2019
Business and Workforce Solutions

Your Local Workforce Training Partner

GATEWAY
TECHNICAL COLLEGE

YOUR WORKFORCE TRAINING PARTNER

We are Gateway Technical College's Business and Workforce Solutions (BWS). Chartered and dedicated to enhancing economic growth in Southeastern Wisconsin, we assist Kenosha, Racine, and Walworth County companies and agencies in their efforts to become better, stronger organizations.

We help companies

- determine what they need to meet goals
- attract and keep employees
- train their workforce

We help individuals

- grow in their jobs and careers
- pursue interests
- broaden their minds

We help strong teachers and leaders become even better.

We are staffed with experts who come from business and industry. We have credentials and real-life experience, and we pull together the resources of the College, the business community, our strategic partners, and the latest technology, all in an effort to help you meet your business needs and to help individuals grow in their careers.

WHY DO WE HAVE A BUNCH OF CONNECTORS ON THE FRONT COVER?

Connectors provide a perfect analogy for what we strive for here at Gateway Technical College's Business and Workforce Solutions.

We're connectors — of people, training, company growth, and job opportunities.

And like connectors used in manufacturing, industry, and construction, when the connection is made — the end product is stronger!

ASK YOURSELF:

Where are the gaps in my company?

Are we attracting the talent we need to be successful?

Do we know what the next level is?

Can I fix this on my own?

Do we need customized training to meet our specific goals?

How do we keep employees engaged?

What keeps me up at night?

Do we have what it takes to get to the next level?

Are our cycle times the best they can be?

What's my business's problem… and what happens if I don't address it?

Where are the gaps in my education?

Are we adapting to the changing business environment?

BUSINESS & WORKFORCE SOLUTIONS OFFERS CUSTOMIZED TRAINING TO MEET YOUR SPECIFIC NEEDS.

Our areas of expertise include:

- Advanced Manufacturing
- Apprenticeship
- Barber & Cosmetology
- Beldin
- BICSI
- Business Technology
- CNC
- Construction
- CPR/AED Training & Certification
- Culinary Arts
- Digital Design
- DOT Commercial Motor Vehicle Certification
- Engineering Software
- Fab Lab for Manufacturing, Art, and Design
- Forklift
- Industry 4.0
- Leadership/Supervisory Management
- Lean/Six Sigma
- Microsoft Suite
- Office & Business Technology
- OSHA Certifications
- Robotics
- Safety
- Team Building
- Technical Rescue
- Telecommunications
- Troubleshooting
- Welding

Do you want training in something that is not on the list?

Just ask.
To get started or to get your questions answered, email us at training@gtc.edu.

START A CONVERSATION WITH GATEWAY'S BUSINESS AND WORKFORCE SOLUTIONS

You may be fully aware of everything you need to get your company and employees to the next level, or you may wonder what the next best steps are. Maybe you are somewhere in between.

Regardless, Business and Workforce Solutions is easy to work with and can partner with you and your company as you navigate through the changing business climate in Southeastern Wisconsin.
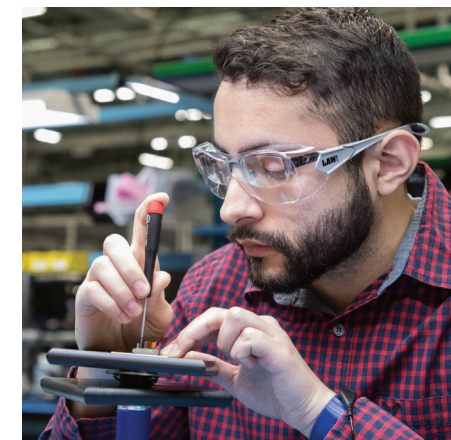
We ask questions. We listen. We want to know where your business is today and where you want to take it. We train in one area, or join you for the ride as you move your company to greater heights.

Start a conversation by emailing training@gtc.edu or calling 262-898-7484.

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MANUFACTURING/INDUSTRY/
CONSTRUCTION
Building Skills and Building Companies

When it comes to training your manufacturing, industry, and construction teams, you have a partner in Gateway. We offer the technical training and solutions to help companies, organizations, and individuals reach their goals.

Look to us to help fill skills gaps and meet your ever-changing training needs. With vast experience in manufacturing, industry, construction, and education, we can customize training or utilize proven programs.

"I help companies improve morale, improve cycle times, organize their tooling, organize their jobs, and organize their processes."

-Rich Buhnerkemper, Instructor

See page 24-32 for training descriptions.

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MANUFACTURING/INDUSTRY/CONSTRUCTION

CNC/Machining
- Mazatrol Conversational CNC Programming
- High Speed Machining
- G&M Code Programming
- CNC Mill Programming
- CNC Lathe Programming
- Introduction to CAM

Troubleshooting
- Intro
- Pneumatic Systems
- Hydraulic Systems
- Electrical Systems
- Programmable Logic Controller Systems
- Integrated Systems

Engineering Software
- CAD and CAM Software
- Mastercam
- SOLIDWORKS
- Autowork
- Pro/Engineer
- CorelDRAW

Safety
- OSHA 10 Safety
- OSHA 10 Construction
- OSHA 30 Safety
- OSHA 30 Construction
- NFPA 70E Electrical safety in the workplace

Welding
- The Art of Welding
- Wisconsin Structural Welding Certifications
  - Shielded Metal Arc Welding (SMAW)
  - Gas Arc Welding (GMAW)
  - Flux Core Welding (FCAW)

Robotics
- Introduction to Robotics Operation and Safety
- Robot Basics 101
- Robot Basics

Lean/Six Sigma
- Lean Six Sigma Green Belt
- Lean Six Sigma Green Belt to Black Belt
- Lean Operations

Electrical
- Conduit Bending
- Advanced Conduit Bending
- Wire Pathways
- Basic Electrical for the Non-Electrician
- Basic Electrical Tool Safety

Construction
- Construction Tech Certificate
  - Building Materials & Construction Methods
  - Survey Basics
  - Conflict Resolution
- Construction Project Management
  - Construction Estimating
  - Residential Code
  - Commercial Code
- 3D CAD
  - AutoCAD for Construction
  - 3D CAD: Digital Terrain Modeling
  - 3D CAD: Building Information Modeling

Forklift
- BWS offers specialized training on the safe operation and maintenance of forklifts. Courses are based on OSHA requirements and open to individuals and companies.

For details and to register for our workshops, go to *training.gtc.edu*

Contact us for customized training or to get your questions answered at *training@gtc.edu* or 262-898-7484.

See pages 24-32 for training descriptions.

INDUSTRY 4.0
The 4th Industrial Revolution

It's the "Smart Factory," the automated and self-monitoring machines that can "talk" to each other, linking business systems and analyzing complex data. It's operational efficiencies that come from integrating systems and processes.

Technology has transformed manufacturing, and we are on the leading edge -- embracing it full-force and providing training in Industry 4.0 equipment, processes, and methodology.

Business and Workforce Solutions is ready to help you implement Industry 4.0 into your organization *and* help you train your team as you work to gain all the advantages that come with embracing the 4th Industrial Revolution.

We offer customized and off-the-shelf training in:

- Industrial Control Systems
- Industrial Robotics
- Industrial IoT (Internet of Things)
- Mechatronics

Contact us for customized training or to get your questions answered at ***training@gtc.edu*** or **262-898-7484**.

TELECOMMUNICATIONS
The Core of Business Today

Telecom is a key component in allowing companies to be competitive and to collaborate with customers, suppliers, vendors, and employees. Telecom is much more than phones. It's the life blood of today's organizations -- connecting communication devices, networks, computers, manufacturing systems, supply chains, and schedules.

Keep your license current and gain the most from your continuing education requirements with hands-on training using state-of-the-art equipment and led by industry experts.

WORKSHOPS

- Introduction to Troubleshooting
- Hand Tool Safety (Snap-on)
- Basic Electrical for the Non-Electrician
- Basic Electrical Tool Safety (Snap-on)
- **Voice, Data, Video Test & Termination (Greenlee/NC3 Copper)
- **Fiber Preparation and Termination (Greenlee/NC3 Fiber)
- **Fiber Testing and Troubleshooting (Greenlee/NC3 Fiber)
- **Fiber OTDR Theory & Operation

- BICSI IN101 Installer Level I
- BICSI IN225 Copper Installer Level II
- BICSI IN250 Fiber Installer Level II
- BICSI TE350 Technician A
- BICSI TE350 Technician B
- **Conduit Bending
- **Advanced Conduit Bending
- **Wire Pathways

**This course satisfies Wisconsin electrician continuing education credit requirements.*

"BWS is an entity that comes alongside companies and helps them be more successful and grow their employees for greater things within the company."

-Randy Reusser, Instructor
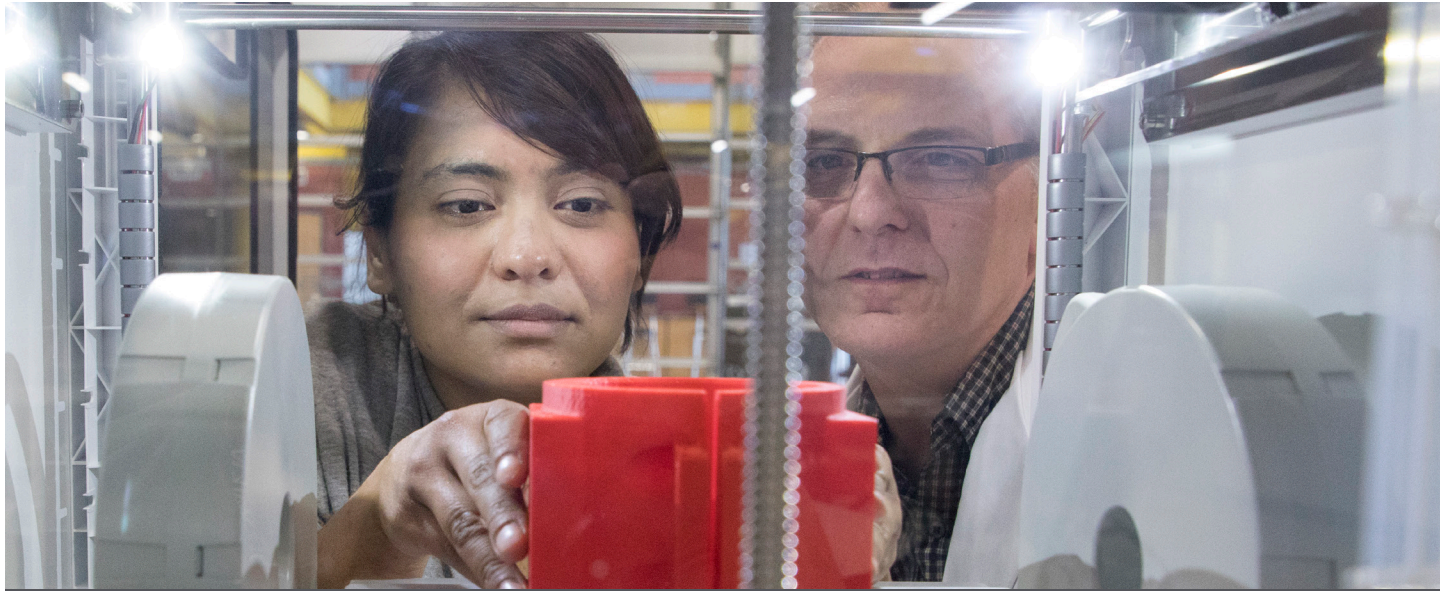
FAB LAB/ART/DESIGN
For Manufacturing, Art, and Design

Bring your ideas to life and open the window of possibility in the Fab Lab. We offer hands-on access to technology and equipment that's on the leading edge of design, art, and fabrication.

