why different types of motors are used in different applications.
- 2 Why motor and driven load alignment is critical.
- 3 How to wire a 3-phase motor.
- 4 How to wire a single-phase motor.
- 5 How to maintain a motor.
- 6 How to use test equipment & troubleshoot a motor.
- 7 How to correct for poor motor power factor.
- 8 What motor efficiency is and how it relates to your electric bill.

#### Who will benefit:

- Maintenance personnel with little electrical experience
- Personnel who need to be cross-trained into the electrical field
- Experienced electricians who desire more understanding of how motors operate and help in their maintenance and troubleshooting
- Supervisors responsible for motor-related issues like purchasing, maintenance or testing

### Variable Frequency Drive Set Up & Troubleshooting (ELC 1131)

T1 8a.m.-4p.m. W-F Main  
Dec. 7 & 9 \$545

This seminar is for electricians or personnel who work with A.C. Variable Frequency Drives. If you are involved with the set up or troubleshooting of A.C. drive systems, this seminar will be of use to you. The two-day seminar consists of a series of hands-on exercises, demonstrations, and lecture designed to help you learn through doing and observing. There is enough theory explained that someone with a very limited electrical background will be able to master the seminar material.

#### You will learn:

- 1 How an A.C. pulse width modulated drive works.
- 2 What the different drive parameters affect.
- 3 How to set the drive parameters.
- 4 How to troubleshoot the drive and motor system.
- 5 The difference between constant-torque and variable-torque loads.
- 6 How to save energy cost using a variable-frequency drive to control a variable-torque load.
- 7 What "reflected wave phenomenon" is and what can be done about it.

#### Who will benefit:

- Maintenance personnel, electricians or engineers who desire more understanding of how drives operate and knowledge of set up and troubleshooting
- Supervisors responsible for drive and motor related issues such as set up or testing

## Blueprint Reading

### Basics of Mechanical Blueprint Reading (INDT 114)

T1 8a.m.-4p.m. F Main  
Oct. 7 \$295

Basics of Mechanical Blueprint Reading, a one-day seminar, instructs participants in the fundamental skills of mechanical print reading: types of drawings, lines, views, blueprint arrangement, print sizes, title blocks, change blocks, surface textures and symbols used, and machine terms and holes. You will learn to use the information presented in class through extensive use of hands-on activities, including working with actual prints. You are encouraged to bring prints from your organization.

#### You will learn:

- 1 To identify common drafting symbols.
- 2 To identify the types of information found in the blueprint title block.
- 3 To identify the types of views shown on blueprints and interpret section views.
- 4 To identify the alphabet of lines.
- 5 To interpret blueprint lines.
- 6 To differentiate between object and hidden lines.
- 7 To locate the needed (top, front, side, etc.) views of an object.
- 8 To identify the surface texture symbols and the processes associated with them.

You will NOT learn to draft prints!

#### Who will benefit:

- Mechanical maintenance personnel
- Electrical maintenance personnel
- Quality assurance personnel
- Operations personnel
- Industrial salespersons
- Frontline supervisors
- Managers or business owners
- Anyone who needs a fundamental understanding of mechanical blueprints

### Geometric Dimensioning and Tolerancing (INDT 116)

T1 8a.m.-4p.m. F Main  
Oct. 21 \$295

GD&T is an information packed seminar that will provide you with knowledge of tolerancing tools and techniques. Geometric dimensioning and tolerancing (GD&T) is used to express engineering configuration from the designer to the manufacturer using a mechanical drawing. When properly specified, the system provides a uniform understanding and interpretation among all persons exposed to the drawing. In 1966 the Department of Defense, industry and educational institutions adopted a common American standard dealing with geometric dimensioning and tolerancing, ANSI/ASME Y14.5M. The problem experienced with this standard is a failure to educate adequately the drawing originators, manufacturers, and quality control personnel in its correct use. You must be familiar with blueprint reading basics and the use of gauges for measurement.

#### You will learn:

- 1 How to insure interchangeability of mating parts.
- 2 How to make additional quality and productivity improvements.
- 3 How to bid contracts with increased confidence.
- 4 How to interpret and apply ANSI Y14.5M-1982 and ASME Y14.5M-1994 standards.

#### Who will benefit:

- Inspectors
- Supervisors
- Quality assurance personnel
- Engineers
- Drafting personnel
- Tool & die makers & machinists PROGRAMMABLE LOGIC CONTROLLERS

## Distillation

### Distillation Principles & Practices (SAF 2011)

This seminar is designed for those who work with, or need to understand, distillation practices and principles. This hands-on course covers all the major forms of distillation. The different types of distillation are covered along with the reasons why a particular type of process is used. The different types of trays used in towers are explained and examples are shown.

T1 8a.m.-4p.m. F Main  
Oct. 21 \$275

#### Course Outline:

- I. Operating Fundamentals
  - A. Material Balance Variables
  - B. Energy Balance Variables
  - C. Tower Control System
  - D. Material Balance Control Loops
  - E. Energy Balance Control Loops
- II. Tower Control Systems
  - A. Effects of an Increase in Bottom Temperature
  - B. Steady-State Operation and Process Disturbances
- III. Product Composition
  - A. Boiling Points and Component Separation
  - B. Effects of an Increase in Bottom temperature
  - C. Effects of a Decrease in Bottom Temperature
  - D. Effects of a Change in external Reflux
- IV. Product Composition
  - A. Direct and Indirect Composition Measurements
  - B. Product Giveaway
  - C. Maintaining Product Specs: Example
  - D. Process Lag
  - E. Analyzer Control of Towers
- V. Process Disturbances
  - A. Sources of Heat Input
  - B. Disturbances in Reboilers
  - C. Disturbances in Shell and Tube Reboilers
  - D. Disturbances in Fired Reboilers
  - E. Disturbances in Condensers
- VI. Principles of Distillation
  - A. Terminology
  - B. Fluid Mixtures
  - C. Fundamentals of Distillation
  - D. Types of Distillation Units
- VII. Basic Distillation Process

- A. Introduction
- B. Batch operation
- C. Continuous Operation
- D. Multi-stage Operation
- E. Vapor Pressures

## VIII. Distillation Towers

- A. Terminology
- B. Principles of Operation
- C. Basic Construction
- D. Steam Circuit

- E. Feed Circuit
- F. Distillate Circuit
- G. Residue Circuit
- H. Plate Towers
- I. Packed Towers

## IX. Application of Distillation

- A. H2O Purification
- B. Chemical Products
- C. Petroleum Product



## Process Operator Training

Prepare yourself for a career in the petrochemical and process industry by enrolling in the Process Operations Technician Program. Joliet Junior College offers a 16 to 18 week program consisting of 26 courses and totaling over 220 hours of classroom and lab experience. In addition, you will earn 4 hours of college credit from our Technical Department.

The goal of this program is to prepare you to start your career as a process operator. This program is designed to provide area process industries with a workforce trained in the technologies necessary to perform successfully and safely as an entry-level process operations technician.

The topics include such things as plant operations, technical math, communications, pumps, valves, chemistry, physics, electricity, resume writing, job seeking skills, and much more.

**For more information about this program contact Bruce Kuzmanich at (815) 280-1512, or by emailing to [bkuzmani@jjc.edu](mailto:bkuzmani@jjc.edu).**



# ONLINE TRAINING 4

## Are you ready to take an online course?

Online learning offers many benefits to students. Among them are convenience, ability to revisit presentations as needed, and easy contact with teachers and students. While these benefits are real, there are some important aspects of online learning a potential student needs to consider.

For example, while online learning offers learning when it is convenient for you, it also requires you to have the self-discipline to ignore the ringing telephone, the blaring television, or the latest tunes from the radio of CD player. If doing that is too difficult, you will need to schedule your learning time when these distractions are minimal.

Additionally, a successful online student needs to accept solitude for long periods. This can be difficult for some people because they like being around others. It gives them energy and inspires learning. Nevertheless, an online student needs to appreciate those long stretches of time engaged in quite exploration of ideas and facts.

It is also important to be computer literate and comfortable reading lots of material on screen. The ability to navigate and find all the right buttons is important. If typing in a password makes you hyper, you may want to brush up on your computer skills before taking an online course.

Despite these precautions, however, anyone with the desire to learn can learn online. Online learners often retain more of what they learn because, unlike the classroom learner, they can hear the lecture or reread the source material, as often as needed.

Online learners are also not as alone as they might think. Bulletin boards allow for a stimulating amount of idea sharing and instructors generally participate.

**For more information about the online courses offered at JJC, call Mike Sillar at (815) 280-1423, or e-mail [msillar@jjc.edu](mailto:msillar@jjc.edu). You can also visit [www.trainingupdate.org](http://www.trainingupdate.org).**

## Manufacturing and Quality Online Education Program

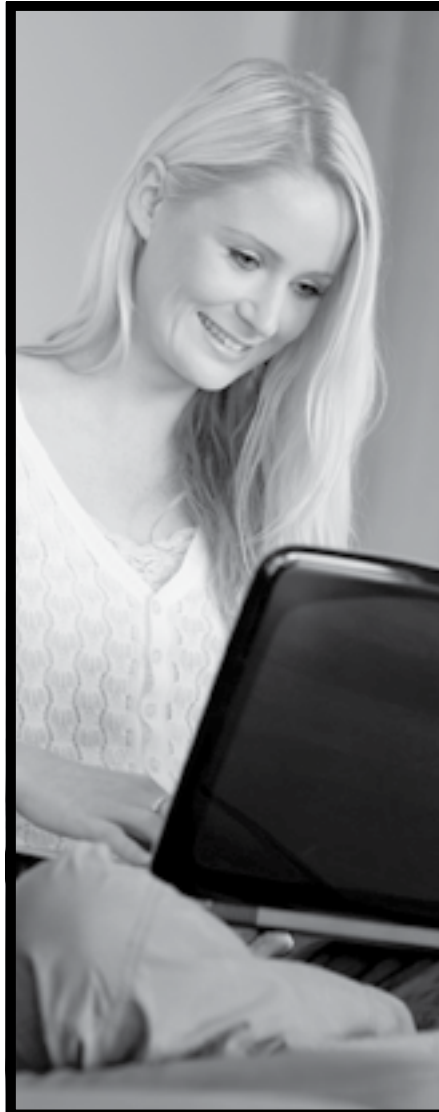
Joliet Junior College is offering an opportunity to expand your knowledge of manufacturing and quality control processes. The online courses listed below run for six weeks. The courses are project-oriented and include lessons, quizzes, hands-on assignments, discussion areas, supplementary links, and more. You can complete any course entirely from your home or office at any time. Complete all four courses and you will earn a certificate of completion in Manufacturing and Quality Processes from Joliet Junior College. The class fee for each course is \$99. Go to [www.ed2go.com/jjciet](http://www.ed2go.com/jjciet) to view the details of the courses. Call 815-280-1555 to register.

