



**Schoolcraft
College®**

WORKFORCE TRAINING SOLUTIONS

Course Catalog

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Welcome to the Workforce Training Solutions Course Catalog – your gateway to custom, cost-effective and convenient corporate learning.

Our highly interactive, hands-on offerings can help your workforce acquire new skills and competencies, boost morale and positively impact your bottom line. Our short-term courses (generally 1–5 days) are taught by seasoned professionals working in the corporate space.

These high-impact classes are customized based upon your workforce needs and time frame and most can be offered online. If you are interested in remote learning, contact us!

See something you need, call us today at 734-462-4438. Don't see something you want, call us and we'll partner with you to create it!

Browse our Catalog—and visit us frequently—we are always adding new offerings!

— *Workforce Training Solutions*





Category

Course Name

Leadership Academy Core Classes

(may be selected individually or as a group)

- 360° Leadership Assessment
- Building High Performing Teams
- Essential Skills for Leaders
- Managers to Leaders
- Coaching Skills for Leaders
- Social-Emotional Intelligence
- Resilient Leadership
- Individual Coaching (Optional)

Leadership

Communication

- Communication Skills for Leaders
- The Power of Influence and Persuasion
- Presentation Skills for Maximum Impact
- Team Communication

Customer Service

- Wowing the Customer

All courses are available online unless designated by this symbol: 





<i>Category</i>	<i>Course Name</i>
Leadership (Cont.)	
Leadership & Leadership Transition	Business Reality 101™ for Manufacturing
	Leadership Transition Facilitation
	Strategic Leadership
Negotiation	The Power of Influence and Persuasion
Problem Solving	Conflict Management
	Problem Solving and Decision Making
	Process Mapping
Professional Branding	Branding: Create and Develop a Professional Brand
Project Management	Certification Preparation for Project Management Professional (PMP)
	Program and Risk Management
	Project Management

All courses are available online unless designated by this symbol: 





<i>Category</i>	<i>Course Name</i>
Leadership (Cont.)	
Simulations	Talent Reality 101™ Simulation
Talent Management	Deterring Sexual Harassment in the Workplace Course
	Diversity and Inclusion
	Performance Evaluations “How To”
Team Development	Team Communication
	Working in Virtual Teams

All courses are available online unless designated by this symbol: 





Category

Course Name

Engineering and Manufacturing

Engineering Tools and Methods

Advanced Product Quality Planning (APQP)

Design for Manufacturing and Assembly (DFMA)

Design for Six Sigma

Design Reviews

Failure Mode and Effects Analysis (FMEA)–Product and Process

Failure Mode and Effects Analysis (FMEA) and Control Plans

Fault Tree/Success Tree Analysis

Geometric Dimensioning and Tolerancing (GD&T)

Production Part Approval Process (PPAP)

Programmable Logic Controllers (PLC)

Quality Function Deployment

Statistical Process Control (SPC)

Tolerance Stack-Up Analysis

All courses are available online unless designated by this symbol: 





Category

Course Name

Engineering and Manufacturing

Industrial Readiness

Industrial Readiness Machine Tool
Blueprint Reading

Industrial Readiness Shop Arithmetic

Industrial Readiness
Trade-Related Preparation

Manufacturing

Compressed Air Dynamics

Lockout Tagout Materials

Materials Management Fundamentals

Metallurgy Heat Treatment

Motor Control

Pneumatics

Safe Electrical Fundamentals

Tool Room Safety

**Occupational
Safety and Health
Administration (OSHA)**

OSHA 10 for General Industry

OSHA 30 for Construction

OSHA 30 for General Industry

OSHA Injury and Illness
Recordkeeping Forms 300, 300A, 301

Plastics

Plastic Technology Academy

All courses are available online unless designated by this symbol: 





Category

Course Name

Engineering and Manufacturing

**Print and Instrument
Reading and Technical
Writing**

Mechanical Drawing and
Blueprint Reading

Metrology: Reading and Using
Measuring Tools

Piping and Instrumentation Diagrams
(P&ID) Print Reading Fundamentals

Print Reading (with GD&T) and
Calipers—Introduction

Technical Writing

Metallography

Materials Properties and Testing

Process Improvement

Global 8 D Problem Solving

All courses are available online unless designated by this symbol: 