Our doors are open to innovators, artists, engineers, tinkerers, and hobbyists of all ages and backgrounds. Whether you're looking to prototype a new part, gain skills, explore, or just have fun exercising the creative and analytical parts of your brain, the Fab Lab is the place to be.

Let the Fab Lab be the connector that ties your team together. We offer team-building exercises that build comradery and foster collaboration.

WORKSHOPS

- Introduction to Fab Lab
- Fab Lab Fundamentals
- Dremel Printer Training
- NC3 Dremel 3D Printer Certification
- Roland Vinyl Cutter Training
- CNC Router - Mill Training
- 2D CAD for Fabricating
- Fab Lab Membership
- 3D Printer Fundamentals
- Fab Lab for Instructors
- Digital Art 4.0

"We have a variety of equipment and software packages in the Fab Lab. If your company is starting to use more of this equipment, we can provide you with the training and certification."

- John Zehren, Fab Lab Manager

See page 34-36 for training descriptions.

SAFETY
Customizable Solutions a Safer Workplace

Safety looks different depending on your industry. Business and Workforce Solutions offers a wide variety of safety-based workshops and seminars.

WORKSHOPS

General & Industry
- Hand Tool Safety (Snap-On)
- Basic Electrical Tool Safety (Snap-On)
- NFPA 70E Electrical Safety in the Workplace
- Intro to Robotics Operation and Safety

Construction
- OSHA 10 Safety
- OSHA 10 Construction
- OSHA 30 Safety (Previously Written as OSHA 30 Industry)
- OSHA 30 Construction

ANNUAL SAFETY DAY
Watch for information on Gateway's Annual Safety Day held every spring.

"We measure safety, quality, on-time delivery, and efficiencies; and we have statistics that prove we have improved in all those areas as a direct result of this training."

-Adrienne Cramer, Director Human Resources, Kenall Manufacturing Co.

See page 36 for training descriptions.

CPR
On-Demand CPR, AED, and Basic First Aid

Create a safer workplace with CPR, AED, and basic first aid trainings held in your facility or ours. Courses are taught in dynamic group settings using the American Heart Association's research-proven practice-while-watching techniques, allowing you to meet OSHA standards or individual company requirements.

Participants get hands-on CPR practice and receive training manuals and certificates of completion. Courses are offered on-demand.

TECHNICAL RESCUE
Learn Rescue Principals and Techniques from Experts

Serving Fire Department personnel and leadership and general-industry safety professionals.

The expertise offered through Gateway is second to none in an industry that is continually changing. These courses are open to safety professionals in industry and public safety and are customizable to best suit the level of knowledge and expertise of the participants.

Courses are offered periodically throughout the year and on-request by area fire departments and companies.

Training is held at Gateway's HERO Center in Burlington or at the location of your choice.

WORKSHOPS

Leadership
- Leadership 101
- Leadership Simulations

Blue Card
- Blue Card Certification
- Blue Card Recertification

Technical Rescue
- Rope Operations
- Rope Technician
- Confined Space Operations
- Confined Space Technician
- Trench Operations
- Trench Technician
- Trench-WI
- Structural Collapse Operations
- Structural Collapse Technician

"We have extraordinary instructors who are very technically gifted in their knowledge and skills and in how they transfer knowledge to others. I know we're making a difference. Some departments have celebrated positive outcomes that were a direct result of our training. Without the training, the outcomes may not have been as positive."

- John Dahms, Gateway Instructor

TRANSPORTATION
Diesel and Automotive

We come at transportation from a variety of angles, offering numerous workshops and certification courses. Our transportation-related training courses are led by industry experts using state-of-the-art equipment.

WORKSHOPS

Department of Transportation (DOT) Certification
Certification is a way for the Department of Transportation to ensure that anyone performing motor carrier reviews, inspections, and safety audits is qualified to do so. Instruction goes beyond the required DOT training topics and teaches students the critical thinking skills that are the mark of top-level inspectors.
- DOT Annual Inspection Certificate
- Brake Inspector Certificate

Snap-on Certification Courses
- Snap-on Diagnostic
- Snap-on Advanced Diagnostics
- Snap-on ShopKey Pro & SureTrack
- Snap-on Torque
- Snap-on Wheel Services & Alignment
- Snap-on Multimeter
- Starrett Precision Measurement Instruments
- Pro-Cut Rotor Matching Master Technician
- Snap-on Battery Starting and Charging

"What we're teaching applies to so many careers -- over the road transportation, agricultural products, construction, and marine. We teach students to think critically. And as long as they can understand the basics and apply that theory, they can work in just about any field they want to."

-Pat Stevens, Instructor

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LEADERSHIP/SUPERVISORY MANAGEMENT

You invest in the best machines and processes, but what about your most valuable and costly investment? Just as Gateway's Business Workforce Solutions assist with the technical aspects of your business, our services in talent and organizational development support the human side of your business. We will help you see through the behavioral complexities of your organization, whether it is a teamwork tune-up or a major change initiative.

We have no preconceived ideas about what will work for you. Instead, we will reach into our toolbox and build what you need. We create custom interventions that drive real and profound change in your individuals and entire organization. We assist in creating a company culture where employees want to stay.

Areas of Expertise Include:
- Leadership/Supervisory Management
- Supervising the Multigenerational Workplace
- Critical Thinking & Problem Solving
- Conflict Resolution Tips & Techniques
- Leadership in the Age of Social Media
- Time Managment
- Organizational Development
- Strategic Planning
- Continuous Improvement
- Leadership Development
- Change Leadership/Management
- Supervision Skills
- Employee Engagement
- Workplace Behavior
- Team Development
- Organizational Design
- Succession Planning/Talent Pipeline Development

Our Process Includes:
- Diagnostics/Assessments
- Individual Coaching
- Group Coaching
- Team Facilitation
- Strategic Consultation
- Customized Leadership Development Workshops for everyone from new supervisors to seasoned managers

"Human behavior determines whether we are going to be successful so long as we have everything else in line. In other words, there are no beans to count if we don't have sound leadership inside of our organization."

-Elizabeth Oplatka, Instructor

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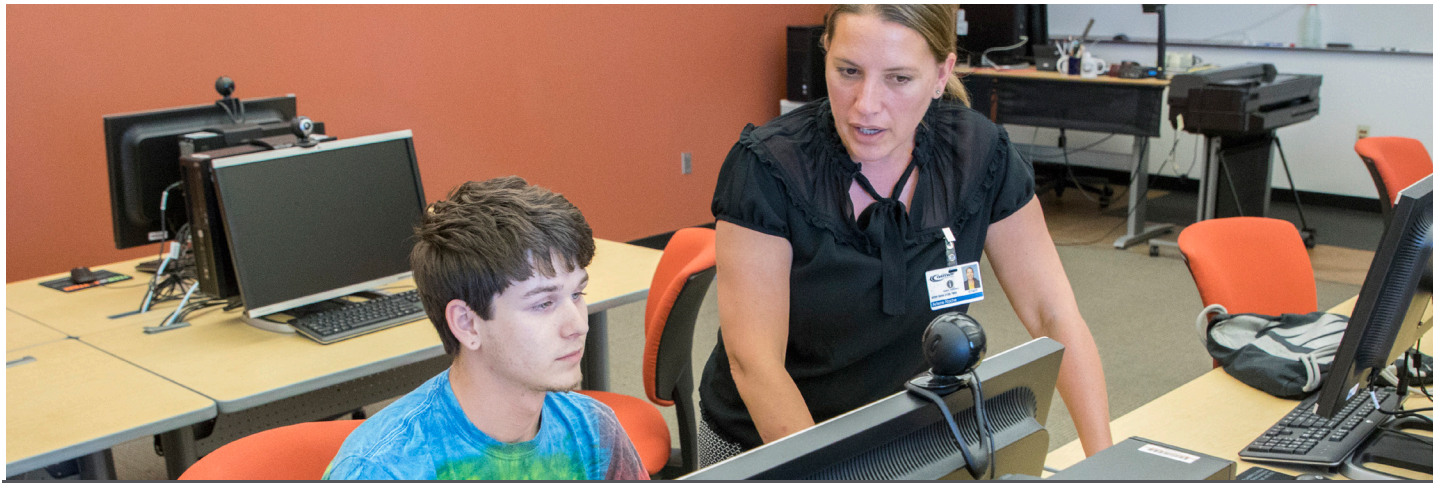
OFFICE/BUSINESS TECHNOLOGY
Business Productivity and Software

Success in business and industry is not only about having the latest technology, it's about using that technology to improve processes, create efficiencies, and ultimately improve the bottom line. Give your team the skills and knowledge they need to maximize the power of their computers and the Microsoft Office Suite -- and watch productivity skyrocket!

We offer basic to expert-level business software workshops in an extensive selection of vendor-authorized applications from providers such as Microsoft, Visio, Adobe, and QuickBooks.

WORKSHOPS

Business Software
- Excel 1 (Basic)
- Excel 2 (Basic & Intermediate)
- Excel 3 (Intermediate)

Intermediate & Advanced Excel Workshops
- PivotTables and PivotCharts
- LOOKUP Functions
- Recording and Running Simple Macros
- Performing Forecasting Functions
- Using "What-If" Tools in Excel
- Excel for Accounting
- Advanced Excel Functions
- Using Advanced Conditional Formatting
- Advanced Charting Options

Microsoft Office Workshops
- Microsoft Word
  - Beginning
  - Intermediate
  - Advanced
- Microsoft Access
  - Beginning
  - Intermediate
  - Advanced
- Microsoft PowerPoint
  - Beginning
  - Intermediate

Additional Workshops
- Introduction to Computers
- Accounting in Quickbooks (basics)

"We're open and flexible and can customize training for you. From company start-ups to project-based work to data analysis, I can work with you and design training to accomplish your goals."