### Manufacturing Fundamentals (EDGO 259)

Learn the basic skills required to work in the manufacturing field. Discover the role of production design, process planning, and the heart of 13 different manufacturing processes. Understand why facility location and plant layout decisions are so vital and learn how job design helps you accomplish company goals and achieve worker satisfaction. Find out what makes up the physical work environment and learn how to characterize different types of production materials. Discuss master product development concepts such as the voice of the customer (VOC), quality function deployment (QFD), and failure mode and effects analysis (FMEA). Learn how performance measurements and standardization improve manufacturing operations. Learn how successful organizations use costs to communicate manufacturing progress and how to effectively develop short and long-term budgets. Also, you will discover how the application of technology turns an ordinary company into a high-performing organization. You will also find out how ISO 9000 and enterprise resource planning (ERP) make the most of a manufacturer's potential.

### Manufacturing Applications (EDGO 2116)

Learn to apply the principles and concepts of manufacturing. Discover the nature of strategy and learn how it leads to the development of manufacturing strategy. Understand the purpose of customer demand forecasting and find out what forecasting methods are suitable for which situations. Explore the nature of planning and learn how to effectively use Gantt charts and the precedence diagram method. Determine how purchasing, production and inventory control, and logistics support a manufacturing operation. Discover the basics of lean manufacturing and see how capacity management converts production plans into concrete products. Learn why manufacturing, industrial, and quality engineering are so essential to any firm. Understand the true meaning of productivity and how to improve it. Learn how successful organizations effectively use master production scheduling (MPS), production activity control (PAC), material



## Online Learning is Easy, Convenient and Effective!

**Education to Go** courses are delivered over the Internet and run approximately six weeks following the start date. You will need an e-mail address and Internet access. The start date varies between the second and third Wednesday of each month.

Call (815) 280-1555 for more information or to register.

**MOST CLASSES \$99**



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| <ul style="list-style-type: none"> <li>• A to Z Grant Writing</li> <li>• Assisting Aging Parents</li> <li>• Basics of Quickbooks 2007</li> <li>• Beginning Braille Transcription</li> <li>• Debt Elimination Techniques</li> <li>• Drawing for a Beginner</li> <li>• Everyday Math</li> <li>• Getting Published</li> <li>• Get Paid to Travel</li> <li>• Get Funny!</li> <li>• Goodbye to Shy</li> <li>• Growing Plants for Fun and Profit</li> <li>• Introduction to Algebra</li> <li>• Luscious, Low - Fat Meals</li> <li>• Marketing Your Nonprofit</li> <li>• Magic of Hypnosis</li> </ul> | <ul style="list-style-type: none"> <li>• Microsoft Software Classes</li> <li>• Music Made Easy</li> <li>• Photoshop Elements</li> <li>• Professional Sales Skills</li> <li>• Real Estate Investing</li> <li>• SAT/ACT Test Prep</li> <li>• Secrets of the Caterer</li> <li>• Speed Reading</li> <li>• Speed Spanish I, II, and III</li> <li>• Start Your Own Consulting Practice</li> <li>• Start Your Home Based Business</li> <li>• Stocks, Bonds, and Investing</li> <li>• Wine Appreciation for Beginners</li> <li>• Wireless Networking</li> <li>• Write Fiction Like a Pro</li> </ul> |
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requirements planning (MRP), and inventory management. You'll also discover how the application of Six Sigma, and statistical process control (SPC) increase customer satisfaction, and you'll learn about the elements of a logistics system, including warehousing and receiving.

### Six Sigma: Total Quality Fundamentals (257)

Learn how to effectively apply the fundamentals of total quality. Understand what quality is and learn about the history of the quality movement. Discover the role of customers in quality and determine the major elements of a quality system. Master key concepts such as the cost of non-quality, variation, and total employee involvement (TEI). Increase your value to your company by learning about various motivational models, leadership, and teamwork. Determine how to effectively apply quality standards by creating and implementing internal and external auditing activities. Learn the ins and outs of ISO 9000, ISO 14000, and the Malcolm Baldrige National Quality Award. Learn how successful organizations apply quality to their everyday activities. You will find out how to use teamwork to make the most of employees' abilities and potential. Manage

the process of change, reduce customer complaints, and increase customer service. You will learn of a number of quality fallacies and how to lessen their impact.

### Six Sigma: Total Quality Applications (258)

Learn how to effectively apply the elements and methods of Six Sigma. Understand how more than 25 tools and methods relate to the DMAIC (define, measure, analyze, improve, and control) model. Determine the relationship of basic statistics to Six Sigma and learn about the Six Sigma business case including strategic planning, the voice of the customer (VOC), quality function deployment (QFD), benchmarking, and financial investment methods. Discover how to use brainstorming, Pareto charts, and critical to quality help define processes, problems, and opportunities. Master the use of other key tools such as cause and effect diagrams, check sheets, scatter diagrams, failure mode and effects analysis (FMEA), and force field analysis. Learn how to apply the DMAIC model each step of the way. You'll learn how to define, plan, implement, and close a Six Sigma project. You'll also know how to use process capability and how to apply lean thinking. Understand the

basics of advanced Six Sigma tools such as sampling, design of experiments (DOE), analysis of variance (ANOVA), hypothesis testing, control charts, and probability distributions.

## Supply Chain Online Education Program

Joliet Junior College is offering an opportunity to expand your knowledge of supply chain processes. The online courses listed below run for six weeks. The courses are project-oriented and include lessons, quizzes, hands-on assignments, discussion areas, supplementary links, and more. You can complete any course entirely from your home or office at any time. Complete all three courses and you will earn a certificate of completion in Supply Chain Processes from Joliet Junior College. The class fee for each course is \$99. Go to [www.ed2go.com/jjciat](http://www.ed2go.com/jjciat) to view the details of the courses. Call 815-280-1555 to register.

### Supply Chain Management Fundamentals (EDGO 268)

Supply chain management professionals play a key role in capturing customer demands, creating forecasts, developing schedules, ordering and managing inventory, controlling production orders, and maximizing customer satisfaction. This course will help you succeed in the supply chain management field. You'll understand how to represent top management's interests on the shop floor, and you'll know how to translate such initiatives as strategic planning, sales and operations planning, and new product introduction into achievable, operational plans. Master the fundamentals of supply chain management, including customer demand forecasting, master production scheduling (MPS), material requirements planning (MRP), capacity planning, and production activity control (PAC).

### Purchasing Fundamentals - EDGO 265

Discover and master the fundamentals of purchasing by understanding your strategic and tactical roles as a purchasing practitioner. Improve your company's bottom-line profitability by learning and implementing key concepts such as negotiation, supplier sourcing and qualification, outsourcing and make-or-buy analysis. Learn the basics of supplier partnerships, capital budgeting and green buying. Learn how to define internal customer needs, generate purchase requisitions and purchase orders, expedite, trace and receive supplier deliveries, maintain effective purchasing records and create and manage various purchasing budgets. Learn about business law, contracts, leasing, Six Sigma and total quality management (TQM). You will learn how to recruit, select and evaluate purchasing personnel, and learn the importance of business ethics.

### Distribution and Logistics Management (EDGO 2122)

Distribution and logistics management is a critical company function. Professionals in this field play a key role in fulfilling customer demands, ordering and managing inventory, controlling inbound and outbound shipments, reducing costs, saving time, and meeting company objectives. This course will not only show you how to create and operate a logistics function, but it will also show you how to achieve success through a combination of strategies and tactics. All elements

of distribution and logistics management will be covered, including physical distribution, warehouse selection, material handling, packaging, order fulfillment, customer service, inventory management, receiving, production stores, and returned goods. The course will also address key technology issues such as enterprise resource planning (ERP), bar coding, electronic data interchange (EDI), electronic commerce (e-commerce), and distribution resource planning (DRP).

## Grant Writing Online Education Program

Joliet Junior College is offering an opportunity to expand your knowledge of the grant writing process. The online courses listed below run for six weeks. The courses are project-oriented and include lessons, quizzes, hands-on assignments, discussion areas, supplementary links, and more. You can complete any course entirely from your home or office at any time. Complete all four courses and you will earn a certificate of completion in the Grant Writing Process from Joliet Junior College. The class fee for each course is \$99. Go to [www.ed2go.com/jjciat](http://www.ed2go.com/jjciat) to view the details of the courses. Call 815-280-1555 to register.

### A to Z Grant Writing (EDGO 021)

A to Z Grant Writing is an invigorating and informative course that will equip you with the skills and tools you need to enter the exciting field of grant writing! Learn how and where to look for potential funders who are a good match for your organization. Discuss how to network and develop true partnerships with a variety of funders, how to organize a successful grant-writing campaign, and how to put together a complete proposal package. This course speaks mainly to nonprofit organizations, schools, religious institutions, and municipalities seeking grants from foundation, corporate, government, and individual donors.