<i>Category</i>	<i>Course Name</i>
Engineering and Manufacturing	
Quality	Quality – ISO 14001: 2015 Management Transition Training
	Quality – ISO 14001:2015 Internal Auditing
Robotics	Robotic Electrical – FANUC
	Robotic Welding Operator

All courses are available online unless designated by this symbol: 





Category

Course Name

Trades

Computer Numerical Control (CNC)

Computer Numerical Control (CNC) Operator-Boot Camp

Computer Numerical Control (CNC) Programming

Welding

Schoolcraft College is an American Welding Society (AWS) Accredited Test Facility

Welding Assessment–Structural

Welding Fabrication & Safety–Basics

Flux Cored Arc (FCAW) Welding

Gas Metal Arc Welding (GMAW) Fundamentals

Gas Metal Arc Welding (GMAW)–Stainless

Welding Introduction

Welding—Pipe Fitting



All courses are available online unless designated by this symbol: 





<i>Category</i>	<i>Course Name</i>
Language	
Language	English as a Second Language
	Basic Business Spanish

All courses are available online unless designated by this symbol: 





Category

Course Name

Industry Specific

Healthcare

Dementia Care for
Healthcare Practitioners

Electrocardiogram (ECG)
Cardiac Monitor Technician Course

All courses are available online unless designated by this symbol: 





Category

Course Name

Information Technology

**Information
Technology**

All levels of Microsoft Office are offered and are customized with client work sample documents used in the training, if desired. Duration varies depending upon the area and can also be tailored based upon the needs of the client.

All courses are available online unless designated by this symbol: 





Course Description:

Every leader has a variety of strengths and areas that need improvement. Development efforts are geared to covering the distance between the current state of skills and competencies, and the desired future state. Through the use of a variety of assessments, a baseline is created, and gaps may emerge that form the basis of individual development. The 360° Leadership Assessment is a multi-source tool that provides a full circle overview of the leader's abilities by gathering information from various perspectives: self, two managers, five direct reports and five peers. The Assessment may be purchased as a stand-alone tool.



Duration:
Variable

Learning Objectives

- ✓ Assess competencies in 18 skill areas
- ✓ Assess gaps in communication, leadership, adaptability, relationships, task management, production, development of others and personal development
- ✓ Provide coaching on skills gaps

The Leadership Development Academy Option

The 360° Assessment is also an optional part of the **Leadership Development Academy**. Assessments are reviewed by an assigned coach and the participant leader prior to the six core classes (Building High Performance Teams, Essential Skills for Leaders, Managers to Leaders, Social-Emotional Intelligence, Coaching Skills for Leaders, and Resilient Leadership). In partnership, they create performance benchmarks, key objectives, goals, and committed outcomes for the remainder of the **Leadership Development Academy**. The 360° Assessment is revisited at the end of the series.





Course Description:

Working in teams is a critical piece of the culture in contemporary organizations. Highly functioning teams are more efficient, more productive, and enjoy higher levels of success.

This course focuses on the fundamentals of team building. Issues such as personality preference styles, group synergy, attitude, perception, trust, and competition are examined, as well as strategies for improving team functioning. Special attention is paid to common blockers that hinder people from working well together.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Describe how highly functioning teams can increase productivity and efficiency
- ✓ Identify the characteristics of excellent team players
- ✓ Apply team communication strategies and techniques
- ✓ Recognize barriers to teamwork Identify personality styles
- ✓ Demonstrate how preferences affect teams and the work environment
- ✓ Identify the differences between managers and leaders



Course Description:

The quality of leadership an employee receives is critical to employee retention, development, and productivity. People leave leaders more often than they leave companies or jobs. Ineffective leadership can cost the company resources, time, and talent. This program is designed to provide new leaders with the knowledge and skills to be highly effective.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Discover how leadership relates to human behavior
- ✓ Identify a personal leadership style
- ✓ Examine leadership blockers
- ✓ Explore different management styles
- ✓ Describe different styles of interaction
- ✓ Build trust
- ✓ Apply strategies and techniques