-Arlene Roche, Instructor

APPRENTICESHIP
It's Good for Business

Apprenticeship helps solve some of the most pressing issues facing companies today -- worker shortages, the need for a highly trained workforce, and worker retention.

Apprenticeship is a proven strategy to develop, grow, train, and retain skilled workers.

Service Trades
- Barber
- Cosmetology
- Wastewater Treatment Plant Operator

Construction Trades
- Construction Electrical
- Plumbing
- HVAC

Industrial Trades
- Machine Technology
- Tool & Die
- Machinist
- Machine Repair
- Industrial Manufacturing Technician
- Maintenance Mechanic/Millwright
- Mold Maker
- Mechatronics Technician

Additional apprenticeships are being added to meet the needs of area businesses. Don't see a program that fits your needs? We can design a program for you. Call 262-564-2954 for information.

CULINARY ARTS
For Industry Professionals, Novices, Individuals, and Corporate Team Building

Whether you are a novice or a chef, our Culinary Arts courses are fun and informational. Classes are taught by professional chefs in Gateway's Racine and Elkhorn professional kitchens.

Courses include demonstration and hands-on training on a variety of cooking-related topics, and you always get to take home what you make.

Let Culinary Arts be the connector that ties your team together, too. Our cooking classes are a great way to build comradery and foster collaboration.

Want to get ahead in your restaurant career? We offer the ServSafe training and certification program which is accredited by the American National Standards Institute - Conference for Food Protection. ServSafe training and certification is widely recognized and sought-after for restaurants looking to fill management positions.

WORKSHOPS
- ServSafe Manager Live Review & Exam
- Baked Goods for Gluten Free
- Basic Pie Crust and Pie Fillings
- Cheesecakes
- Essential Knife Skills

"Our students can jump right in and start working. They know how to plan a menu and cost out a menu. They can tell you what your profit margin is. They see what a supervisor does, they learn about nutrition, and they know where sustainability comes from."

-Susanna Elrod, Instructor

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BARBER & COSMETOLOGY
For Industry Professionals and Students

Take your barber or cosmetology skills to the next level, and learn to run your business effectively.

Our industry experts help prepare you for success as you learn styling and cutting techniques and the intricacies of running your own shop or chair.

WORKSHOPS
- Booth Renting Module 1 - Getting Ready to Rent a Booth
- Booth Renting Module 2 - Ready to Rent
- Booth Renting Module 3 - Financial Responsibility
- Vintage Barber
- The Art of Shaving
- Fading Fundamentals

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CERTIFICATIONS
Let BWS Help You Through the Certification Process

Telecom/BICSI Certifications
- BICSI IN101 Installer Level I
- BICSI IN225 Copper Installer Level II
- BICSI IN250 Fiber Installer Level II
- BICSI TE350 Technician A
- BICSI TE350 Technician B
- Fire Stopping I
- Fire Stopping II

Snap-on Diagnostics
- Snap-on Diagnostic Certification
- Snap-on Advanced Diagnostics Certification
- Snap-on ShopKey Pro & SureTrack Certification
- Snap-on Torque Certification
- Snap-on Wheel Services & Alignment
- Snap-on Multimeter
- Starrett Precision Measurement Instruments Certification
- Pro-Cut Rotor Matching Master Technician Certification
- Snap-on Battery Starting and Charging Certification

Transportation-Related Certificates
- DOT Annual Inspection Certificate
- Brake Inspector Certificate

Lean and Six Sigma
- Lean Operations Certificate Program
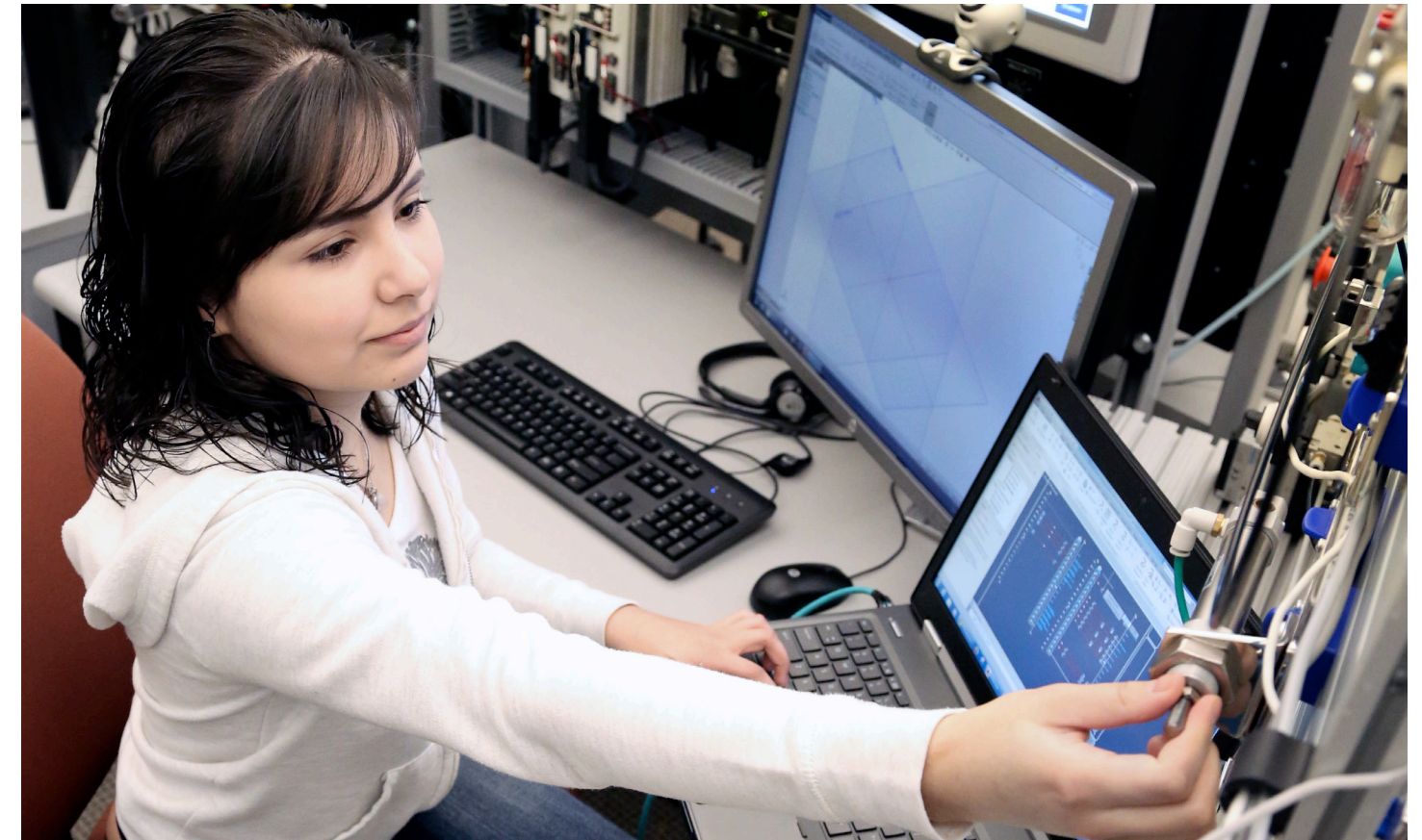- Lean Six Sigma Green Belt
- Lean Six Sigma Black Belt

Wisconsin Structural Welding Certifications
- Shielded Metal Arc Welding (SMAW)
- Gas Arc Welding (GMAW)
- Flux Core Welding (FCAW)

Advanced Leadership Certificate Program

For more information email
training@gtc.edu

See page **47** for training descriptions.

WORKFORCE ADVANCEMENT TRAINING (WAT) GRANTS
Work with BWS to Secure State Funding for Training

Workforce Advancement Training (WAT) Grants are state-funded training grants designed to improve Wisconsin's competitiveness, profitability, and economic base. Training under these grants must focus on occupational skills, market expansion, or business diversification and be conducted by Wisconsin technical colleges.

Business and Workforce Solutions can help you assess your training needs, develop training, and guide your grant-proposal process.

For more information, contact the Dean of Workforce Operations at 262-898-7410.

"If you want to continue to improve your bottom line, you have to find ways to drive down manufacturing costs and improve on-time delivery. We did that through training."

- Joe Mierzejewski, General Manager, Bradshaw Medical

TRAINING DESCRIPTIONS

MANUFACTURING/INDUSTRY/CONSTRUCTION/CNC/MACHINING

Mazatrol Conversational CNC Programming Intro

Use state-of-the-art Mazak lathes with live tooling to learn the basics of Mazatrol programming in this two-day workshop, which combines classroom and lab learning. Participants will program Y axis and full C axis. Working in groups, attendees will set unit data using common work units and determine machining process by creating boundaries, parameters, feeds and speeds, data fields, retracts, tool entries and exits, unit tool sequences, and unit shape sequences. At the end of the workshop, participants will be able to write programs for complete work pieces, including: facing, turning, grooving, drilling, and boring. The workshop also covers cross drilling a hole and milling a profile.

Mazatrol Conversational CNC Programming Intermediate

This workshop is a continuation of Mazatrol Conversational CNC Programming Intro. We will explore the milling side of the software, which involves working with and selecting multiple planes (G17, G18 and G19). Participants will write basic face and turn programs; learn types of point machining units including spot and peck drilling, reaming, tapping, and counterboring/spot-facing; and learn to interpret the point and line configuration necessary for the creation of milling tool paths. The workshop also addresses tool path check and machine tool simulation including tool data creation and work-holding data such as chuck and tool barriers. Participants learn the relationship between the sub program unit and the priority machining function, which allows the processes to be moved around. Time permitting, the course covers running multiple programs on the same part with different G54 work offsets with Z and X positions (flipping a part in a lathe or running second operation in another vice). By the end of this workshop, attendees should be ready to program their own part, which they will take home.

High Speed Machining Intro

This 18-hour workshop covers the basics of high-speed machining. Participants learn basic cutting tool and high-speed machining nomenclature such as: cutting edge, rake angle, clearance angle, lead angle, radius, tool-nose radius, inscribed circle, chip breakers, TiAlN, titanium nitride coatings, bull-nose technology, and flute technology. Learners get hands-on experience with some of the pioneers of high-speed machining such as the "wiper insert" by Sandvik and "calypso mill" by Hanita and Widia. Learners study and perform basic point-to-point M and G-code lathe programming (face and turn), CNC mill programming (drill, face, mill, and profile mill), and create feeds and speeds data by calculating RPM with instructor-provided baseline surface footage per minute (SFM) and by calculating inches per minute (IPM) with instructor-provided baseline inches per revolution (IPR). The ability to perform these calculations is critical to determining high-speed parameters like DOC (depth of cut) and RE (radial engagement) and being able to compete in today's high-speed global market.