### Writing Effective Grant Proposals (EDGO 056)

Preparing successful grant proposals to receive funding from corporations or foundations requires careful research, meticulous preparation, and graceful writing. Grant administrators tell us that many grant requestors have no real understanding of the proposal writing process and as a result, their worthy causes lose out. Learn how to avoid the errors that lead to the rejection of your proposal. You will learn how to become fully familiar with the institution or project for which you are requesting support. Get valuable guidance in preparing a background statement and a brief financial statement to support your request. Be able to research some charitable foundation and corporate giving sources. Learn how to put everything together so you can assemble, write, and submit complete grant proposals to foundations, corporations, and wealthy individuals for any number of your pet projects.

### Advanced Grant Proposal Writing (EDGO 055)

An experienced grantwriter will show you how to research and write winning proposals that get funded. You will become proficient in the proposal format used by the vast majority of public foundations. Learn what to do--and, more importantly what not to do--on your cover sheet, narrative, background

page, and your stakeholder and third-party evaluation plan. Discover the quickest and most efficient ways to gather the information you'll need to develop your proposal's attachments, including information on your organization's structure, administration, and finances. Gain a full understanding of the criteria funders use to determine whether your grant proposal gets funded or rejected. Become an expert at ferreting out corporate, foundation, and government grantmakers, and know how to tailor your responses to information found in the peer review criteria. Discuss a number of significant finishing touches that can give your project the edge over others. Know the best type of paper to use, which buzzwords to include, which fonts work best, which types of graphics to include, and a variety of formatting techniques that will make your proposal more competitive.

### **Becoming a Grant Writing Consultant (EDGO 3634)**

Good grant writing consultants are always in demand. Learn how you can use a basic knowledge of grant or proposal writing to become an expert in the red-hot grant consulting field. Your instructor, a national grant consulting veteran, will provide you with easy-to-follow instructions that you can use to start your own home-based business. Learn what services to offer, how to find clients, and how to set your fees. This is one field where your creative writing skills can literally touch thousands of people and make a true difference in their quality of life

## **Sales Online Education Program**

Joliet Junior College is offering an opportunity to expand your knowledge of the sales process. The online courses listed below run for six weeks. The courses are project-oriented and include lessons, quizzes, hands-on assignments, discussion areas, supplementary links, and more. You can complete any course entirely from your home or office at any time. Complete all four courses and you will earn a certificate of completion in the Sales Process from Joliet Junior College. The class fee for each course is \$99. Go to [www.ed2go.com/jjciet](http://www.ed2go.com/jjciet) to view the details of the courses. Call 815-280-1555 to register.

### **Keys to Effective Communication (EDGO 2822)**

If you often find yourself at a loss for words or lack confidence in your communication abilities, you will appreciate this course. With the help of a patient instructor and a supportive community of your fellow students, you'll work step by step through the process of becoming a great conversationalist. Learn to use communication to build rapport and create environments of trust, warmth, and respect. Become more confident, create a great first impression, get along well with others, and create more and better personal and professional relationships.

### **Effective Selling (EDGO 3631)**

The goal of Effective Selling is not to teach you how to make a sale today, but to help you discover how you can easily convert a potential customer into a long term asset. Effective Selling will help you lay the groundwork for repeat business and your future success. In sales, there are no quick fixes. However, with

the knowledge, planning skills, communication techniques, and the understanding of human nature that you will gain from this course, your sales will grow as if by magic.

### **Professional Sales Skills (EDGO 3630)**

Today, there are no shortages of opportunities for skilled salespeople. In good times or bad, companies never stop looking for sales representatives that can help them meet their financial goals. If you've always dreamed of becoming successful in sales, this course is exactly what you need. You'll learn how to turn prospects into buyers, how to provide proper customer service, how to develop a sales plan, and more.

### **Principles of Sales Management - EDGO 936**

Learn how to deliver superior sales-team results from a sales management veteran. Discuss a detailed examination of sales management's roles and responsibilities. Learn valuable tips, techniques and strategies for success and reinforces how critical planning is to successful sales management. You will learn how to prepare and lead better sales meetings and how to resolve team conflict. Develop sales plans and budgets, recruit and interview new sales professionals, and set team goals and objectives. Be able to effectively motivate and manage your sales teams.

## **Direct Supervision Online Education Program**

Joliet Junior College is offering an opportunity to expand your knowledge of the supervisory process. The online courses listed below run for six weeks. The courses are project-oriented and include lessons, quizzes, hands-on assignments, discussion areas, supplementary links, and more. You can complete any course entirely from your home or office at any time. Complete all four courses and you will earn a certificate of completion in Direct Supervision from Joliet Junior College. The class fee for each course is \$99. Go to [www.ed2go.com/jjciet](http://www.ed2go.com/jjciet) to view the details of the courses. Call 815-280-1555 to register.

### **Fundamentals of Supervision and Management I (EDGO 247)**

If you have recently been promoted to a supervisory or management position or want to learn how to become a more effective manager, this course will help you master the basics of business by learning the language of management. A large part of a manager's job involves getting things done through other people, and this course will help you understand how to influence and direct other people's performance.

### **Fundamentals of Supervision and Management II (EDGO 248)**

Learn how to be a more effective manager or supervisor. Master the basics of communication, because effective communication is essential in your quest to be a good manager or supervisor. Discuss how you can develop your interpersonal skills, by understanding and dealing with the various people



issues that arise at work. Understand various personality traits--in yourself and in others--and how they impact the ability to get the job done. These traits include emotional intelligence, the need for power, conscientiousness, agreeableness, and more. You will be able to assess your own personality, as well as the personalities of your co-workers and boss, and develop a plan of action to improve both your interpersonal skills and your work relationships.

### **Building Teams That Work (EDGO 2821)**

Teams are becoming a staple in today's workplace. Learn the components of a successful team and the stages of its development. Master the skills you'll need to effectively manage projects, make decisions, and solve problems in a team setting. Discuss the pitfalls of unhealthy group interaction and minimize any of its effects on your team. Follow real-life examples and scenarios to help you identify with the team-building process. Many of today's teams rotate leadership roles, so it's crucial to understand both perspectives as you learn the best ways to communicate and work together for positive change.

### **Employment Law Fundamentals (EDGO 280)**

Learn the basics of employment law so you can legally hire, evaluate and manage employees as a manager, supervisor, small business owner, human resource specialist, or corporate executive. Learn the difference between an employee and independent contractor; the basic types of employee benefits; effective hiring, evaluation, and termination procedures; methods to resolve employment disputes in and out of court; discrimination and union laws; and workplace safety rules. You will gain an inside view of the law with court examples, real situations, and prevention strategies that prepare you to effectively resolve workplace issues.

## **Business Management Online Education Program**

Joliet Junior College is offering an opportunity to expand your knowledge of the management process. The online courses listed below run for six weeks. The courses are project-oriented and include lessons, quizzes, hands-on assignments, discussion areas, supplementary links, and more. You can complete any course entirely from your home or office at any time. Complete all four courses and you will earn a certificate of completion in Business Management from Joliet Junior College. The class fee for each course is \$99. Go to [www.ed2go.com/jjciet](http://www.ed2go.com/jjciet) to view the details of the courses. Call 815-280-1555 to register.

### **Introduction to Business Analysis (EDGO 254)**

Learn powerful techniques to improve your decision-making skills at work. Give yourself an employment advantage by developing analytical skills that are consistently in high demand. Learn powerful quantitative methods that will have you making better, more informed, and more effective business decisions. The days of making critical business decisions by instinct or coin toss are long gone.

### **Effective Business Writing - EDGO 3632**

Don't let small gaps in your business writing skills prevent you from reaching your full potential. If you communicate with others in writing, you need this course to help you identify and eliminate problem areas. Learn to develop powerful written

documents that immediately draw readers in and keep them motivated to continue until your very last, well-chosen word.

### **Mastery of Business Fundamentals (EDGO 255)**

Understand the significance of strategic planning and discover how external and internal environmental factors affect an organization. You will learn the difference between financial and cost accounting. Discover various financial investment models. Discuss the basics of financial planning and budgeting methods. Learn the basic principles of business law, contracts, and the principal-agency relationship. And you'll explore the forms of business organization and learn about ethics and organizational politics.

### **Leadership (EDGO 042)**

Leadership skills can help you gain the respect and admiration of others, while also allowing you to enjoy success in your career and more control over your destiny. Contrary to popular belief, leadership skills can be learned and developed. Even if you don't hold a leadership position, this course will teach you how to use the principles of great leaders to achieve success in almost every aspect of your daily life.

## Online Workforce Training Courses

Joliet Junior College is partnering with Gatlin Education to offer these online courses. These self-paced programs are designed by a team of professionals to provide the most effective web-based learning experience possible. Programs are self-paced. Instructors are actively involved in the students' online learning experience by responding to any questions or concerns. Go to [www.gatlineducation.com](http://www.gatlineducation.com) for class details and review their financial assistance program. Call (815) 280-1555 to register. All class materials are included in the class fee. Take these quality classes at your convenience, anytime and anywhere.