Course Description:

Managers manage; leaders inspire and motivate. This course focuses on the differences between managing and leading while maintaining consistency in all areas of business operations. Motivation, leadership style, delegation, and fostering a positive work environment are addressed. Emphasis is placed upon building a wide variety of leadership skills.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Identify the differences between managers and leaders
- ✓ Identify team leadership styles
- ✓ Explore leader behavior
- ✓ Recognize the elements of building positive relationships
- ✓ Discover what motivates people, and how to create a motivating climate
- ✓ Explore ways to delegate
- ✓ Identify levels of trust
- ✓ Explore and understand common approaches to discipline
- ✓ Practice a non-punitive approach to dealing with negative behavior



Course Description:

Employee engagement, motivation, and performance management are critical drivers in high performing organizations. Today's leaders are responsible for achieving corporate objectives by motivating their associates to work at the greatest efficiency, while promoting personal growth.

This program is designed to equip leaders with the essential coaching skills necessary to create a positive environment fostering optimal performance. This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:

1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Establish an environment for being both “directive” and compassionate in order to bring out the best in people
- ✓ Help people through critical learning opportunities
- ✓ Create an environment for open, risk-free communication
- ✓ Develop listening strategies and skills
- ✓ Navigate effectively in difficult or uncomfortable conversations
- ✓ Apply a variety of communication strategies
- ✓ Identify different types of coaching
- ✓ Discover how preference styles affect the coaching relationship



Course Description:

Research has shown that Social-Emotional Intelligence (SEI) contributes more to a person's success in life than raw intelligence (IQ). Leaders and employees with a high SEI are the ones who make the best decisions, manage people more effectively and contribute most to the overall success of the organization. Emphasis is placed on the development of specific skills that strengthen SEI.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Define social-emotional intelligence
- ✓ Recognize the role of SEI in the workplace
- ✓ Describe an SEI model
- ✓ Build an intuitive muscle
- ✓ Better manage emotions
- ✓ Improve social awareness
- ✓ Practice and enhance social and empathy skills
- ✓ Listen and respond with empathy



Course Description:

The Harvard Business Review stated in a recent article: “More than education, more than experience, more than training, a person’s level of resilience will determine who succeeds and who fails.” In a constantly changing workplace, resilience is defined as how well everyday job pressures are perceived and managed, and obstacles overcome. This course focuses on building skills to strengthen a leader’s resiliency.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Identify forces of enterprise-wide change, stress, and resiliency
- ✓ Master new skills and techniques to strengthen resiliency
- ✓ Recognize change as a natural force in organizations
- ✓ Assess personal resiliency quotients
- ✓ Identify reasons people resist change
- ✓ Create a flexible, engaged, and open work environment
- ✓ Effectively manage the change process



Course Description:

Individual Coaching and Group Coaching is available throughout the Leadership Academy. Coaching is often provided intermittently and as a follow-up to classes to emphasize important session learning points and work on personal and group development.



Duration:
Variable

Learning Objectives

At the end of this Leadership Academy, participants will be able to:

- ✓ Work with a personal or group coach
- ✓ Get advice and help on specific issues
- ✓ Focus on personal and team development



Course Description:

The challenges in contemporary organizations require leaders to excel in communication. Basic communication skills are insufficient for working with customers, and leading individuals and teams to optimal performance. This program is designed to equip leaders with the higher-level skills and techniques necessary to initiate and sustain an open, interactive, and productive workplace.