High Speed Machining Intermediate

In this module, participants choose their own set of parameters based on tool material and the material the work piece is made of. Attendees are faced with the challenge of interpreting how the tool is cutting by looking at the tool; feeling the vibrations of the machine; listening to the sound of the tool; examining the chip size, shape, and color; and examining tool wear and part finish. Participants will cut chips, change parameters, and learn cycle-time shredding techniques such as adaptive clearing using Fusion 360 CAD/CAM software. Participants will also experiment with tricordial milling.

G & M Code Programming

Participants learn G & M code commands, enabling them to write and understand complex NC code programs. Commands include machine rapid, feed moves, long-hand programming, cutter compensation, canned cycles, and drilling. The Cartesian coordinate system is covered as well as how to compare absolute positioning to incremental positioning. Attendees gain an understanding of surface footage and learn to calculate feeds and speeds.

CNC Mill Programming

This CNC milling course introduces the fundamentals of CNC milling by having participants work with a variety of simulated machining applications. Participants learn by working with industrial-based programming concepts to machine a series of basic parts. Activities challenge attendees to develop and edit G & M code longhand programs using their own blueprints. Participants also create their own tool lists and, using industry formulas, find the appropriate feeds and speeds for their selected tools. Learners will design solutions for industrial CNC milling applications with an emphasis on real industrial concerns, such as optimized programming, accurate milling, and increased productivity.

CNC Mill Programming Intermediate

This workshop is a continuation of CNC Mill Programming and focuses on the fundamentals of G & M code CNC mill programming. Students will program CNC mills to face mill, pocket mill, slot mill, and profile mill. The workshop will go in-depth on G41 cutter comp left and G42 cutter comp right as well as G81 canned cycle for drilling, G83 canned cycle for peck drilling, and G84 canned cycle for tapping, which cut programming times compared to point-to-point programming. Participants design solutions for industrial CNC milling applications with emphasis on real industrial concerns, such as optimized programming, accurate milling, shorter programming times, shorter run times (machine cycle time), and increased productivity.

CNC Lathe Programming

This CNC Turning Technology module introduces students to the fundamentals of CNC turning. This module challenges students to develop and write programs and machine assorted parts. Students learn about the cutting tools and turning inserts used in basic lathe programming so that they can properly choose and use the right tools and inserts. Using industry formulas and their own blueprints, students create tool lists and find appropriate feeds and speeds for selected tools. Students go on to design solutions for industrial CNC turning applications with emphasis on real industrial concerns such as optimized programming, accurate turning, and increased productivity.

MANUFACTURING/INDUSTRY/CONSTRUCTION
CNC/MACHINING (CONTINUED)

CNC Lathe Programming Intermediate
This workshop is a continuation of CNC Lathe Programming. This module studies the fundamentals of G & M code for lathe programming. Participants program CNC lathes to rough and finish face, rough and finish turn, groove, drill, thread, and bore. The course also goes in-depth on G41 cutter comp left and G42 cutter comp right. In addition, attendees study the G71 canned cycle for rough turning, G70 for finish turning, and G76 and G92 canned cycles for CNC lathe threading. Using canned cycles allows learners to cut programming time when compared to point-to-point programming. Participants will design solutions for industrial CNC turning applications with emphasis on real industrial concerns, such as optimized programming, accurate turning, shorter programming times, and increased productivity.

Introduction to CAM
This 18-hour Computer Aided Machining module introduces the fundamentals of part geometry. Participants will actually draw the geometry of the workpiece they are going to machine. When the drawing is finished, they will learn how to chain tool paths, create tool libraries, and run the virtual simulations. Participants then learn how to program parts on a CNC mill and a CNC lathe using FeatureCAM. At the end of class, learners are challenged to draw and design parts from actual blueprints using FeatureCAM.

TROUBLESHOOTING

Intro to Troubleshooting
Learn the basic and logical steps to troubleshoot any technical problem. Participants will discuss the process of troubleshooting, look at useful tools and troubleshooting aids, and work on a variety of troubleshooting problems.

Troubleshooting Pneumatic Systems
This course allows participants to advance their knowledge of complex pneumatic systems and improve their troubleshooting and maintenance skills. The Pneumatics Troubleshooting workshop begins by breaking down the components of the pneumatic system, including valves and actuators. Participants then learn to read and interpret pneumatic schematics while assembling and troubleshooting actual circuits. Practical exercises on training equipment for setup, commissioning, troubleshooting, and repair/fault elimination that facilitate the transfer of knowledge to day-to-day work are covered.

Troubleshooting Hydraulic Systems
This workshop teaches the fundamentals of pneumatic troubleshooting and is ideal for anyone responsible for maintaining and repairing pneumatic systems. Participants learn the function of all system components, how to read and use the hydraulic schematic as a troubleshooting tool, how to troubleshoot individual components (preferably without removing them from the machine), how to adjust the system for maximum speed and efficiency, and how to perform reliability checks to help improve machine longevity and uptime. Participants work hands-on with state-of-the-art equipment and gain skills that are transferable to most pneumatic systems.

Troubleshooting Electrical Systems
Safe and systematic troubleshooting methods that greatly enhance technician skills are the focus of this hands-on workshop, which covers component identification, ladder diagram interpretation, and the correct multi-meter use needed to facilitate the troubleshooting of electrical system problems. The learner will identify the following components and their general applications: breakers, fuses, relays, transformers, coils, overloads, switches, disconnects, contacts, motors, and indicator lights. This information will be used to interpret common control circuits and basic ladder logic diagrams allowing the learner to quickly identify faulty components. Practical troubleshooting and equipment repair exercises facilitate the transfer of knowledge to day-to-day work.

Troubleshooting Programmable Logic Controller (PLC) Systems
This workshop provides a basic look at what a PLC is and how it works. The learner will develop the skills to safely troubleshoot electrical equipment and systems containing PLC controls while learning to determine the operation of PLC circuits using ladder diagrams, wiring diagrams, input/output schematics, and data sheets. Participants learn how to identify defective input, output, and control modules using a multi-meter while performing actual wiring of peripheral IO devices to their related modules. Participants also connect a laptop to a PLC to go online, upload PLC programs, and view the operation of the system live.

Troubleshooting Integrated Systems
This course covers the various service procedures, tools, instruments, and equipment necessary to analyze and repair typical multi-faceted industrial equipment. From developing a list of possible causes through the repair and commissioning of the equipment, a logical process is taught and used to find faults and to repair actual manufacturing equipment. Troubleshooting is a skill that is refined over time as the learner solves each problem, and these procedures will increase troubleshooting skills by teaching techniques for how and when to combine, as well as skip, steps in an effort to reach a solution quickly.

ENGINEERING SOFTWARE
Learn some of the most popular engineering software programs used in industry and manufacturing. Allow BWS to customize workshops to meet your specific training needs.

CAD and CAM Software
Mastercam
SOLIDWORKS
Autowork
Pro/Engineer
CorelDRAW

SAFETY

OSHA 10 Safety
This OSHA 10-hour course provides a broad awareness of workplace safety based on OSHA principles. Attendees learn to identify, abate, avoid, and prevent job-related hazards in general industry. Topics include electrical hazards, fire prevention, equipment safeguards, hazards associated with walking surfaces and working surfaces, and choosing/using personal protective equipment. Also covered in the course are employee rights, employer responsibilities, and how to file an OSHA complaint. Participants will leave with an understanding of what is included in OSHA inspections, how to implement HazCom Programs and emergency action plans, and how to read and understand material safety data sheets (MSDS).

OSHA 10 Construction
This course provides entry-level construction workers with knowledge to recognize, avoid, abate, and prevent safety and health hazards on the construction site. This online training focuses on Federal OSHA construction industry standards, pointing out differences with State standards. The course is a proven way to get your OSHA 10 Card and achieve the safety level required by companies for work in the construction industry. Participants are encouraged to learn their own company policies on these subjects, which may be different and more stringent.

OSHA 30 Safety (Previously OSHA 30 Industry)
This comprehensive safety program was designed for anyone involved in general industry. It is intended to help foremen, supervisors, managers, safety committee members, safety staff, and others with responsibility for workplace safety get up to speed on the basics of general health and safety regulations in the workplace. Topics covered include worker rights, employer responsibilities, blood borne pathogens, proper standards for citation purposes, ergonomic programs, and fall protection standards and plans. **Note: OSHA 10* is a prerequisite to enrolling in this course.

OSHA 30 Construction
This 30-hour online construction safety course trains workers and employers in recognition, avoidance, abatement, and prevention of safety and health hazards in the workplace. The course includes information on workers' rights, employer responsibilities, and how to file an OSHA complaint. Participants are provided with the specific steps and requirements to complete this online OSHA 30 Outreach Training.

NFPA 70E Electrical Safety in the Workplace
This course introduces the NFPA 70E Electrical Safety Standard and is for individuals who work with electrical dissemination systems. Participants learn about electrical hazards such as electric shock, arc flash, and arc blast. Further instruction focuses on safety precautions for working with and around electrical dissemination systems. Discussions include the role of the National Fire Protection Association and why NFPA 70E was developed, the concepts of arc flash, approach boundaries, risk assessment procedures, information on warning labels, and personal protective equipment.

WELDING

The Art of Welding
This course is for beginning welders and hobbyists. Explore the art of welding, including elements of sculpture and design, using basic welding procedures and techniques. Learn the fundamentals of welding including soldering, brazing, and fabrication of various metals. Then put your new skills and talents to work on you own metal art project. First time welders are welcome as we start from the very beginning. Course instructs in the SMAW (wire welding process), torch cutting, and metal shaping to give an understanding of beginning welding processes.

Wisconsin Structural Welding Certifications
Obtain Wisconsin Structural Welding Certification in Shielded Metal Arc Welding (SMAW), Gas Arc Welding (GMAW) and Flux Core Arc Welding (FCAW). Note: If you are welding, or plan to be welding, on any jobs paid for with Wisconsin tax dollars, you must have current certification in place for the type of welding you will be doing. Contact us in you have questions about required certifications.

ROBOTICS

Robot Basics 101
Gain a basic understanding of Fanuc Robot components during this four-hour Robot Basics course.

Robot Basics
This introductory course has no prerequisites and covers basic functions and programming of industrial robots. Eighty percent of the class-time will be in the robotics lab, working hands-on with Fanuc Industrial Robots.