## Business and Professional Development

### **Administrative Professional with Microsoft Certified Application Specialist (MCAS) (240 Hours)**

Our Administrative Professional with MCAS training will not only provide you with Administrative Professional training but will also prepare you to become a Microsoft Certified Application Specialist (MCAS). MCAS training will teach you how to use the new Microsoft Office 2007 suite of programs (Word, Excel, Access, Outlook, and PowerPoint) as well as the new Vista operating system. Price \$1995

### **AutoCAD 2011 (150 Hours)**

AutoCAD is an essential tool in many industries, including mechanical and civil engineering and architecture. Employers

seek workers skilled in AutoCAD more than any other CAD system. This online program teaches students the skills needed to create and edit simple drawings and gradually introduces more advanced AutoCAD skills. Price \$2395

### **Certified Bookkeeper (80 Hours)**

This online course for experienced bookkeepers leads to national certification with the American Institute of Professional Bookkeepers (AIPB). The AIPB certification is a high professional standard and the only national standard for bookkeepers. This course was created by the AIPB to prepare bookkeepers for the national certification exam. All textbooks are included. Price \$1795

### **Certified Global Business Professional (400 Hours)**

This online preparatory program for the Certified Global Business Professional Credential exam is a prestigious acknowledgement of international business expertise. The North American Small Business International Trade Educators Association (NASBITE) Certified Global Business Professional Credential (CGBP) provides a benchmark for competency in global commerce. Price \$2495

### **Grant Writing (300 hours)**

This nationally recognized Grant Writing online certificate program is perfect for anyone seeking to learn the essentials in writing or acquiring grants for private, public, or government use. If you are thinking of starting a business that utilizes grants, you will want to learn the essentials of writing, researching, obtaining and maintaining operations and strategies within the grant system. The Grant Writing Certificate consists of 10 modules geared to provide the essential information in a timely manner designed to fit busy, work, and family schedules. Price \$2095

### **Lean Mastery (60 Hours)**

Lean Mastery contains clear, concise information on transforming an enterprise to Lean. This online program is packed with examples, photographs, graphics, quizzes, progress tests, case studies and many interactive features that provide tips, "try this" exercises and in-depth information. The program covers all of the Lean Enterprise concepts and was authored by people who have successful, hands-on, practical worldwide experience. Students learn the concepts and theories needed to transform an organization to Lean. Price \$1695

### **Payroll Practice and Management (80 Hours)**

The Payroll Practice and Management online program provides detailed instruction in all facets of payroll—from the basics to the intricate complexity of fringe benefits, taxation, and garnishments. The primary objective of this exciting new online program is to teach the solid skills and knowledge of payroll rules and regulations to the beginner and to increase or refresh the skills of the more experienced student. This program is an excellent overall review for the Certified Payroll Professional test given by the American Payroll Association. Price \$1595

### **Project Management (40 Hours)**

This online, instructor-led program provides a comprehensive education in project management. This program teaches the basics of project management and includes preparation for the Project Management Professional national certification exam. Textbook and exam prep are included. Price \$1495

### **Records Management (180 Hours)**

Gatlin's online record management certificate course is a power-packed online training program that teaches students how to manage electronic records and conquer the paper pile-up. Textbook is included. Price \$1395

### **Six Sigma Black Belt (200 Hours)**

The Black Belt training program integrates online learning with hands-on data analysis. The course material provides an in-depth look at the DMAIC problem-solving methodology, as well as deployment and project development approaches. The course flow follows the DMAIC methodology, with the appropriate tools and concepts taught at each stage of project deployment. Workshops are incorporated extensively throughout the training to challenge the student's analytical and problem-solving skills. Price \$2695

### **Six Sigma Green Belt (100 Hours)**

Six Sigma Green Belt is a Quality Improvement methodology structured to reduce product or service failure rates. This online program encompasses all aspects of a business, including management, service delivery, design, production and customer satisfaction. Six Sigma is one of the highest standards for companies and individuals to achieve. This interactive online experience provides the skills needed to affect this highly valuable skill as well as prep for the national certification. All materials are included. Price \$1895



### **Technical Writing (80 Hours)**

Gatlin Education Service's training program is designed for anyone who wishes to develop their technical writing abilities to a professional level. Students will learn research methods, audience considerations, style, drafting and revision techniques, how to work in a collaborative environment, and more. A variety of media and formats will be studied, including websites, emails, proposals, memos, and instructions. The need for writers who can clearly and concisely convey information is almost universal in the business world, and people who can write well are consistently hired and promoted over those with limited writing ability. Our technical writing program will give you the skills you need to get noticed. Price \$1595

## Management and Corporate

### **Certified Alternative Dispute Resolution Specialist (240 Hours)**

This online program is offered in partnership with the Institute for Advanced Dispute Resolution™. With the evolution of this new career field, states and courts are increasingly demanding that mediators be trained. This online training program will give you the educational background you need to break into this fast-growing field. Students will be required to take a Core Mediation course and will select two specialty courses from the following: Divorce and Child Custody Mediation, Workplace Mediation, Healthcare Mediation, Construction Mediation, Advanced Mediation Practice and Arbitration. Materials included. Price \$2995

### **Certified Mediator (120 Hours)**

Mediation and dispute resolution are rapidly growing fields of study and sought after skills in the workplace. This comprehensive course provides the core skill sets necessary for the practice of mediation. As it becomes more and more apparent that individuals, families, groups, organizations, communities and nations must begin to work together in peaceful ways for the common good, mediation and dispute resolution are poised to become increasingly popular. In mediation, a neutral third party, termed a mediator, works with both sides of a dispute to have them agree on their own terms, without someone else deciding what is best for them. All materials included. Price \$1595

### **Management for IT Professionals (390 Hours)**

The Management for IT Professionals online training program is designed for anyone in IT who has recently assumed management responsibilities, anyone who is managing IT professionals, or anyone who wants a perspective on some of the unique issues facing management in the IT field. The leaders in an organization often set the tone and establish the benchmarks for success. In this program, the focus is on developing a successful leadership style that facilitates team-building, collaboration, and a corporate culture that promotes success. Different decision-making techniques will be explored in the context of successful leadership styles. Materials included. Price \$2095

**Management Training (360 Hours)**

The Management Training program is perfect for the business owner, entrepreneur, or anyone seeking to learn the essentials in business and management. If you are thinking of starting a business or pursuing an MBA, learn the essentials here! The Certificate in Management Essentials consists of 12 separate modules geared to providing the vital information in a timely manner designed to fit your busy work and family schedules. This program will provide you with an understanding of financial and accounting terms, successful negotiation strategies, and issues in the management of the marketing process, employment law, compliance and regulatory requirements, and more. Price \$2095

**Non-Profit Management Training (300 Hours)**

For those who work with or desire to work in a non-profit organization or business environment, this is the program for you. The Non-Profit Management Program is particularly well suited for anyone in who has recently assumed management responsibilities, anyone who is working in a non-profit organization, or anyone who wants a perspective on some of the unique issues facing management of a non-profit organization. This certificate program consists of 10 modules geared to provide the essential information in a timely manner designed to fit your busy work and family schedules. You will examine the fundamental principles of non-profit management as well as the roles and responsibilities of a nonprofit board of directors and the management team, examine the essential aspects of fundraising, and become acquainted with the fundamentals of the budgeting process. Price \$2095

**Purchasing & Supply Chain Management (300 Hours)**

This Purchasing Management online training program is particularly well suited to anyone working in or interested in working in purchasing, supply chain management, or procurement. In this program students will be introduced to the supply chain environment, including enterprise resource planning systems and requirement systems. The relationships between purchasing, vendor selection, supply sources and



technology will also be explored in this program, so that students understand the integrated approach to planning, acquisition, flow, and distribution from raw materials to finished products. Price \$2095

**Understanding Earned Value Management (30 Hours)**

This nationally recognized Understanding Earned Value Management online course teaches you to more objectively measure your project performance. Understanding Earned Value Management is critical to your project success. This interactive course teaches what is necessary to plan and manage a project using Earned Value concepts. The course walks you through the process by using a case study from start to finish. Price \$1295

**E-Business—Sales and Marketing****Graphic Design with Photoshop CS5 Training (200 Hours)**

This online program begins with the fundamentals of design and guides the student through the terms and processes needed to turn knowledge of design into a career. The student learns the rules of graphic design, as well as useful marketing strategies and information about art in the electronic age. Price \$1795

**Multimedia Arts Certificate (420 Hours)**

The Multimedia Certificate focuses on providing the conceptual, technical, and visual design skills required to create multimedia applications and environments. Students learn professional applications for Adobe Photoshop, Macromedia Flash, Apple Final Cut Pro, and Adobe After Effects, or equivalent digital imaging, animation, digital video editing, and motion graphics tools. Course projects include critique, storyboarding, retouching, compositing, Flash animation and site design, basic Action-Scripting, video and sound editing principles, motion graphics production, and interface design. Price \$5595

**Pay Per Click Marketing (150 Hours)**

Pay Per Click Marketing (PPC) is a sub-set of Search Engine Marketing, and refers to a specific type of advertising where you pay a search engine every time a potential customer clicks on your ad. The Pay Per Click Marketing training series has been developed in direct response to the skyrocketing growth of the paid search engine industry. This extreme demand means Search Engine Marketers can pick and choose their jobs and/or clients. The Pay Per Click Marketing series is a designed for people who want to jump-start their career path in the fast-paced search engine industry. This program will help you set-up, maintain, monitor, and improve your Pay Per Click campaign. Price \$1495

**Search Engine Marketing (250 Hours)**

The Search Engine Marketing training series has been developed in direct response to the skyrocketing growth of the search engine industry. Search Engine Marketers improve their company's search engine page rankings. Because of a shortage of qualified personnel in this relatively new field, many Search Engine Marketers receive multiple job offers. This comprehensive program will show students how to create, monitor and maintain successful search engine rankings, integrate technology such as dynamic content and Flash, take advantage of pay-per-click advertising, and much more. This Search Engine Marketing program combines both the Search Engine Optimizing and the Pay Per Click Marketing programs into one extended program. Price \$1895