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Describe the verbal and written communication process
- ✓ Identify and avoid communication blockers
- ✓ Avoid manipulation by people with other communication styles
- ✓ Apply several communication choices
- ✓ Master techniques of asking questions, respectful listening, and empathetic responding
- ✓ Follow a specific communication model
- ✓ Create an open, interactive workplace climate



Course Description:

Business leaders require knowledge and skills to both influence and persuade team members to achieve a common objective. This course focuses on strategies to effect team “buy-in” and create a motivating environment conducive to meeting performance goals. Communication, and building rapport are defined and discussed.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Define influence and persuasion
- ✓ Recognize updated neuroscience research related to influence and persuasion
- ✓ Identify 4 bedrock principles
- ✓ Explore ways to build rapport
- ✓ Practice skillful communication
- ✓ Recognize ways to manage emotions
- ✓ Enhance social awareness
- ✓ Manage resistance and objections
- ✓ Practice skills



Course Description:

Experts agree! Death by bullet points, too much text, and tedious presentations can strangle messages, stifle retention, and hamper meeting business objectives. Presenting confidently and effectively is a critical skill for leaders. Presenters can by-pass boring and forgettable by ensuring their message is delivered in an impact-filled presentation.

Great presenters combine visual images, thought-provoking delivery and the ancient art of story to promote deeper connection with the audience and greater engagement with content. Pitching services to a client, persuading management of an idea, or promoting products and services all require powerful presentation skills. This session provides a step-by-step method for creating and delivering memorable presentations.

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Identify the benefits of presenting powerfully for career growth
- ✓ Influence how others perceive you, your skills and talents as a leader
- ✓ Express ideas with impact
- ✓ Toss thinking in “text” and embrace the power of visual and traditional storytelling
- ✓ Explore the seven steps in preparing a presentation
- ✓ Create and deliver an energizing, effective and dynamic presentation



Course Description

This course focuses on the fundamentals of team communication. Issues like group synergy, attitude, rapport building, personality styles, and communication are examined.

Participants identify common blockers that hinder people from working together and communicating effectively. Additionally, participants learn a Four Step Communication Process, as well as how their personalities affect communication. They will practice several specific communication skills and techniques.

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Identify the benefits of working together
- ✓ Experience a team exercise reinforcing course principles
- ✓ Master a Four Step “Adult” Feedback Process
- ✓ Identify personality styles
- ✓ Recognize how personality affects communication
- ✓ Practice several specific communication skills and techniques



Course Description:

Great customer service is the lifeblood of any organization. This highly interactive course focuses on the role of exceptional customer service in driving organizational success. Emphasis is placed on how attitude, communication, and behavior impact customer satisfaction.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:

1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Recognize the value of consistently delivering exceptional customer service
- ✓ Define the characteristics of high-quality customer service
- ✓ Identify customer service “busters” and how they affect the entire organization
- ✓ Avoid being “hooked” by difficult customers
- ✓ Practice skills and techniques designed to manage the difficult customer
- ✓ Master customer service telephone and email etiquette and skills



Course Description:

This simulation course provides an opportunity to explore and practice organization-wide critical thinking and creative problem-solving strategies and techniques to drive overall business success. Attendees participate in a highly-interactive game-board simulation demonstrating business concepts and apply problem-solving and decision-making methodology to company work-related problems.

This course is based upon active and kinesthetic learning techniques with include rich, interactive exercises, gaming, case studies, and applied experiences.



Duration:
1/2–1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Comprehend how a manufacturing company works
- ✓ Explore common business terms
- ✓ Identify company strategies and operations
- ✓ Explore how a manufacturing company makes money and earns profits
- ✓ Realize how each individual or departments' activities impact each other
- ✓ Recognize and understand income statements and balance sheets
- ✓ Appreciate the competitive nature of the business
- ✓ Move from a silo mentality to a corporate mentality
- ✓ Identify how to positive impact profitability from an individual vantage point



Course Description:

Leadership Transition Facilitation is a highly interactive staff facilitation focused on changes occurring in times of leadership transition, or when employees transfer to a new department. This facilitation provides both leaders and staff the opportunity to react to new changes, work together on common agendas, and familiarize themselves with new leader and departmental expectations.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Identify the new leadership vision
- ✓ React to changes in leadership and expectations
- ✓ Explore team expectations
- ✓ Recognize the role of work/personality/behavioral team and individual styles
- ✓ Identify blockers/concerns to successful and effective change
- ✓ Brainstorm solutions for concerns
- ✓ Agree on a common agenda for moving forward



Course Description:

Strategic leadership is critical to business growth and success. Great leaders use a combination of interpersonal, management, strategic and tactical skills. They must also act from the organization's strategic intent and translate the vision into consistent and effective actions.