Introduction to Robotics Operation and Safety
Industry 4.0 and Automated Manufacturing are becoming more commonplace in Southeastern Wisconsin. Gain in-demand automated manufacturing skills as you build a foundation in the latest Fanuc Robotics Technology. In this eight-hour introductory robotics course, participants learn the parts of robots and robotic cells, gain hands-on experience moving and programming Fanuc Robots, and explore ANSI/RIA2014 Robotics Safety Standards.

LEAN/SIX SIGMA

Lean Six Sigma Green Belt
Lean Six Sigma is the gold standard for world-class quality based on continuous improvement through identifying and eliminating waste. The flexible curriculum blends classroom instruction, online modules taken at your convenience, and a work-based project with six hours of coaching. The course is made up of two sections. Section A is comprised of Lean Enterprise and Six Sigma organizational structure and the elements of 'Define' and 'Measure' in the DMAIC process. Section B covers the 'Analyze', 'Improve', and 'Control' elements of the DMAIC process with "report outs" of individual workplace improvement projects. Participants must enroll in both sections A and B. A laptop PC with high-speed internet connection is required.

Lean Six Sigma Green Belt to Black Belt
This six-week course is designed to take certified Green Belts to the Black Belt level. Participants will apply powerful problem-solving tools and basic statistical techniques necessary for the Black Belt to lead strategic implementation of Lean Six Sigma practices in the organization, as well as train and mentor Black Belts and Green Belts. A laptop PC with high-speed internet connection is required.

LEAN/SIX SIGMA (CONTINUED)

Lean Operations Class

Earn one of the most valued certifications in business. Lean is not just for manufacturing. Understanding and knowing how to apply Lean methodology means you can recognize non-essential and non-value add activities and work to eliminate those activities in your organization. Learn how Lean transforms businesses of all types through proven principles that can shrink lead-time, decrease employee turnover, increase sales, reduce setup and change-over time, multiply inventory turns, and maximize profits. This course blends classroom instruction, individual coaching, and workplace-based projects.

ELECTRICAL

Basic Electrical for the Non-Electrician

This course provides an introduction and overview of basic electrical systems from the perspective of home wiring. Instruction includes discussion on maintaining/installing AC systems, AC system operation, and troubleshooting. Participants also learn to examine diagrams, symbols, and codes.

Basic Electrical Tool Safety

Learn basic electrical safety, as well as how to properly and safely select and use electrical tools. Attendees will develop an understanding of various electrical tools and their specific uses.

Conduit Bending**

Learn the bending characteristics of the various conduits used in the electrical trade. Apply the bending theory required to calculate, layout, and perform a variety of the most common bends used in the electrical trade. Demonstrate proficiency by bending conduit using hand benders and ratchet mechanical benders. Successful completion of this course satisfies 12 continuing education requirements for Wisconsin electricians.

Advanced Conduit Bending**

Conduit bending is an integral part of the electrician's job. After a brief review of the bending characteristics of the various conduits used in the electrical trade, as well as the theory required to calculate, layout, and perform a variety of the most common bends, participants advance to using industry-standard electric and hydraulic benders to make larger radius segment bends. Further instruction revolves around using PVC heaters, which increase productivity. Successful completion of this course satisfies 12 continuing education requirements for Wisconsin electricians.

Wire Pathways**

Learn the proper use of professional tools for creating cabling pathways through commercial and residential framing materials and for ingress into metal panels and control boxes. Discuss the advantages and proper use of the latest professional wire pathway-making solutions used in the trades. Learn how choosing the "right tool for the job" impacts tool life, workmanship, and productivity. Successful completion of this course satisfies 12 continuing education requirements for Wisconsin electricians.

**This course satisfies Wisconsin electrician continuing education credit requirements.

CONSTRUCTION

Construction Tech Certificate

Building Materials & Construction Methods

In this workshop, participants become familiar with common building materials and construction methods for residential and commercial construction. Participants will gain a basic understanding of soils, aggregates, pipes, cements, concrete, asphalt, steel, wood, and masonry as they relate to construction.

Survey Basics

This workshop provides participants with an introduction to the basics of surveying. Topics covered include pacing/taping, level loops, basic surveying terminology, units of measure, and deeds.

Conflict Resolution

Participants learn to recognize, approach, and defuse various confrontational situations on the construction site and in the workplace.

Construction Project Management

Construction Estimating

This workshop teaches participants to prepare construction cost estimates based on cost of materials, labor, and equipment. Time and cost components are also covered. The critical path method is used to evaluate unit production cost and project scheduling.

Residential Code

This workshop examines the Wisconsin Uniform Dwelling Code and its application to residential design.

Commercial Code

This workshop examines the Wisconsin Commercial Building Code and its application to commercial design.

3D CAD Classes

AutoCAD for Construction

Learn the basics of Computer Aided Design (CAD) for construction using AutoCAD. Participants develop their CAD skills while working on actual construction-related projects.

3D CAD: Digital Terrain Modeling

This workshop introduces the concepts and creation of Digital Terrain Models (DTM) including the extrapolation of contours, profiles, and cross sections from the DTM using Autodesk Civil 3D software.

3D CAD: Building Information Modeling

This workshop introduces the concepts and creation of Building Information Modeling (BIM) projects, including the extrapolation of schedules, plans, sections, and elevations from the BIM using Autodesk Revit software.

FORKLIFT

Business and Workforce Solutions offers specialized training on the safe operation and maintenance of forklifts. Courses are based on OSHA requirements and open to individuals and companies. Contact us at training@gtc.edu or call 262-898-7484 for details.

INDUSTRY 4.0

Industrial Control Systems/Programmable Logic Controllers

Industrial Control Systems and Programmable Logic Controllers (PLCs) are used in industrial settings to control the manufacturing process. PLCs allow control to be done remotely, with or without human interface, and based on factors that are currently impacting the process. Participants learn the basic concepts of Industrial Control Systems and their applications. Further learning includes hands-on lab experiments, which introduce robotics, programming principles, electronic inputs and outputs, and communication between system components.

Industrial Robotics

This introduction to programming techniques for industrial robots examines "teach pendant programming," which is used to manually program points and move the robot remotely. Programming techniques include I/O, routines, decision-making, six frames of positional operation, and robot communication. Upon successful completion, participants can operate and program industrial robots commonly used in Industry 4.0 operations.

Industrial IoT (Internet of Things)

Learn both theoretical and practical aspects of the IIoT. Investigate the range of sensor actuator devices available, ways in which they communicate and compute, methods for getting information to and from IoT-enabled devices, and ways of visualizing and processing data acquired from the IoT. Participants use hardware, software, and industry tools to construct a sensor network within an existing system.

Mechatronics

Mechatronics is the combination of mechanical engineering, electrical engineering, and computer science -- working together to make something better than any of those disciplines could do on their own. This course examines the individual components, how they work, and how they integrate into systems. Participants gain an understanding of how industry uses mechatronics in advanced manufacturing and the role of the mechatronics technician.

TELECOMMUNICATIONS

Hand Tool Safety (Snap-on)

This workshop is ideal for anyone who uses hand tools. Safety, maintenance, and tool selection are covered. Participants learn about a variety of hand tools and how to properly use them.

Basic Electrical for the Non-Electrician

This course provides an introduction to and overview of basic electrical systems from the perspective of home wiring. Instruction includes discussion on maintaining/installing AC systems, AC system operation, and troubleshooting. Participants also learn to examine diagrams, symbols, and codes.

Basic Electrical Tool Safety (Snap-on)

Learn basic electrical safety and how to properly and safely select and use electrical tools. Attendees will develop an understanding of various electrical tools and their specific uses.

Voice, Data, Video Test and Termination (Greenlee/NC3 Copper)**

Learn the proper use of tools, testers, and applicable standards for terminating and performing wire verification testing on copper communications cabling. Utilize professional grade tools to learn the proper techniques for cutting, stripping, and terminating twisted pair and coaxial cables within the EIA/TIA cabling standards. Participants will successfully complete lab activities including terminating and testing LAN network cabling and coaxial "F type" terminations according to the latest EIA/TIA LAN cabling standards. Successful completion of this course satisfies 12 hours of continuing education requirements for Wisconsin electricians.

Fiber Preparation and Termination (Greenlee/NC3 Fiber)**

Understand the history of fiber optic cabling and the importance of structured cabling standards. Identify various types of fiber optic connectors and their applications. Demonstrate safe and efficient use of fiber optic hand tools, fusion splicers, and the accessories used with fusion-splicing equipment. Successful completion of this course satisfies eight hours of continuing education credit requirements (CEC's) for Wisconsin electricians.

Fiber Testing and Troubleshooting (Greenlee/NC3 Fiber)**

Fiber optics cabling is the core of business today. As network speeds and bandwidth demands increase, fiber optic cabling is critical to our infrastructure. This workshop teaches the safe and efficient use of tools for testing and troubleshooting fiber optic systems. The use of visual fault locations and non-intrusive fiber identification testers is also covered. In accordance with TIA methods A, B, and C, participants learn to use video inspection scopes, optical power meters, and light sources to measure optical loss. Participants earn Greenlee NC3 Fiber Certification for successful completion of this workshop. Successful completion of this course satisfies five hours of continuing education credit requirements (CEC's) for Wisconsin electricians.

Fiber OTDR Theory & Operation**

Optical Time Domain Reflectometers (OTDRs) test and analyze optical fiber transmission quality. Learn principles of OTDR, industry terminology, and how to test fiber optical cabling using this technology. Successful completion of this course satisfies three hours of continuing education credit requirements (CEC's) for Wisconsin electricians.

BICSI IN101 Installer Level I

This six-day course provides entry-level installers with the knowledge they need to terminate various types of copper connectors. Participants learn pathways, spaces, bonding and grounding, fire stopping, and how to choose the correct tool and use the correct methodology for specific tasks. This course also highlights safe practices and procedures as well as professionalism on the worksite.

BICSI IN225 Copper Installer Level II

This course sets a foundation for copper-based cable system installation. Participants learn to read and understand cabling drawings, plans and specifications, and how to interpret the job plan and scope of the work as related to copper installations. Participants also learn how to properly test and troubleshoot copper installations and perform retrofits and upgrades to the existing infrastructure. Also discussed are the impacts different media/materials have on the network and how to work within applicable codes, standards, and best practices.

TELECOM (CONTINUED)

BICSI IN250 Fiber Installer Level II
This course sets a foundation for optical fiber-based cabling systems. Participants learn to interpret drawings, plans, and specifications as well as how to properly test and troubleshoot optical fiber installations. Participants also learn impacts of different media/materials used in the trade.