**Search Engine Optimization (150 Hours)**

Search engine optimizers (SEOs) increase their company's Web site traffic by improving its search-engine page rankings. This is an especially important task in today's Internet-driven world, where many customers first learn of an organization and its products or services through the Web. Indeed, this SEO program was created in direct response to the skyrocketing demand for paid search engine industry professionals. Because of a shortage of experts in this area, many top SEOs receive multiple job offers. This 3-part program will teach you how to tailor your website to achieve better search engine ranking, incorporate dynamic technology such as Flash, and make the most of your website's content. Price \$1495

**Web Database Developer (267 Hours)**

The Web Database Developer online program will provide students with intermediate and advanced knowledge and skills in utilizing and leveraging databases on the Internet. Students will be able to incorporate database design, development, and deployment into e-commerce sites, dynamic web sites, and business-to-business data collaboration. Students will also learn about current and emerging trends impacting high-end web site development and enterprise-class data warehousing along with resources to keep them current in this fast moving technology. Price \$2195

**Webmaster (150 Hours)**

This online program prepares students for a dynamic Internet-based career as a Webmaster. Webmasters design, develop, and maintain web sites. This Webmaster program begins by teaching simple webpage development and progresses by introducing new concepts by involving students in active webpage implementation using HTML and Dynamic HTML. Textbook is included. Price \$1795

**Website Design Certificate (420 Hours)**

Gatlin Education Service's Website Design online training program focuses on developing the visual graphic and information design skills required to create compelling Web sites. Students learn professional applications for Adobe Photoshop, Macromedia Dreamweaver and Flash, or equivalent software tools. Course projects include critique, digital imaging, color, typography, and composition, Web page design using HTML, tables, frames, and CSS, ecommerce and gateway pages, site maps and many more. Price \$5595

**Skilled and Industrial Trades****Chemical Plant Operations (400 Hours)**

This online training program will teach you the skills you need to gain employment as a Chemical Plant Operator. Chemical Plant Operators are highly paid and enjoy a stable work environment. There is an ongoing need for entry-level personnel. Generally, Chemical Plant Operators enter the workforce in entry-level positions and work their way up - sometimes to senior management positions. This is a unique user-friendly course designed for people who have minimal knowledge of industry, math, physics or chemistry. The necessary science concepts are built into the course modules. Price \$2595

**Freight Broker/Agent Training (150 hours)**

Entrepreneur Magazine has rated the freight brokerage business as one of the top home-based businesses to own, and a recent Wall Street Journal article cited freight brokering and logistics as the largest growing sector of the transportation industry. Written by freight brokerage specialists, the freight broker/agent training course will provide the student with the knowledge and resources needed to break into the \$400 billion plus shipping industry. Students will learn the "how-to's" of building up a freight brokerage or agency. From licensing to operations, to sales and marketing, students learn the basics of how to run a freight brokerage or agency. This course arms graduates with the information needed to succeed in the freight brokerage business, and can help lead to a rewarding career in this field. Price \$1695

**Oil Refinery Operations (400 Hours)**

This online training program will teach you the skills you need to gain employment as an Oil Refinery Operator. Oil Refinery Operators are highly paid and enjoy a stable work environment. There is an ongoing need for entry-level personnel. Generally, Oil Refinery Operators enter the workforce in entry-level positions and work their way up - sometimes to senior management positions. This is a unique user-friendly course designed for people who have minimal knowledge of industry, math, physics or chemistry. The necessary science concepts are built into the course modules. Price \$2595

**Power Plant Operations (400 Hours)**

This online training program will teach you the skills you need to gain employment as a Power Plant Operator. Power Plant Operators are highly paid and enjoy a stable work environment. There is an ongoing need for entry-level personnel. Generally, Power Plant Operators enter the workforce in entry-level positions and work their way up - sometimes to senior management positions. This is a unique user-friendly course designed for people who have minimal knowledge of industry, math, physics or chemistry. The necessary science concepts are built into the course modules. Price \$2595

# 5

# ON-SITE TRAINING

## Creative Team Building

Joliet Junior College uses a number of creative ways to teach team building. Employers like them because they inspire and motivate their employees.

A good example is the Teambuilding Pizza class JJC put on for the Edward Jones office in Tinley Park, Illinois. Chef Keith Von Hoff added spice to the company's quarterly district meeting by teaching participants the team approach to building a pizza. "They were looking for a place to meet, have lunch and do a hands-on activity," said Brenda Large, personal enrichment coordinator for JJC. "The team building pizza class was a perfect fit." Participants sharpened their teambuilding skills by making pizzas together. Later, the group dined on their creations and tackled their meeting agenda.

Another business group, The Professional Development Alliance, expanded upon the teambuilding aspects of this kind of class. They worked in teams to build a menu of salad, pizza and dessert. Then, they created their own restaurants and worked as teams to solve dilemmas that could occur in such an endeavor. The group achieved their goals while enjoying a great meal.

For those who want a more traditional way to teach teambuilding, JJC offers the Frontline Supervisory training program. Broken down into seven modules that can be taken together or individually, the program offers first time supervisors an opportunity to learn all the skills needed to build an effective team. For companies like Schneider Logistics Transloading and Distribution in Elwood, Illinois, the course was the perfect solution. "The supervisors really liked the interaction with each other and they really enjoyed the JJC instructors," said Ilene Klein, Training and Development Manager for Schneider Logistics. "They were able to get to know each other better and think like a team. I hated to have it end - great learning experience."

**For more information on all the teambuilding programs offered at JJC, contact Amy Murphy at (815) 280-1418 or e-mail [amurphy@jjc.edu](mailto:amurphy@jjc.edu). You can also visit [www.trainingupdate.org](http://www.trainingupdate.org).**

## Hazwoper

### HAZWOPER TRAINING

HAZWOPER Training was developed to assist private industry employees in the emergency response to releases of hazardous substances, according to company policy, safe work procedures and applicable compliance regulations.

### HAZWOPER REFRESHER TRAINING

A one day, eight hour workshop for those who must meet the HAZWOPER refresher training requirements. The workshop is designed for emergency responders who will be participating in the defensive actions at the scene of an uncontrolled release of hazardous materials.

### HAZWOPER GENERAL SITE WORKER WORKSHOP

Five day (40 hour) training program designed for the company whose employees will be working at a RCRA, Superfund, or other facility with chemical hazards. Evaluations are completed during the lecture period on the job site and are based on realistic work activities using props where contact with chemicals could occur. Control activities must be implemented to minimize exposure to workers and the environment.

### HAZWOPER ON-SCENE COMMANDER INCIDENT COMMAND WORKSHOP

The objective of this three-day workshop (24 hours), is to instruct your selected employees in the knowledge, skills and techniques of using the Incident Command System during unusual occurrences that can pose threats to persons and or the environment.

### HAZARDOUS MATERIALS TRAINING FOR DOT 49 CFR TRANSPORTATION REGULATIONS

This four-hour course will assist employers in meeting mandatory training requirements for those employees responsible for the transportation of hazardous materials.

### EIGHT HOUR HAZWOPER SUPERVISOR TRAINING

An eight-hour course designed to meet the requirements for supervisors who have taken either the 40-Hour or the 24-Hour HazMat course. Covers the OSHA standard, Site Hazard Recognition, Site Safety, Field Survey Instruments, Selection and Use of PPE, the Incident Command System, and Decontamination Procedures.

**For information about OSHA Safety training, call Bruce Kuzmanich at (815) 280-1512, or e-mail [bkuzmani@jjc.edu](mailto:bkuzmani@jjc.edu).**

Call (815) 280-1418 for more information about on-site training and grant funding.



### COMPETENT PERSON FOR EXCAVATION TRAINING

One day (8 hr.) training program designed to train your selected employees using lecture and demonstrations to verify their understanding of the requirements of CFR 1926.650 - .652, as a competent person for excavation.

### PROCESS SAFETY AND RISK MANAGEMENT SYSTEMS

The key to implementation of effective process safety and risk management systems is to develop a common framework that includes all local regulatory requirements and all corporate standards. We have worked with numerous industry groups and companies to develop safety and risk management systems, guidelines and standards, and audit protocols. Our services include baseline and compliance audits, preparation of implementation/follow-up plans, development of guidelines and standards, and implementation of program elements and delivery of customized process and equipment specific training. We can help you comply with internal company standards; CCPS, CMA, API, and other industry guidelines; and the regulatory requirements of OSHA's Process Safety Management Standard and EPA's Risk Management Program (RMP) Rule.

## Process Hazard Analysis

Effective process safety and risk management starts with understanding the hazards that are present in your process. Process hazard analysis (PHA) should be conducted throughout the life of a process from initial laboratory trials through operation, until the process is decommissioned. At different stages of a process life cycle different PHA techniques may need to be used. Our partners have pioneered many of the current techniques for conducting PHAs and understand the best use of these techniques, including preliminary or inherent hazard analysis, hazard and operability (HAZOP) studies, and failure modes and effects analyses (FMEA).

### HAZARD AND RISK ASSESSMENT

Risk assessment can be accomplished both qualitatively and quantitatively and at varying levels of detail.

**INCIDENT INVESTIGATION AND LITIGATION SUPPORT**

Our partners have investigated and provided litigation support for accidents involving fires, explosions, and runaway reactions. We understand the critical aspects of incident investigation, including preservation of data and effective interviewing of witnesses. Our partners have also been called as expert witnesses for litigation resulting from major incidents.

The Occupational Safety and Health Administration believes that employee safety and health training helps to protect workers from injuries and illnesses. OSHA emphasizes its point through standards that require employers to train their employees in safety and health. Certain jobs are limited to employees who are "certified", "competent", or "qualified." Today, both federal and state occupational safety and health regulations are broad and far-reaching. Accordingly, more and more companies are tightening their safety and health policies, demanding that everyone, from top manager to most recently hired trainee, play an important role in maximizing workplace safety and health.

We have developed an OSHA Health & Safety Compliance on programs through which your company can meet its compliance burden without the necessity of locating and employing a full-time safety director. You get the expertise you need at a cost you can afford - with no employer taxes, health insurance or vacation days.