Focus is on the methodologies needed to provide a roadmap to strategic leadership and establish measurable goals to evaluate success.

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies.



Duration:

1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Create the conditions for resilient leadership
- ✓ Develop a discipline using strategic planning and execution methodologies
- ✓ Create an execution system that organizes and aligns resources with the “plan”
- ✓ Identify the differences between strategic and tactical planning and actions
- ✓ Plan for seamless integration of systems, structures, and people through critical communication skills
- ✓ Manage for breakdowns, interruptions and changes (Murphy's Law)
- ✓ Create an innovative strategy for managing resources



Course Description:

Negative conflict, in a business setting, can be expensive, counter-productive, time consuming, and labor intensive. Constructive conflict can bring about new ideas and problem-solving methods. This program focuses on providing the skills necessary to manage negative conflict and promote positive working relationships.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Recognize how and why conflict exists
- ✓ Realize conflict represents differences in opinions and beliefs
- ✓ Identify personal conflict resolution styles
- ✓ Identify blockers that hinder the resolution process
- ✓ Demonstrate a five (5) step collaborative process
- ✓ Manage emotions
- ✓ Take the perspective of others
- ✓ Deal with negativity



Course Description:

Organization-wide critical thinking, and creative solutions to problems can significantly drive overall business success. This course provides a model and framework for a clear and consistent problem solving and decision-making process. Participants are introduced to multiple strategies, tools, and techniques.

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies. Participants will apply the problem-solving and decision-making methodology to company work-related problems.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Define a problem
- ✓ Apply a problem-solving model
- ✓ Apply a decision-making model
- ✓ Recognize the difference between a problem and a decision
- ✓ Identify problem solving styles
- ✓ Identify personal and team roadblocks to success
- ✓ Develop action plans
- ✓ Practice with problem solving and decision-making tools



Course Description:

Process mapping develops a visual roadmap of a work process – including inputs, decision points, and output requirements. This allows team members to explore how interrelated work tasks lead to current outcomes. When outcomes fall short of desired quality, cost or cycle-time requirements, strategies to improve the process can be applied.

Process Mapping can assist with increasing quality, productivity and profits by reducing uncertainty and waste in work processes. Process maps can also be used as tools for process improvement, training, and documentation.

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Explore methods that allow a visual look at work performed
- ✓ Find ways to improve workplace performance
- ✓ Define job procedures prior to writing standards or other instructions
- ✓ Develop a process map and identify several improvement actions



Course Description:

Great personal brands can boost career potential, and poor brands can actually keep a career from thriving. This session explores the concept of personal and professional branding and its application in the workplace.

A user-friendly five-step model helps maintain a laser-like focus on creating and developing a flexible and versatile professional brand. Areas such as differentiation, perception, value and marketability are explored to catapult a career into the next phase of growth.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Explore the power of professional branding for career growth
- ✓ Identify the critical elements in developing, enhancing and maintaining a brand presence
- ✓ Influence how others perceive you, your skills and talents
- ✓ Discover how to use personal branding to boost social media presence
- ✓ Explore the importance of brand in your job, department and company
- ✓ Take charge of your growth and start to design a personal action plan



Course Description:

A personal brand is a critical component to reputation both in the workplace and in social media networks. Personal branding is the way people market themselves to others, and can help increase positive visibility, and advance career goals. This course focuses on skills needed to create and maintain a clear, consistent personal brand.

Employee retention, especially of the best, most desirable employees, is a key challenge in organizations today. Employee involvement, recognition, advancement, development, and pay based on performance are all essential elements in retaining great producers. The session is designed to provide managers with the knowledge and skills needed to create and maintain a high performing organization through retention strategies

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Recognize the importance of brand creation and create ways to successfully present and promote a personal brand
- ✓ Identify the benefits of a successful brand
- ✓ Avoid obstacles that may hinder the “re-branding” process
- ✓ Use a BRAND model to create a personal brand
- ✓ Link the importance of high social-emotional intelligence to branding
- ✓ Identify why employees stay or leave a company
- ✓ Identify employee engagement strategies and a motivating climate
- ✓ Compare and contrast generational differences



Course Description:

The PMP® Credential was established in 1984 in order to recognize practitioners' skills and knowledge in the field of project management. Passing the **Project Management Professional (PMP®) Certification Exam**, along with experience and education, is necessary to achieve the PMP® Credential.