BICSI TE350 Technician A
Join an elite group of installers who possess this high level of skills training. Take your installation performance to the next level through the study of specialized systems, and advanced copper and optical fiber structured cabling systems. TE350 A is part 1 of a two-part, 40-hour course that provides the necessary skill set for the structured cabling systems technician. An advanced study of copper splicing, testing, and troubleshooting will open this course. A significant amount of course time will cover splicing, testing, and troubleshooting of optical fiber cable. The participant must also take BICSI TE350 B in order to prepare for and take the BICSI hands-on and written exams. This course includes the two and one-half hour written certification test.

BICSI TE350 Technician B
This workshop is a continuation of BICSI TE350 Technician A. Participants must take Section A and Section B to be eligible for certification.

Fire Stopping I
Participants learn the basic concepts of fire and fire stopping for commercial buildings. Successful completion results in Unique Firestop Certificate.

Fire Stopping II
Building on Fire Stopping I, this workshop teaches the selection and installation of fire stopping systems for commercial cabling installations. Participants have the opportunity to earn a FIT Level I Fire Stopping Certificate.

**This course satisfies Wisconsin electrician continuing education credit requirements. The workshops that this relates to are on the previous page.

FAB LAB/ART/DESIGN

Introduction to Fab Lab
This workshop is an introduction to and overview of the Fab Lab, including the Lab's history and origins, its application, implications, and impact on education and the community. The session includes hands-on demonstrations of 3D printing, laser engraving, CNC routing, and vinyl cutting. Participants receive some training on Epilog Laser, Roland Vinyl Cutter, and Dremel 3D Printers. This course qualifies attendees for Fab Lab usage during Open Lab hours during the current semester.

Fab Lab Fundamentals
This in-depth workshop allows participants to create their own projects, focusing on operating Fab Lab equipment and using the software and control programs. Participants make sample projects using laser engraving, vinyl cutting, 3D printing, and are introduced to other Fab Lab accessories, such as electronics soldering, scanners, and digital embroidery machines. This workshop also gives some CNC routing instruction on the Lab's Shopbot (Desktop Max). Fab Lab safety is stressed throughout workshop. This workshop qualifies you for Fab Lab usage during Open Lab hours during the current semester.

Dremel Printer Training
Attendees learn to set up the Dremel 3D40 3D Printer and to process a model for printing.

NC3 Dremel 3D Printer Certification
Learn set-up, operation, and troubleshooting for the Dremel 3D40 Printer. Participants also learn basic CAD in Tinkercad as well as techniques for slicing models for 3D printing. Upon successful completion of the course and a passing grade on the exam, participants receive Dremel Technician Certification.

Roland Vinyl Cutter Training
Attendees learn set-up of the Roland GX24 and Cricut vinyl cutters and then create and design in both Roland's Cut Studio and Cricut Design Spaces software.

CNC Router - Mill Training
Learn the setup and operation of the Shopbot Desktop Max and the Roland MDX 40A Mill. Setup involves an understanding of router basics, machine setup, safety, materials, cutting feeds and speeds, and hold-down strategies. Training also introduces design and toolpathing in VCarve Pro.

2D CAD for Fabricating
Understanding the concepts of 2D CAD is critical to running computer-driven equipment and is instrumental when adding media to your web page or social networks. The software landscape can be overwhelming, and this training gives a brief overview to help you select the software that best suits your needs. This session introduces you to a variety of 2D software and the core concepts for using it with a focus on CorelDRAW and VCarve Pro.

Fab Lab Membership
This refresher workshop updates your membership for Fab Lab usage during Open Lab hours for the current semester. This session reviews safety, standards, lab protocols, new equipment, and other recent additions and changes.

3D Printer Fundamentals
Dive deeper into setting up 3D printers by working on FDM, SLA, and Polyjet Resin printers. This training goes into more detail about different printers, the various processes, and how to adjust and troubleshoot the settings involved with slicing models.

FAB LAB/ART/DESIGN (CONTINUED)

Fab Lab for Instructors
This workshop goes over the basics of running the equipment typically found in Makerspaces and Fab Labs. The areas included are, as per the original MIT Fab Lab Charter: 3D printing, laser engraving, CNC routing, and vinyl cutting and soldering. Participants explore ideas for integrating Fab Lab equipment into the classroom, developing networks and support groups, and implementing cross-platform between instructors. This course is ideal for teachers or anyone interested in exploring Makerspace or Fab Lab Technician work.

Digital Art 4.0
Attendees learn setup of the Roland GX-24 and Cricut vinyl cutters and then create and design in both Roland's Cut Studio and Cricut Design Spaces software.

SAFETY

General & Industry
Hand Tool Safety (Snap-On)
Basic Electrical Tool Safety (Snap-On)
NFPA 70E Electrical Safety in the Workplace
Intro to Robotics Operation and Safety
CPR

Construction Related
OSHA 10 Safety
OSHA 10 Construction
OSHA 30 Safety (Previously Written as OSHA 30 Industry)
OSHA 30 Construction

Leadership

Leadership 101
This course prepares rescue/safety personnel to appropriately deal with the responsibilities of leadership. This course includes leadership traits, issues, written communication skill development, and various leadership assignments.

Leadership Simulations
This course immerses rescue/safety personnel in the supervisory role and provides opportunities to gain experience in properly dealing with personnel-issue challenges.

Blue Card

Blue Card Certification
This course leads successful participants who are rescue/safety personnel to Blue Card Hazard Zone Management Certification. Successful completion of the Blue Card online (non-WTCS) course is required prior to this course.

Blue Card Recertification
This four-hour course leads successful participants who are rescue/safety personnel to Blue Card recertification.

RESCUE

Rope Operations
This 40-hour workshop teaches personnel how to safely conduct basic rope operations. The course focuses on the various knots, rescue hardware, auxiliary equipment, personal protection equipment, rope care and maintenance, and standards governing basic rope rescue operations. Participants learn specific rope rescue operations including anchoring systems, safety belaying systems, Rescue 8 rappelling, bar-rack rappelling, personal belayed rappels (SRT), self-extrication on a rappel system, and patient packaging. Participants are trained in lowering systems rescue techniques, stairwell lowering systems, horizontal Stokes basket operations (with & without an attendant), vertical Stokes basket systems, and scene management.

Rope Technician
This 40-hour workshop teaches personnel various mechanical advantage (MA) systems. The course focuses on MA principles, high point pulley systems, converting systems into lowering systems, and converting 3:1 and 4:1 hauling systems into lowering systems. Specific rope operations include knot passing systems, highline/Telpher systems, Stoke basket highline (with & without attendants), highline rappels, basic ascending systems, and various hauling and lowering systems. Additional training in risk/benefit analysis, scene management, and equipment selection and maintenance is also conducted.

Trench Rescue Operations
This workshop reviews the standards that regulate excavations as well as those that define the specific Job Performance Requirements needed to safely perform in a trench-rescue to the Operations level. These standards include OSHA 29 CFR 1926 Subpart P, WI SPS 332.38, NFPA 1670 and NFPA 1006. A combination of lecture and practical evolutions cover trench rescue hazards, collapse mechanics, protective systems, and shoring system design. Case studies of actual local incidents are used to highlight safety, size-up, and decision-making processes needed in trench rescue. Hands-on evolutions include utilization of cutting and building wood shoring, pneumatic shoring in straight trenches, spoil removal, and patient packaging. Special emphasis is placed on command responsibilities of the Incident Commander, Safety Officer, and Rescue Operations Team Leader.

Trench Rescue Technician
This workshop reviews the specific standards and Job Performance Requirements covered in the Trench Rescue Operations workshop. These standards include OSHA 29 CFR 1926 Subpart P, WI SPS 332.38, NFPA 1670 and NFPA 1006. A combination of lecture and practical evolutions are used to teach trench rescue hazards, collapse mechanics, protective systems, and shoring system design. A more in-depth look at actual local incidents is used to prepare rescuers for complicated rescues. Hands-on evolutions include utilization of pneumatic shoring in straight and intersecting trenches, spoil removal, and patient packaging. Special emphasis is placed on command responsibilities of the Incident Commander, Safety Officer, and Rescue Operations Team Leader.

RESCUE (CONTINUED)

Trench Rescue Combined Operations/Technician
This extended workshop reviews the standards that regulate excavations as well as those that define the specific Job Performance Requirements needed to safely perform in a trench rescue at the Operations and Technician level. These standards include OSHA 29 CFR 1926 Subpart P, WI SPS 332.38, NFPA 1670 and NFPA 1006. A combination of lecture and practical evolutions cover trench rescue hazards, collapse mechanics, protective systems, and shoring system design. Case studies of actual local incidents are used to highlight safety, size-up, and decision-making processes needed in trench rescue. Hands-on evolutions include utilization of pneumatic shoring in straight and intersecting trenches, spoil removal, and patient packaging. Special emphasis is placed on command responsibilities of the Incident Commander, Safety Officer, and Rescue Operations Team Leader.

Structural Collapse Operations
This workshop covers the specific Job Performance Requirements in NFPA 1670 and NFPA 1006 as they relate to structural collapse operations. The Operations level addresses collapses in light frame and ordinary construction. A combination of lecture and practical evolutions cover structural collapse hazards, size up and marking systems, collapse mechanics, protective systems, and shoring system design. Case studies of actual incidents are used to highlight safety, size-up, and decision-making processes needed in structural collapse rescue. Hands-on evolutions include cutting and building wood shoring, manufactured shoring use, removal of debris, tunneling, and patient packaging. Special emphasis is placed on command responsibilities of the Incident Commander, Safety Officer, and Rescue Operations Team Leader.

Structural Collapse Technician
This workshop covers the specific Job Performance Requirements in NFPA 1670 and NFPA 1006 as they relate to structural collapse technician. The Technician level addresses collapses in heavy timber, steel, and concrete construction. A combination of lecture and practical evolutions review structural collapse hazards, size up and marking systems, collapse mechanics, protective systems, and shoring system design. In addition, cutting, lifting, and moving of structural steel and concrete is taught. Case studies of actual incidents are used to highlight safety, size-up, and decision-making processes needed in structural collapse rescue. Hands-on evolutions include cutting, lifting, and moving structural steel and concrete, tunneling through concrete and heavy debris, building appropriate shoring systems, and patient packaging. Special emphasis is placed on command responsibilities of the Incident Commander, Safety Officer, and Rescue Operations Team Leader.