**OSHA 10-HOUR GENERAL INDUSTRY**

A two-day seminar covering 29CFR1910, the OSHA Standard for General Industry. Learn to identify potential job site hazards while increasing your knowledge of OSHA requirements. Topics include Personal Protective Equipment, Fire Protection, HazCom Standard, How to Handle OSHA Compliance Inspections, and others.

**OSHA 10-HOUR CONSTRUCTION TRAINING**

A two-day seminar covering 29CFR 1926, the OSHA Standard for the construction industry. Learn to identify potential job site hazards while increasing your knowledge of OSHA requirements. Topics include Trenching and Excavation, Cranes, Aerial Lifts, Motor Vehicles, Earth Moving Equipment, Personal Protective Equipment, Fire Protection, the HazCom Standard, How to Handle an OSHA Compliance Inspection, and others.

**HAZARDOUS MATERIALS TRAINING FOR DOT 49 CFR TRANSPORTATION REGULATIONS**

This four-hour course will assist employers in meeting mandatory training requirements for those employees responsible for the transportation of hazardous materials. Course covers the requirements of HM-215A, HM-22, HM-126, and HM-181, Hazardous Materials classifications and definitions, container selection and labeling, shipping papers, placard selection, vehicle loading and unloading, HazMat employee training requirements, and related topics.

**PERSONAL PROTECTIVE EQUIPMENT**

A half-day course on understanding 29CFR 1919.132-140 Subpart I. This part of the standard was revised in 1994. In the revision, OSHA addressed two of the greatest problems facing the effective use of PPE: Accurate assessment of the hazards in the workplace, and employee compliance. Learn about this standard, the documentation required, and how to effectively comply.

**RESPIRATOR FITTING AND USE**

A half-day course on understanding 29CFR 1910.134. In January 1998, the respiratory standard was changed. It contains requirements for program administration, worksite specific written procedures, respirator selection, annual employee training, fit testing, medical evaluation, respirator use, cleaning, maintenance, and repair. Learn to effectively comply with this standard.

**CONFINED SPACE AND CONFINED SPACE RESCUE TRAINING**

Train your employees for safe entry into permit-required confined spaces, emphasizing your company policies, procedures, and current regulations. Includes exercises under actual or simulated conditions. Course meets the requirements of 29CFR 1910.146. These requirements apply to employees in general industries who are exposed to the hazards of entering into permit required confined spaces. This course covers hazard identification and control, implementation of a permit program, and rescue and emergency procedures.

**ELECTRICAL AWARENESS — NFPA 70E Non-Qualified**

This four hour workshop provides an understanding of electricity and focuses on increased awareness and prevention of industrial and home accidents. The course is designed for all employees.

**ELECTRICAL SAFETY AWARENESS — NFPA 70E Qualified**

This eight to twelve-hour workshop in advanced electrical awareness is designed to provide electrical safety certification for your employees who require the skills, knowledge and attitude to work safely in an environment of energized electrical equipment. It fulfills the OSHA mandate stated in 29CFR 1910 for electrical safety training for "qualified" personnel who work on energized circuits.

**FORK TRUCK OPERATOR CERTIFICATION WORKSHOP**

The new OSHA ruling on fork truck operator certification is now in effect and must be implemented before new employees take the controls. This half-day course explains the revised 29CFR 1910.178 standard and what employers need to do to comply.

**FIRST AID/CPR**

Learn the basic principles of first aid and cardiopulmonary resuscitation. Includes required content as mandated by OSHA.

**SMALL BUSINESS TRAINING**



**Four Tips to Better Internet Security**

Small business owners need password security to protect themselves and their businesses. Here are a few tips on how to protect your passwords from hackers.

**1. Don't use the same password everywhere**

It can make you vulnerable to hackers who could access all your personal information. The best practice is to use a different password for banking, blogging, and social networking.

Use a strong password as a foundation for customization then add your own set of rules for prefix and suffix ideas.

**2. Use different usernames**

Another alternative to changing passwords is to change usernames. In most cases, a hacker will need to know both the username and password to gain access to your Internet account. Using different usernames can make it more difficult. A different username with a different password will provide maximum protection.

**3. Use a password manager**

Password manager tools such as LastPass will help you create strong passwords. You simply create an account in LastPass and it does the rest.

**4. Change your password on important accounts periodically**

This may seem a bit "over the top," but it might be a good idea if you are concerned about your password on certain websites. Simply change the password, username, or both periodically. It could help maximize security.

To read more about this topic, read Lisa Barone's article at <http://smallbiztrends.com/2010/12/how-to-keep-your-password-safe-on-web.html>.

**For help with with your start-up or on-going business, call the Illinois SBDC for a consulting appointment at (815) 280-1400.**

**Entrepreneurship**

**Starting Your Business in Illinois (SBDC 2000)**

This seminar helps future entrepreneurs understand many of the steps and requirements of starting a small business in the state of Illinois. This course covers a variety of topics, including creating a business plan and forms of incorporation. Sign up for one of our monthly seminars.

T1	6-8p.m.	R	Main
Sept. 8			\$15
T2	Noon-2p.m.	W	Main
Oct. 5			\$15
T3	9-11a.m.	R	Main
Nov 10			\$15
T4	Noon-2p.m.	R	Main
Dec. 8			\$15

**Social Media Marketing Made Simple (SBDC 2820)**

This is not Twitter, Facebook, LinkedIn 101, but instead a program about how to use them to benefit your business and build client relationships. This session will cover some of the strategies and best practices to get the most out of social media for your business, including time management and measuring the return of your activities. Learn what social media marketing really is, how to incorporate it into your business life without losing productivity, and explore how other businesses are using these low-cost tools to gain visibility, develop relationships, and drive sales and response.

T1	9-11a.m.	T	Main
Aug. 23			\$30

**Effective Business Writing (SBDC 2110)**

An entrepreneur who can't write well has a greater chance of failure than one who knows how to communicate. You will learn how to persuade, teach, and report with clarity and interest. Topics include how to get ideas, using an idea map, outlining, and writing good transitions. E-mail etiquette is also covered along with the basics of grammar and punctuation. This is a hands-on seminar.

T1	9a.m.-Noon	W	Main
Sept. 14			\$45

**The Power of E-mail Marketing (SBDC 2800)**

There is more to e-mail marketing than hitting the "send" key. To use it effectively, you need to understand what it can and cannot do. The Illinois SBDC at Joliet Junior College is offering an informative half-day seminar that will show you how to use this powerful marketing tool. By the end of the course, you will know how to use the strategies and tactics that will make your e-mails more powerful. You'll also become familiar with one of the most popular and easy to use programs for e-mail marketing: Constant Contact.

T1	1-3p.m.	M	Main
Sept. 19			\$45



**Customer Service Training for Small Business (SBDC 2520)**

Customer service training is extremely important for small business since most small businesses rely on their customers and the loss of one customer can have a significant financial impact on the business. It is also important to have repeat customers and to promote a positive image of a company so your current customers will refer other prospective customers to your business.

T1 9a.m.-Noon	T	Main
Sept. 27		\$75

**How to Get Free Publicity (SBDC 2302)**

While advertising is important, it can cut deep into an entrepreneur's budget. This course will show small business owners how to work with the media, and get free publicity without having to hire a PR person. You will learn to develop events and programs that editors will find worthy of a few column inches. Unlike other public relations courses, this one includes ways to develop strong relationships with editors, pitch a story with confidence, and use the phone and e-mail to maximum advantage. It will also demonstrate the best way to write a press release.

T1 10a.m.-Noon	W	Main
Sept. 28		\$45

**Save Green by Greening Your Business (SBDC 2510)**

All organizations, both large and small and new or well established, can learn ways to cut costs while at the same time making their businesses more sustainable. Various speakers will explain rebates, performance contracting and waste reduction. Vendors will also be available to provide personalized information. If interested in being a vendor, please contact us at (815) 280-1400. This program is being offered in partnership with the Illinois Small Business Development Center at Joliet Junior College and Will County. Registration information is available at the Will County Green website and at the JJC website. The intention of this event is to promote sustainable, economic and environmentally beneficial business practices.

T1 8a.m.-Noon	W	Main
Oct. 12		\$15

**Developing Your Business Plan (SBDC 2100)**

Any entrepreneur looking to start a business or request financing needs to have a business plan. This seminar provides an in depth look at how to create a business plan thoroughly and explains the necessary sections and information that should be covered in any effective business plan.

T1 Noon-2p.m.	R	Main
Oct. 13		\$45

**Creating a Website for Your Business (SBDC 2850)**

The Internet has changed the traditional landscape of the business environment from that of being a "marketplace" to one that is more of a "marketspace." Learn how to create your own "space" on the Internet where you can promote your business and sell goods and services. Class participants will learn about the many options available to build a website without extensive computer "coding" skills, and discover what elements make up an effective e-commerce website. This class is designed for those with no experience in website design.

T1 6-9p.m.	R	Main
Oct. 27		\$75

**Understanding Basic Financial Statements (SBDC 2200)**

Learn the basics of the three primary financial statements: cash flow statements, profit and loss statements, and balance sheets, and understand how each report can be used to help you manage aspects of your business. We will review accrual based accounting and also take a look at the importance of forecasting and budgeting. This is a great introductory seminar for those who are in business, and those that are planning on starting one.

T1 6-8p.m.	W	Main
Nov. 2		\$45

**Establishing a Marketing Strategy (SBDC 2300)**

Create an effective marketing plan with which you can achieve your sales and marketing goals by understanding your competitors and your clients. You will learn how to present your products or services in a manner that will appeal to your clientele.