The PMP exam been updated to 180 questions to meet today's new agile work environment. It focuses on three areas: people, process and business environment.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Apply the fundamental concepts of project management
- ✓ Gain essential knowledge about project management to deliver results for stakeholders and prepare to succeed on the PMP® or CAPM® exam
- ✓ Study and explore topics including management of integration, scope, time, cost, quality human resources, communications, risk and procurement



Course Description:

This course presents a proven eight-step method for program planning and control, including: the definition of customers' requirements, roles of the program team, determination and flowcharting of program tasks, scheduling and costing, quality aspects of critical tasks, and risk management. Easy to grasp, each of the eight steps evolve from common-sense questions that should be answered for any program, regardless of size or complexity.

With shortened development cycles and greater reliance on information in programs, this course emphasizes the value of communication within a program team, between the team and functional areas, and between the team and the program customer. Since the appropriateness of communication vehicles vary depending on purpose and audience, alternative modes of communication and change control are discussed.



Duration:
2 – 2½ Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Explain the eight-step method for program planning and control
- ✓ Implement the eight-step method to improve program outcomes as measured by cost, schedule and quality
- ✓ Make plans and progress visible to team members and to the program customer



Course Description:

Project management is an essential skill in business. This workshop presents a proven 8-step methodology for project planning including: Definition of the customer's requirements, roles of the project team, determination and flowcharting of the project tasks, scheduling and costing, quality aspects of critical tasks, risk management and project communications.

This is an application-intensive program developed around eight common-sense questions that should be answered for all projects regardless of project size or complexity.

This workshop is based upon active learning with rich, interactive exercises and applied experiences. Company products and services are used in the training design and will be customized based upon the needs of the company. The two-day class includes additional opportunities to practice skills.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Use an 8-step Methodology
- ✓ Explore a practical process for organizing, planning, implementing and controlling projects to include:
 1. Define Outcome
 2. Identify Team Members
 3. Determine the Tasks Required
 4. Optimize the Schedule
 5. Optimize the Work Performance
 6. Execute the Plan
 7. Review the Work
 8. Complete the Work



Course Description:

Project Management and Advanced Product Quality Planning (APQP) are two critical techniques used in product development in the mobility industry today.

This seminar will bring these techniques together in an easy to understand format that goes beyond the typical concept of constructing timelines and project planning, by exploring not only the AIAG APQP process, but also specific aspects of PM processes.

Students will gain a solid foundation in the essential principles of Project Management and APQP.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Define the importance of each of the nine Bodies of Project Management Knowledge and the essential components of APQP by Phase
- ✓ Properly evaluate Statement of Requirement, Statement of Work and Work Breakdown structures
- ✓ Formulate an effective meeting summary and action list and conduct an actual Design Review
- ✓ Apply the different timeline methodologies: Milestone, Gantt, Network (PERT) and Critical Path
- ✓ Properly evaluate Statement of Requirement, Statement of Work and Work Breakdown structures
- ✓ Recognize the current U.S. and international legislation and directives which impact today's technology development and manufacturing environment



Course Description:

This simulation course provides an opportunity to explore and practice organization-wide critical thinking and creative problem-solving strategies and techniques to drive overall business success. Attendees participate in a highly-interactive game-board simulation demonstrating business concepts and apply problem-solving and decision-making methodology to company work-related problems.

This course is based upon active and kinesthetic learning techniques with include rich, interactive exercises, gaming, case studies, and applied experiences.