Confined Space Rescue Operations
This workshop reviews the standards that regulate all types of confined spaces as well as those that define the specific Job Performance Requirements needed to safely perform in a confined space rescue at the Operations level. These standards include OSHA 29 CFR 1910.146, WI SPS 332.38, NFPA 1670 and NFPA 1006. A combination of lecture and practical evolutions cover the definitions of confined spaces, hazards of confined spaces, air monitoring, rope systems, and supplied air systems. Case studies of actual local incidents are used to highlight safety, size-up, and decision-making processes needed in confined space rescue. Hands-on evolutions include Permit Required Confined Space scenarios, entries into vertical and horizontal spaces, air monitoring, ventilation, use of supplied-air breathing apparatus (SABA), and patient packaging. Special emphasis is placed on command responsibilities of the Incident Commander, Safety Officer, and Rescue Operations Team Leader.

Confined Space Rescue Technician
This workshop reviews specific standards and Job Performance Requirements covered in the Confined Space Rescue Operations workshop. These standards include OSHA 29 CFR 1910.146, WI SPS 332.38, NFPA 1670 and NFPA 1006. A combination of lecture and practical evolutions review the definitions of confined spaces, hazards of confined spaces, air monitoring, rope systems, and supplied-air systems. Hands-on evolutions include Permit Required Confined Space scenarios, entries into vertical and horizontal spaces with hazardous environments, rescue from a space with entanglement hazards, air monitoring, ventilation, use of supplied-air breathing apparatus (SABA), and patient packaging involving spinal injuries. Special emphasis is placed on command responsibilities of the Incident Commander, Safety Officer, and Rescue Operations Team Leader.

Confined Space Rescue Combined Operations/Technician
This extended workshop reviews the standards that regulate all types of confined spaces as well as those that define the specific Job Performance Requirements needed to safely perform in a confined space rescue at the Operations and Technician level. These standards include OSHA 29 CFR 1910.146, WI SPS 332.38, NFPA 1670 and NFPA 1006. A combination of lecture and practical evolutions cover the definitions of confined spaces, hazards of confined spaces, air monitoring, rope systems, and supplied air systems. Case studies of actual local incidents are used to highlight safety, size-up, and decision-making processes needed in confined space rescue. Hands-on evolutions include Permit Required Confined Space scenarios, entries into vertical and horizontal spaces, rescues from a space with entanglement hazards and hazardous environments, air monitoring, ventilation, use of supplied-air breathing apparatus (SABA), and patient packaging including some with spinal injuries. Special emphasis is placed on command responsibilities of the Incident Commander, Safety Officer, and Rescue Operations Team Leader.

TRANSPORTATION
Department of Transportation (DOT)

DOT Annual Inspection Certificate
This certification training covers all facets of commercial motor vehicle inspection and maintenance as stipulated in the Federal Motor Carrier Safety Regulations (FMCSR). This course includes comprehensive training in the Code of Federal Regulations Title 49, Parts 390, 393, and 396 of the FMCSR. Participants who successfully complete the course meet the DOT regulations to become a DOT Inspector.

Brake Inspector Certificate
This course focuses on periodic brake inspection requirements as stated by the Federal Motor Carrier Safety Administration (FMCSA). Students learn vehicle maintenance and record keeping requirements, how to compare annual inspection criteria with CVSA out-of-service criteria, the minimum periodic inspection standards (Appendix G), and how to explain a motor carrier's responsibility to qualify its vehicle and brake inspectors.

Snap-on Certifications

Snap-on Diagnostic Certification

This course is designed to create power users -- individuals who can efficiently and effectively utilize 90% or greater of all available features found on the different Snap-on Verus tools. Course includes diagnostic research and repair information, scanner navigation, and Lab Scope operation. Training covers basic navigation through effective use of the Fast-Track Troubleshooter, SureTrack Data, Component Test Meter, PID Triggers, and glitch capture techniques as participants demonstrate these techniques using the supplied individual diagnostic tools. Participants are also welcome to bring their own personal tools. Individual hands-on attention is a cornerstone to this certification program. Learn by doing!

Snap-on Advanced Diagnostics Certification

Participants dive deeper into the functionality of the Verus/Zeus tools, including discussion on the use of ignition and transducer accessories used during the diagnostic process. The Verus/Zeus tools used in conjunction with ShopKey Pro will be applied to multiple diagnostic situations using various ATech training boards to simulate faulty vehicle systems. An interactive and hands-on approach to operating the Scanner and Lab Scope, along with integrated service information is used to guide participants through diagnostic scenarios. Emphasis is placed on diagnostic strategy, utilizing a systematic procedure to tackle any diagnostic issue. Successful completion of ShopKey Pro and the Verus/Zeus Scanner and Lab Scope certification course is highly recommended before taking Advanced Diagnostics.

Snap-on ShopKey Pro & SureTrack Certification

Time is money, and the faster and more efficiently a technician can find and utilize service information, the more profitable the shop will be. Dive deep into the ShopKey Pro & SureTrack service information program and learn all the tips and tricks that will help make you a better and more profitable technician. From quicker searches and more accurate results to integrating SureTrack data to speed up diagnosis, few technicians take the time to learn and leverage these resources to the fullest extent, which inadvertently wastes time and money and leads to frustration. Get the most out of your service information investment – become ShopKey Pro & SureTrack Certified.

Snap-on Torque Certification

This course has two key objectives. First, participants will develop a new appreciation for the complexities behind the proper tightening of fasteners. Second, participants will be trained, tested, and certified on various torque instruments, ensuring proper tool set-up and physical technique. This course begins by examining the relationship between torque and clamping pressure and how external factors can greatly affect this relationship, thus causing a fastened joint to fail prematurely. This concept is discovered by the participants through a number of lab activities and demonstrations which illustrate how external factors affect torque and clamping pressure. Participants then demonstrate proficiency on a number of mechanical and electrical torque tools developed by Snap-on. Students will get instant "actual torque applied" feedback while using each tool on a calibration machine, allowing them to hone their technique and become both accurate and precise in the use of each tool.

Snap-on Wheel Services & Alignment

This course is designed to create power users -- individuals who can efficiently and effectively utilize 90% or greater of all available features found on the RFV 2000 or B2000P Wheel Balancer, EHP System V Tire Changer, and Pro42 Alignment Software. Details from basic navigation through effective use of the diagnostic software, calibration menus, and use of all accessories are thoroughly explained while each student demonstrates these techniques using each piece of equipment. The Pro42 software instruction is delivered on a laptop loaded with the Pro42 alignment software for each student. The Pro42 class includes EZstream technology training for vehicles that require OBD connection to complete alignment. The course also covers optional scan tool use.

Snap-on Multimeter

This course is designed to create power users -- individuals who can efficiently and effectively utilize 90% or greater of all available features found on the multimeter equipment. Through the use of a demonstration signal generator board, all of the electrical measurement features and options will be performed by the participant. Learn how to perform initial safety and reliability checks on the meter using the meter itself, followed by common voltage, amperage, and resistances measurements with a focus on meter set-up and connection to avoid overload and blown fuses in the future. The advanced features of the meter will be explored including recording values, temperature, frequency, and other special settings dependent on the actual meter model used in the training.

Snap-on Starrett Precision Measurement Instruments Certification

This course gives participants a thorough understanding of the fundamentals for working with precision measurement equipment. The course covers proper inspection, operation, handling, adjustments, and techniques. Both SAE and Metric Equipment is covered including steel rules, feeler gauges, precision straight edge, calipers, inside and outside micrometers, small-hole gauges, telescoping gauges, bore gages, and dial indicators.

Snap-on Pro-Cut Rotor Matching Master Technician Certification

From the recognized leader in on-car brake lathing systems, the Pro-cut Rotor Matching Master Technician Certification teaches technicians to diagnose, correct, and avoid common brake problems associated with today's precisely engineered vehicles. Upon successful completion, participants will be certified as Master Rotor Matching Technicians, a widely recognized endorsement of expertise and skill.

Snap-on Battery Starting and Charging Certification

This hands-on course teaches the fundamentals of batteries: charging and charging system diagnostics, jump-starting, and how to safely and effectively use jump-start tools and related service equipment.

Leadership/Supervisory Management

Leadership/Supervisory Management
Don't want to rely on an off-the-shelf solution to your unique needs? Let our trained experts design customized solutions to your leadership, supervisory management, and organizational development challenges.

Supervising the Multigenerational Workplace
As the face and composition of today's workforce continues to change, so does the role of the supervisor. This workshop examines how generational issues are changing workforce dynamics and how supervisors can effectively guide teams, which may consist of five generations of workers and greater diversity and motivations than we have ever seen in the workplace. The training goes deeper than managing people of different ages, it examines the innate differences between generations and how to work with and build cohesiveness among these diverse groups and individuals.

Critical Thinking & Problem Solving
If your favorite problem-solving tool is a coin flip, this session is for you. This workshop examines the basics of problem solving and looks at several problem-solving processes. Participants will learn how to write an effective problem statement, briefly examine data and data tools associated with problems, and ultimately examine and learn the process to come to a decision. Critical thought process and examination of cognitive bias in the decision-making process helps individuals formulate better, more inclusive decisions on the job.

Conflict Resolution Tips & Techniques
Develop the skills necessary to be a resource for your company and increase your employability by being a conflict resolution expert. Conflict resolution skills are valuable in everyone's personal and professional lives. This course explores different strategies that work in different situations. Students learn techniques that will increase the ability to get coworkers and friends to get along better. Resolved conflict makes everyone's life better. Join this course and make the world a better place.

Leadership in the Age of Social Media
Have you ever looked at your employee's (or manager's) Facebook page and wondered what they were thinking -- or why you weren't invited? This workshop examines the roles of leadership and human resources in the age of social media. The session starts with a quick look at the human resources issues around social media and then examines the motivations behind what drives employees to post, how leaders should act or react, and how to channel social media toward productive use in an organization.

Time Management
You start your day with great intentions but end it wondering where the time went. Stop beating yourself up and start prioritizing your day. This participative session starts with building awareness that how you spend your time is based on what is important to you. Students will learn to track time in blocks, decide what is most important, and deal with those tasks first. Your time is your most important currency, start spending it wisely!

OFFICE/BUSINESS TECHNOLOGY BUSINESS SOFTWARE

Word (Beginning)
This 8-hour workshop is designed for individuals with some computer skills and helps novice Word-users more efficient in editing and formatting basic documents. Participants will learn a variety of shortcuts as well as how to turn simple documents into professional-looking documents. The workshop focuses on basic word processing terminology and editing; basic formatting of text and paragraphs; basic insertion and formatting of tables; basic page setup and printing options; and basic insertion and formatting of a variety of objects such as shapes, pictures, hyperlinks, WordArt, and symbols.

Word (Intermediate)
Upon completion of this 8-hour workshop, participants will gain efficiency in creating, editing, and formatting multi-page documents. Participants will also learn how to format text, paragraphs, whole pages, and multi-page documents; mail merging options; and options for inserting and formatting of a variety of objects such as SmartArt, Quick Parts, and drop cap.