T1 10a.m.-Noon	R	Main
Nov. 10		\$45

**ABCs of Accounting (MGT 882)**

This concise accounting course is targeted for students with a need to understand basic accounting principles, but who are not seeking an accounting career. Become familiar with the accounting equation: Assets = Liabilities + Owner's Equity. Discuss T-accounts and their uses in accounting, business transaction analysis steps, and work through the entire accounting cycle using various small business case studies. Designed for beginners, no accounting background required.

T1 9a.m.-4p.m.	T	Main
Sept. 6-13		\$179

**Introduction to QuickBooks (COMP 2400)**

QuickBooks is an accounting program designed for small business. With it, you can monitor all your company's finances including accounts payable and receivable, invoicing, and payroll. You will learn how to automate transactions, create budgets, and generate reports. This program is ideal for a service or product-based company. Topics include setting up a company, chart of accounts, vendor lists, and bank accounts. Generate sales receipts, credit memos, checks, and invoices. Be able to record deposits, enter bills and make payments, process payroll, protect and back up data.

T1 9a.m.-4p.m.	T	Main
Sept. 20-27		\$179

T2 9a.m.-4p.m.	W	Main
Nov. 9-16		\$179

**Advanced QuickBooks (COMP 2401)**

Expand your knowledge of QuickBooks. Learn to customize forms, create graphs, and build and modify various types of reports. Set up a payroll system that generates checks, tax files, and employee information. Be able to track sales tax and synchronize QuickBooks with other contact management software. Use QuickBooks to write various types of letters, track credit card transactions, and create job estimates and control time spent on those jobs. Prerequisite: QuickBooks 2007 (COMP 2400).

T1 9a.m.-4p.m.	T	Main
Oct. 4-11		\$179

**IDOT Contract Required Course**

**Storm Water and Soil Erosion Control (ERC 007)**

This daylong class covers the details involved in storm water and erosion control in accordance with the National Pollutant Discharge Elimination System (NPDES) permit program as authorized by the Clean Water Act. Learn to develop and implement a storm water pollution prevention plan. Know when NPDES applies and what permits are required. Be able to identify pollutants of concern and minimize storm water pollution. Discuss inspections including what is to be inspected, when, where, by whom, and what to do with inspection results.

T1 9a.m. - 5p.m.	W	Main
Sept. 28		\$299



**The Illinois Small Business Development Center (SBDC) at Joliet Junior College**

To learn more about the Illinois SBDC at Joliet Junior College, call (815) 280-1400, or e-mail sbdc@jjc.edu. Visit www.sbdccjjc.com to register for these seminars, or to learn more about other SBDC services.

The Illinois Small Business Development Center at Joliet Junior College is one of the small business service providers in the Illinois Entrepreneurship Network and is funded in part through a cooperative agreement with the U.S. Small Business Administration and the Department of Commerce and Economic Opportunity.

# 7

# SPANISH TRAINING

## How to pick up a little Spanish on your own

Every day more and more people are finding it useful to learn Spanish, whether it be for employment purposes, for international trade, for leisure and vacationing, or just for fun. The benefits to learning another language are endless, especially for people that learn Spanish in the United States since it is the second most spoken language of the country.

There are many learning opportunities available to those trying to learn Spanish in the United States that might not be available those who are learning other languages. With a little ingenuity, it can be easy for a person trying to learn Spanish to make their learning experience very similar to an immersion trip without having to spend the extra money.

There are a number of ways the Spanish student could enhance their classroom and personal learning and achieve this immersion benefit without having to travel. One way is to find friends or coworkers who speak the language, and ask them to speak to the student in Spanish for a few minutes a day.

If the student does not know anyone who speaks Spanish but is an outgoing person, then he or she could visit a neighborhood that has a large Spanish speaking population. There the learner could strike small conversations in Spanish with people that live or work in the area. If the student is shy, then he or she could listen to passerby conversations while walking or shopping around.

For Spanish learners that have a more difficult time reaching a location where people speak Spanish, there is always the Spanish media. There are a number of television channels, radio stations, magazines, and newspapers offered in Spanish. Many of the Spanish television stations will even offer subtitled or closed captioning for their programming.

If all else fails, there is always the internet. With modern means of communication, it is easy to find people all over the world who would be willing to have you practice your Spanish with them if they are able to practice their English with you. There are chats targeted specifically for this purpose, and the best of it all is that they are only a search away.

**For those who need to learn how to speak Spanish quickly and fluently, one of our courses can work for you. We have courses tailored for specific industries. Call (815) 280-1555 for more information, or visit [www.trainingupdate.org](http://www.trainingupdate.org).**

## Spanish for the workplace

### Conversational Spanish for Health Care Workers (MGT 125)\*

Learn how to communicate with Spanish-speaking patients & their families -- without having to learn tedious grammar and language rules. This saves time and frustration and eases the burden on medical interpreters. Designed for "basic, effective communication" without a long learning curve, our Conversational Spanish for Health Care Workers enables you to speak common health care terms & expressions in Spanish without months of study or expensive online courses. Use what you learn immediately. Participant manual and CDs included.

T1 11a.m.-1p.m. W Main  
Sept. 14-Nov. 9 \$175

### Conversational Spanish for Criminal Justice (MGT 150)\*

Conversational Spanish can provide a cost-effective answer to your Spanish language needs for law enforcement, corrections officers and court system personnel. Designed for "basic, effective communication" without grammar and long learning cycles, our materials enable you to "jump right in" and use what you have learned immediately. No grammar to learn, no rules to memorize, no prior Spanish training is necessary. Participant manual and CDs included.

T1 11a.m.-1p.m. M Main  
Oct. 3-Nov. 28 \$175

### Conversational Spanish for Manufacturing (MGT 175)\*

Improve Teamwork - Productivity - Safety! "Conversational Spanish for Manufacturing" was designed for supervisors, team leaders, and crew leads in manufacturing environments to improve communication with Spanish-speaking workers resulting in better teamwork and productivity. Designed for "basic, effective communication" without grammar and long learning cycles, our materials enable you to "jump right in" and use what you have learned immediately. No prior Spanish training is necessary. Participant manual and CDs included.

T1 11a.m.-1p.m. R Main  
Sept.15-Nov. 10 \$175

**\*Bring Your Lunch and Learn Spanish**

Call (815) 280-1418 for more information about on-site training and grant funding.



### Basic Spanish (MGT 7058)

Expand your language skills or grasp the basics of Spanish through conversation and listening. Discuss the basic pronunciation of vowels and consonants in Spanish. Learn vocabulary, sentence structure, and how to ask and answer basic questions. This course is designed for the student with no previous knowledge of Spanish.

T1 6 - 8:30p.m. R Main  
Sept. 15 - Nov. 17 \$22

### ON-LINE Occupational Spanish Course

These "industry-specific" on-line occupational Spanish courses will help bridge the communication gap between English and Spanish-speaking co-workers and clients. Courses are designed for beginning Spanish learners. Students use visual imagery for better retention and interactive assessments to measure progress. Class fee is \$99. Call 815-280-1555 to register. Courses are available for the following industries:

- |                 |                 |
|-----------------|-----------------|
| Banking         | Construction    |
| Educators       | Food Service    |
| Health Care     | Hospitality     |
| Human Resources | Law Enforcement |
| Manufacturing   | Social Workers  |

# 8 SUSTAINABILITY TRAINING

## Dedicated to educating future workers in green technology

In an effort to meet the anticipated need for mechanics, installers, and service technicians, Joliet Junior College (JJC) has purchased \$225,000 worth of wind-turbine and solar panel equipment to teach this new technology.

According to the Wall Street Journal, some green industry has already taken root. The Cayuga Ridge wind farm, for example, has 150 wind towers in operation and employs technicians to service them. Glenn Clarke, president of Renew Mechanical Inc., which installs small wind turbines said, "I'm not sure that the demand is there yet. Hopefully a year or two from now that will change."

Along with the programs in wind turbine and photovoltaic systems, JJC teaches weatherization to prepare people to become certified energy raters. Recently the college prepared building inspectors from a number of municipalities to take the energy rater exam. This program was initiated by the City of Naperville as a way to help homeowners qualify for available energy-related tax credits

While these are examples of jobs directly involved in renewable energy, JJC is aware that many current jobs will become "greener" simply because of changes in regulations governing different industries. Technicians in the heating and air conditioning industry, for example, will need to become more familiar with energy-efficient furnaces and cooling units and Architecture Technology students will need to become aware of LEED requirements in building design and construction.

JJC is also offering a new course this year in CALEFFI HYDRONIC Solar HOT-WATER SYSTEM (INDT 207). It is a hands-on seminar that will touch on the principles of the CALEFFI HYDRONIC SYSTEM, its operation and installation.

**For more information about all the sustainable energy programs at Joliet Junior College, call Amy Murphy at (815) 280-1418, or e-mail amurphy@jjc.edu. You can also visit [www.trainingupdate.org](http://www.trainingupdate.org).**

## Sustainable Energy

### EPA Section 608 Technician Universal Certification (ELC 510)

Since November 14, 1994, EPA-Approved Section 608 certification is needed to service building air conditioning and refrigeration systems. With 608 certification, you can purchase any refrigerant in containers greater than 20 pounds. Four types of certification are available. Only CERTIFIED TECHNICIANS can purchase refrigerants. Technicians receiving a passing grade on the Type I (small appliance) examination are certified to recover refrigerant during the maintenance, service or repair of packaged terminal air conditioners with 5 pounds or less of refrigerant. Only Type I or Universal certified technicians can recover refrigerant from these units. The Type I certification is available in an open-book exam, as well as the closed book format.

Technicians receiving a passing grade on the Type II (high-pressure and very high pressure) examination are certified to recover refrigerant during the maintenance, service or repair of high-pressure equipment (Medium-Pressure R-12, R-114, R-134a, R-401A, and R-500; High-Pressure R-22, R-402A, R-402B, R-404A, R-407A, R-407B, R-407C, R-410A and R-502; and Very-High-Pressure R-13, R-23, and R-503). Only Type II or Universal certified technicians can recover refrigerant from these units.