Duration:
½–1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Comprehend how a manufacturing company works: Explore common business terms
- ✓ Identify company strategies and operations
- ✓ Explore how a manufacturing company makes money and earns profits
- ✓ Realize how each individual or departments' activities impact each other
- ✓ Recognize and understand income statements and balance sheets
- ✓ Appreciate the competitive nature of the business
- ✓ Move from a silo mentality to a corporate mentality
- ✓ Identify how to positive impact profitability from an individual vantage point



Course Description:

This simulation provides an opportunity to explore and practice departmental critical thinking and creative human resource problem solving strategies and techniques to drive overall business success. Attendees participate in a highly-interactive game-board simulation demonstrating business concepts and apply problem-solving and decision-making methodology to company work-related problems. The critical areas of Talent Utilization, Processes and Procedures and Culture are addressed.

Financial management is reviewed from the perspective that it costs money to run a department, and how leaders spend and invest those monies can have a significant positive (or negative) impact on results. Focus on only one of the critical areas will lead to a decline in the other two. By attending to all three key critical areas, participants will be able to drive overall positive results.

Additional subjects covered are Onboarding, Talent Acquisition, Retention, Severance, Staff Training, IT Investments, and Continuous Improvement. Participants will also be able to discuss and concretely define those problem areas which can have a negative impact on the business.

This course is based upon active and kinesthetic learning techniques which include several groups of 3–4 individuals comprising a “leadership team” within their department. The course has rich, interactive exercises, gaming, case studies, and applied experiences.



Duration:
½–1 Day

Learning Objectives

At the end of this simulation, participants will be able to:

- ✓ Explore how talent utilization, processes and procedures and culture affect an organization
- ✓ Identify how spending and investing dollars on critical areas can result in success
- ✓ Identify how to positively impact profitability from a human resource vantage point





Course Description

Sexual harassment prevention training is an important element of an organization's overall human resource initiative. This session helps managers follow practical guidelines to prevent sexual harassment within the corporate culture, provide a safe and positive workplace, and reduce potential legal claims.

This program is designed to equip managers with strategies and techniques for creating a culture where sexual harassment is prevented or managed according to guidelines.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
½–1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Recognize the legal definition of sexual harassment
- ✓ Differentiate between situations that satisfy the legal definition, and those that do not
- ✓ Identify reactions to sexual harassment
- ✓ Apply strategies and techniques to prevent sexual harassment
- ✓ Help employees make good choices
- ✓ Create a respectful workforce



Course Description:

Diversity and inclusion are important pieces of an organization's business strategy. Today's businesses are part of the larger global business community, and workplace diversity can drive both competitive advantage and personal growth. Increasing knowledge of diversity can foster greater cultural awareness as well as tap into the strengths and talents of the entire workforce.

This program focuses on developing the ability to embrace diversity, and effectively assess and respond to diversity-driven situations.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
½–1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Define diversity
- ✓ Identify the components of a diverse workforce
- ✓ Recognize diversity challenges
- ✓ Reflect on personal awareness of cultural diversity
- ✓ Apply a four (4) step model to effectively communicate in diversity-driven situations



Course Description:

Performance evaluations provide a formal opportunity for the supervisor and employee to meet and communicate. They are critical in assessing the employee’s strengths as well as providing positive constructive criticism to enhance job performance. Additionally, performance evaluations serve as an avenue for further career development.

This course focuses on the “how to” of meeting with the employee and providing feedback, coaching, and talent development.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Set up a performance evaluation meeting
- ✓ Provide communication based on specific, observable results
- ✓ Recognize and document the employee’s strengths and achievements
- ✓ Reinforce positive performance through coaching and feedback
- ✓ Identify areas where performance improvement is needed
- ✓ Document poor performance that may lead to corrective action
- ✓ Identify career and individual development needs
- ✓ Give the employee an opportunity to comment on his or her performance
- ✓ Help the employee assume accountability for the job and or performance
- ✓ Conduct the performance evaluation in alignment with company goals and objectives



Course Description:

There are currently four generations operating in today's workforce. Contemporary managers and leaders must juggle both the needs of the organization with the varying strengths and weaknesses of generational groups.

The course provides communication, motivation, engagement, and management tools and techniques designed to leverage the leaders' strengths in effectively managing each generation.