Word (Advanced)
In this 8-hour workshop, participants will learn the advanced concepts of recording and running simple macros; creating and using forms and controls; and using and saving templates. Upon completion, participants will have gained efficiency in MS Word and be more in command of advanced concepts for designing professional-looking documents.

Excel 1 (Basic)
This 8-hour workshop is designed for individuals with basic computer skills. Participants will learn basic spreadsheet terminology and editing; basic functions such as Sum, Average, Min, Max and Count; basic spreadsheet formatting such as changing font, alignment, number, and cell styles; basic charting tools; and basic page setup and printing options. Upon completion, participants will be more efficient at using shortcuts; creating, editing, and navigating a basic spreadsheet; and performing simple calculations.

Excel 2 (Basic & Intermediate)
In this 8-hour workshop, participants will gain efficiencies and learn shortcuts to perform a variety of spreadsheet functions while learning to format and analyze data. Participants will learn functions to format text including Abs, Substitute, Upper, Lower, Trim, and Concat; calculations using absolute references and order of operation; basic logical functions such as: If, Sumif, and Countif; named ranges; and basic statistical and date/time functions such as Small, Large, Rank, Now, Today, and Days.

Excel 3 (Intermediate)
Upon completion of this 8-hour workshop, participants will be able to better navigate and create relationships in large worksheets and between multiple worksheets. Participants will also be able to better analyze and organize large amounts of data and to set data entry restrictions. Participants will learn 3D and external references and use in formulas; grouping and subtotals; sorting and applying filters on data; data validation and restriction; logical functions such as nested IF functions; special formatting such as table styles and sparklines; and paste special options.

PivotTables and PivotCharts

In this 2-hour workshop, participants will gain efficiencies by learning to analyze and organize data through PivotTables and PivotCharts. Participants will learn to create and modify PivotTables, create and modify PivotCharts, and filter data using timelines and slicers.

LOOKUP functions

Upon completion of this 2-hour workshop, participants will be able to use LOOKUP functions to lookup and retrieve pieces of data from a dataset, combine data from 2 or more tables, and classify/categorize data. Participants will learn the use: VLOOKUP and HLOOKUP functions as well as MATCH and INDEX functions

PowerPoint Beginning

This 8-hour workshop is designed for individuals with basic computer skills. Participants will gain efficiencies while learning to create and edit professional-looking presentations. Participants will learn basic presentation terminology and editing; basic slide layout; slide creation and insertion from other files; basic presentation formatting using font, paragraph, and drawing tools; basic insertion and formatting of a variety of objects such as shapes, pictures, WordArt, symbols, tables, and charts; basic slideshow settings such as transitions and animation; and basic page setup and printing options.

PowerPoint Intermediate

During this 8-hour workshop, participants will gain efficiencies while learning to create and edit professional-looking presentations. Participants will learn to insert and format a variety of objects such as audio, video, SmartArt, and hyperlinks; organize slides with sections; use advanced slideshow settings; customize templates and master slides; and use advanced saving and printing options.

Access Beginning

During this 8-hour workshop, participants will gain efficiencies in creating, navigating, and editing a simple database. Participants will learn basic database management terminology and editing; basic data entry rules; design and creation of tables including data entry of fields and records; basic sorts, filters, and calculations on data; and design and purpose of simple queries, forms, and reports.

Access Intermediate

During this 8-hour workshop, participants will gain an understanding of relationships between database objects while learning efficiencies for analyzing and restricting data. Participants will learn about data validation and restriction on fields and records; database relationships including joining tables and queries; design and purpose of subdatasheets; object dependencies and object navigation tools; design and purpose of more complex queries and forms; and calculations in many objects including tables, queries, and forms.

Access Advanced

During this 8-hour workshop, participants will learn advanced concepts to help design useful databases in MS Access as well as to better analyze data through a variety of database tools. Participants will learn about design and purpose of more complex reports; outlines and calculations on reports; design and purpose of switchboards; macro recording of simple tasks; mail merging options; and data normalization.

CULINARY

ServSafe Manager Live Review & Exam

This single-day session blends lecture, video, and activities to help participants study and review for the ServSafe Manager Exam, which will be administered at the end of the session. The workshop fee includes the most current edition of the ServSafe Manager's Book, lunch, live review session, and all exam fees.

Baked Goods for Gluten Free

Whether you are cooking gluten-free because you want to or because you need to, this course will give you the confidence to prepare easy and delicious gluten-free baked goods. Learn the basics of gluten-free baking and build skills that will last a lifetime. Workshop consists of demo, hands-on baking in our state-of-the-art kitchen, recipe and story sharing, and tasting of our products. Workshop fee includes all ingredients, and you will take home what you bake.

Basic Pie Crust and Pie Fillings

Pie is an iconic American dessert, and there are few kitchen projects as rewarding as baking a beautiful and delicious pie. The best pies start with a flaky homemade crust, which is a lot easier to make than most people believe. Participants learn the lifetime skills of making and rolling pie dough by hand, making crust, choosing great tasting fruit, and tips and tricks to bake picture-perfect pies! Workshop includes a nine-inch pie pan, all ingredients, and recipes.

Cheesecakes

Making a perfect cheesecake does not have to be intimidating. In this workshop, you will learn to make delicious and beautiful cheesecakes using one simple recipe that can be adapted to please most any pallet. In our state-of-the-art kitchen, participants learn to make the crust and filling as well as techniques for cooling and storing cheesecakes. Share stories and recipes and take home what you make! Workshop fee includes ingredients.

Essential Knife Skills

Gain confidence at the cutting board with the chef's most important tool -- the knife. Join us as our expert instructor leads participants as they hone existing knife skills and practice fundamental cuts for vegetables: cut, dice, brunoise, batonnet, and julienne. Participants will also learn how to select the best knife for the job and learn tips for keeping cutlery sharp and well maintained.

BARBER & COSMETOLOGY

Booth Renting Module 1 - Getting Ready to Rent a Booth
Are you getting ready to rent a booth? This workshop helps you prepare for that big step. You will learn about estimating expenses, determining how much to charge clients, calculating profit and loss, building a customer base, and understanding the ratio between number of clients and income. The goal is to succeed right off the bat, and this workshop helps set participants on the right path for success. Workshop participants must have a Barbering/Cosmetology, Nail Tech, Esthetician, or Massage Therapy license to enroll.

Booth Renting Module 2 - Ready to Rent
This workshop builds on Module 1 and helps participants know how to find the right salon, how much to pay for their space, and how to negotiate. This workshop looks at contracts, business insurance, credit cards, and provides links and the paperwork necessary for business licensing.

Booth Renting Module 3 - Financial Responsibility
This workshop is a toolbox for those who are renting or planning to rent a booth. You will get up-to-date tax information, learn what you can deduct, learn about various apps that will help you track financials and calculate profit and loss, and learn how to effectively blog and how to set up blogging accounts for your business.

Vintage Barber**
This course is designed for state-licensed barbers and cosmetologists or students enrolled in Cosmetology or Barbering courses. Focus is on the basic skills and techniques of the vintage barber, marrying old school technology with today's modern trends. Emphasis is placed on safety and sanitation in the workplace, terminology and the purpose of multiple tools and products of the trade and techniques for using them. Styles examined include tapering, afro cutting, and afro edging.

The Art of Shaving**
This six-hour workshop covers the classic 14 specific strokes to a facial shave. The course is designed for state-licensed barbers and cosmetologists or students enrolled in Cosmetology or Barbering courses who have little or no experience in straight-razor shaving. Participants learn the different positions and strokes in rezoning as well as infection control and safe shave practices.

Fading Fundamentals**
This workshop focuses on tapers and the art of fading and is designed for state-licensed barbers and cosmetologists or students enrolled in Cosmetology or Barbering courses. Attendees learn techniques using the clipper and detail trimmers for creating low, medium, and high bald fades. Safety in the workplace as well as identifying proper hair design to fit the face shape are also taught.

**Workshop fee includes mannequin head and disposable razor. Participants must provide their own personal trimmer, clippers with guards, and thinning shears.

CERTIFICATIONS

BICSI Certifications
BICSI IN101 Installer Level I
BICSI IN225 Copper Installer Level II
BICSI IN250 Fiber Installer Level II
BICSI TE350 Technician A
BICSI TE350 Technician B

Blue Card
Blue Card Certification
Blue Card Recertification

Snap-on Diagnostics
Snap-on Diagnostic Certification
Snap-on Advanced Diagnostics Certification
Snap-on ShopKey Pro & SureTrack Certification
Snap-on Torque Certification
Snap-on Wheel Services & Alignment
Snap-on Multimeter
Snap-on Starrett Precision Measurement Instruments Certification
Snap-on Pro-Cut Rotor Matching Master Technician Certification
Snap-on Battery Starting and Charging Certification

Transportation-Related Certificates
DOT Annual Inspection Certificate
Brake Inspector Certificate

Lean and Six Sigma
Lean Operations Certificate Program
Lean Six Sigma Green Belt
Lean Six Sigma Black Belt

Wisconsin Structural Welding Certifications
Shielded Metal Arc Welding (SMAW)
Gas Arc Welding (GMAW)
Flux Core Welding (FCAW)

Advanced Leadership Certificate Program

"BWS has done a great job coming in and helping us identify specifically what training will meet our evolving needs and then tailoring the training to meet those needs."

-Waylon Gross, Workforce Development & Training Program Manager, Kenall Manufacturing Co.

"The BWS training is bridging a gap for our company. I know that we could take the time to develop some internal training and educate from within but the fact is I have a lot on my plate and so does our HR Manager."

- Jason Price, Director of Engineering and Support Technology, Swiss-Tech, LLC

"Gateway helped us develop curriculum and train in GD&T. We couldn't have done that internally. The training helped strengthen our expertise in this area and showed the employees that we're investing in them."

-Chad Ryshkus, Director of Marketing and Business Development, MedTorque, Inc

"People don't intend to do poor quality. It's all about process, it's not about people. The Gateway training helped us develop our leaders."

-Joe Mierzejewski, General Manager, Bradshaw Medical

"Having an outsider was crucial to gaining an outside perspective to help observe and identify gaps and opportunities within our business and to develop the foundation for a cohesive team."

-Kurt Penn, CEO, Good Food Groups

"My advice? Pick up the phone and call Business and Workforce Solutions. Meet with them and find out how they can benefit your organization. They are one of our favorite business partners and were instrumental in our move to Kenosha."

-Adrienne Cramer, Director Human Resources, Kenall Manufacturing Co

GATEWAY TECHNICAL COLLEGE

gtc.edu/solutions