Technicians receiving a passing grade on the Type III (low-pressure appliance) examination are certified to recover refrigerant during the maintenance, service or repair of low-pressure equipment (CFC-11, HCFC-123). Only Type III or Universal certified technicians can recover refrigerant from these units.

Technicians receiving a Universal Certification are certified to recover refrigerant during the maintenance, service or repair of small appliances, high-pressure equipment and low-pressure equipment. That is, they are certified to work on any type of air conditioning and refrigeration equipment except motor vehicle air conditioning. Type I, II and III certification exams consist of 25 core questions and 25 specific Type I, II, or III questions, for a total of 50 multiple choice questions. The Universal certification exam consists of 25 Core questions, 25 Type I questions, 25 Type II questions, and 25 Type III questions, for a total of 100 multiple-choice questions. Technicians can take any of the certification exams as many times as necessary (passing grade per section is 72%, that is 18 of 25 correct in each section). When retaking the exam, only the sections failed need to be repeated. If a technician taking a Universal Exam fails to pass all sections, but passes the Core Sections and at least one other section, a certification card for the types passed will be issue.

T1	8a.m. - Noon	F	Main
	Oct. 14-Nov. 4		\$295

(includes the exam on the last day)

Call (815) 280-1418 for more information about on-site training and grant funding.

## Solar Thermal

### NEW — CALEFFI HYDRONIC Solar HOT-WATER SYSTEM (INDT 207)

This hands-on seminar introduces attendees to the latest "GREEN" technology in solar hydronic hot-water heating applications. Attendees will learn the following information: principal components of the CALEFFI SYSTEM; operation of the "active" solar thermal system; installation procedures; install hot-water collector evacuated tubes; freeze protection methods; controlling the solar collection process; and cutting copper tubing and soldering connections.

#### WHO WILL BENEFIT:

- Home owners
- Maintenance mechanics
- Anyone needing a basic understanding of the operation of a CALEFFI HYDRONIC SYSTEM

T1	8a.m.-Noon	F	Main
	Oct. 7		\$165

## Green Your Business

### Save Green by Greening Your Business (SBDC 2510)

All organizations, both large and small and new or well established, can learn ways to cut costs while at the same time making their businesses more sustainable. Various speakers will explain rebates, performance contracting and waste reduction. Vendors will also be available to provide personalized information. If interested in being a vendor, please contact us at (815) 280-1400. This program is being offered in partnership with the Illinois Small Business Development Center at Joliet Junior College and Will County. Registration information is available at the Will County Green website and at the JJC website. The intention of this event is to promote sustainable, economic and environmentally beneficial business practices.

T1	8a.m.-Noon	W	Main
	Oct. 12		\$15



# 9 WATER/WASTEWATER TRAINING

## Wastewater byproducts help power hospital.

Wisconsin-based businesses Gundersen Lutheran hospital and the City Brewing company have ventured into a biogas partnership to provide carbon-neutral energy from conditioned wastewater.

Biogas is a naturally occurring byproduct of the anaerobic digestion process used in wastewater treatment. When conditioned and harnessed properly, this byproduct can reduce energy costs and provide an environmentally friendly power source to nearby facilities.

Gundersen Lutheran spent \$4 million on energy in 2007, which led them to seek ways to cut costs. They also wanted to find a more sustainable approach to energy use. They set a goal to be 100 percent energy neutral by 2014. Their initial step toward this goal was to work with City Brewing in 2009 to turn the brewery's wastewater into a source of renewable energy for two of its hospitals.

The beer-making process can produce three to ten liters of wastewater per liter of beer. City Brewing produces nearly 50 million cases of beer each year and has its own on-site wastewater treatment plant.

After a costly mistake at the start, the project is now on track and is expected to generate approximately 3 million kW hours of power a year. Additionally, Gundersen uses wind power to supplement its energy consumption and expects to make about \$180,000 from the energy it sells back to the power company.

This article is based on a story by Paul Tower for waterworld.com. For more details, visit <http://www.waterworld.com> and click on the wastewater treatment of sludge in London story, then select the link "power generation from sludge" in the second paragraph.

**For information about the latest programs in water/wastewater at Joliet Junior College, call Mike Sillar at (815) 280-1423, or e-mail [msillar@jjc.edu](mailto:msillar@jjc.edu). You can also visit [www.trainingupdate.org](http://www.trainingupdate.org).**

## Water/Wastewater

### Wastewater Treatment Operator Review Class 3 & 4 (WTR 882)

Study for the Class 3 and Class 4 wastewater operator's license examinations, which are administered by the Illinois Environmental Protection Agency. To be eligible to test at the conclusion of class, you need three years of experience for Class 3, and one year for Class 4. Contact IEPA about test eligibility requirements or changes. Books are included in the class fee.

T1	6-8:45p.m.	R	Main
	Aug. 25 - Dec. 15		\$449
	(No Class Nov. 24)		

### Wastewater Treatment Operator Review Class 1 & 2 (WTR 883)

Study for the Class 1 and Class 2 wastewater operator's license examinations, which are administered by the Illinois Environmental Protection Agency. To be eligible to test at the conclusion of class, you need eight years of experience for Class 1, and six years for Class 2. Contact IEPA about test eligibility requirements or changes. Books are included in the class fee.

T1	6-8:45p.m.	M	Main
	Aug. 22 - Dec. 12		\$449
	(No Class Sept. 5)		

### Water Treatment Operator Review Class C & D (WTR 885)

Study for the Class C and Class D water operator's license examinations, which are administered by the Illinois Environmental Protection Agency. To be eligible to test at the conclusion of class, you need one year of experience for Class C, and six months for Class D. Contact IEPA about test eligibility requirements or changes. Books are included in the class fee.

T1	6-8:45p.m.	W	Main
	Aug. 24 - Dec. 14		\$449
	(No Class Nov. 23)		

### Water Treatment Operator Review Class A & B (WTR 886)

Study for the Class A and Class B water operator's license examinations, which are administered by the Illinois Environmental Protection Agency. To be eligible to test at the conclusion of class, you need three years of experience for Class A or B. Contact IEPA about test eligibility requirements or changes. Books are included in the class fee.

T1	6-8:45p.m.	T	Main
	Aug. 23 - Dec. 6		\$449

### Class K Industrial Wastewater Treatment Exam Prep (WTR 888)

Quick training over 5 weekends allows companies to meet regulations requiring Class K-permitted staff. Send up to 4 people at the company rate. Books are included in the class fee.

T1	8-11a.m.	S	Main
	October 15 - November 12		\$1200 per company*
	*Call (815) 280-1555 for details.		

### Storm Water and Soil Erosion Control (ERC 007)

This daylong class covers the details involved in storm water and erosion control in accordance with the National Pollutant Discharge Elimination System (NPDES) permit program as authorized by the Clean Water Act. Learn to develop and implement a storm water pollution prevention plan. Know when NPDES applies and what permits are required. Be able to identify pollutants of concern and minimize storm water pollution. Discuss inspections including what is to be inspected, when, where, by whom, and what to do with inspection results.

T1	9a.m. - 5p.m.	W	Main
	Sept. 28		\$299

## For Water Operators:

### Half-Day Classes Earn 3 IEPA-Approved RTCs!

#### Water Storage and Distribution (WTR 906)

This class provides an overview of potable water storage and distribution. Topics discussed include evaluation of storage alternatives, the use of Geographic Information Systems (GIS) for mapping and asset management, and the use of hydraulic modeling for evaluating water systems and proposed improvements. (3 Renewal Training Credits through the Illinois EPA)

T1	8:30a.m. - Noon	F	Main
	Sept. 9		\$99

#### New System Inspection (WTR 897)

This class covers new system construction, general construction methods and procedures, new construction inspecting procedures and record keeping, testing and reporting, and pre-construction meetings. (3 Renewal Training Credits through the Illinois EPA)

T1	8:30a.m.-Noon	F	Main
	Oct. 7		\$99

#### Operating Reports & Applied Math (WTR 898)

This class covers all aspects of IEPA record keeping, reporting, required frequency and procedures, and more. Mathematics for chemical calculations and well pumping will also be demonstrated. (3 Renewal Training Credits through the Illinois EPA)

T1	8:30a.m.-Noon	F	Main
	Oct. 21		\$99

### Water Storage Tank Maintenance (WTR 902)

This class covers the basics of water storage tank inspection, and discusses the best methods to assess conditions, specify needed repairs, applicability of cathodic protection systems for interior corrosion prevention and more. (3 Renewal Training Credits through the Illinois EPA)

T1	8:30a.m.- Noon	F	Main
	Nov. 4		\$99

### SCADA Systems (WTR 903)

This course explains SCADA systems, demonstrating how to evaluate benefits and limitations in relation to your own water system (3 Renewal Training Credits through the Illinois EPA)

T1	8:30a.m.- Noon	F	Main
	Nov. 18		\$99

### Meter Maintenance/Automated Reading (WTR 905)

This class reviews basic maintenance, automated meter reading systems such as touch reading and radio frequency reading systems; causes of wear and tear, technology solutions, and much more. (3 Renewal Training Credits through the Illinois EPA)

T1	8:30a.m.- Noon	F	Main
	Dec. 2		\$99

### Corrosion Control for Distribution Systems (WTR 904)

This class identifies the corrosion process and proven measures to reduce its negative impact on metallic piping and associated fittings. (3 Renewal Training Credits through the Illinois EPA)

T1	8:30a.m.-Noon	F	Main
	Dec. 9		\$99



# Registration



## Fill in course information:

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_____	_____	_____
_____	_____	_____

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SS#: \_\_\_\_ - \_\_\_\_ - \_\_\_\_ Birth date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

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