Special attention is paid to developing strategies designed to increase productivity through harnessing the power and special attributes of each group.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:

1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Recognize differences between the four generations represented in today's workforce
- ✓ Identify main motivational drivers for each generation
- ✓ Determine specific communication, motivation, and engagement strategies for each group
- ✓ Apply different management approaches
- ✓ Use leadership skills to manage each generation
- ✓ Develop an action plan for bridging the generation gaps



Course Description:

Distributed teams are rapidly becoming common in today's global workplace. Effective teaming from remote locations can be challenging and requires a specific and practical set of tools to maximize success. Maintaining a sustainable competitive advantage involves focusing on the importance of communication and on the use of an array of available technical tools (including Zoom, WebEx and other platforms).

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Assess the effectiveness of the virtual manager, and the remote team member
- ✓ Differentiate between remote and conventional teams
- ✓ Align team processes with best practices
- ✓ Identify technology to maximize team success
- ✓ Create tools and policies for managing and participating in virtual teams



Course Description:

Working in teams is a critical piece of the culture in contemporary organizations. Highly functioning teams are more efficient, more productive, and enjoy higher levels of success.

This course focuses on the fundamentals of team building. Issues such as personality preference styles, group synergy, attitude, perception, trust, and competition are examined, as well as strategies for improving team functioning.

Special attention is paid to common blockers that keep people from working well together.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Identify the characteristics of good team players
- ✓ Identify personality preference styles
- ✓ Demonstrate how preferences affect teams and the work environment
- ✓ Describe how highly functioning teams can increase productivity and efficiency
- ✓ Apply team communication strategies and techniques
- ✓ Recognize barriers to teamwork
- ✓ Identify ways to create a positive team attitude
- ✓ Initiate action plans for improvement



Course Description:

Advanced Product Quality Planning (APQP) is a documented analysis that begins with a team's thoughts concerning requirements that could go wrong and ends with defined actions that are implemented to help prevent and/or better detect problems. This workshop provides key skills required for people involved with new programs and introduces a five-stage process supported by the "Plan-Do-Check-Act" cycle.

APQP methods should be applied early in the development of new product plans, ideally beginning with the RFQ bid response. Aspects of APQP can be applied through manufacturing start-up and process/product changeovers.

This interactive workshop will help participants prevent problems before they become reality. When an efficient process is used to streamline new product or service introductions, the effect is significant resulting in fewer problems and less waste. This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1-2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Define APQP
- ✓ Plan workflow for new production processes
- ✓ Practice with powerful tools and techniques that make work visible
- ✓ Anticipate risk and plan actions that will remove anticipated problems
- ✓ Evaluate the effectiveness of the quality planning effort
- ✓ Implement Control Plan methodology



Course Description:

Design for Manufacturing and Assembly (DFMA), pioneered by Boothroyd and Dewhurst, has been used by many companies around the world to develop creative product designs that use optimal manufacturing and assembly processes. Correctly applied, DFMA analysis leads to significant reductions in production cost, without compromising product time-to-market goals, functionality, quality, serviceability, or other attributes.

This course will include information on how DFMA fits in with QFD, Concurrent Engineering, Robust Engineering, and other disciplines.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Perform Design for Assembly (DFA) Analysis using the BDI Manual (Worksheet) Method
- ✓ Perform DFM Analysis (manufacturing cost estimation)
- ✓ Apply Design for Service (DFS) Principles
- ✓ Reduce company production costs by analyzing and eliminating the factors that greatly affect the time, cost, and quality of manufacturing, assembly and service processes
- ✓ Utilize effective analysis, brainstorming, and trade-off techniques for redesigning assemblies and subassemblies



Course Description:

This activity-based course showcases the power and utility of this methodology. The purpose of DFSS is to ensure the quality and reliability of new product and process designs in any environment (manufacturing, services, financial, healthcare, research).

Design for Six Sigma (DFSS) is a truly cross-functional undertaking, not the sole responsibility of the product development function. Though statistical design tools are an integral part of this course, the importance of VOC (voice of the customer), financial analysis and supplier selection is also emphasized.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:

3 Days
(time may be customized)

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Compare and contrast DMADV (Define-Measure-Analyze-Verify) and DMAIC (Define-Measure-Analyze-Improve-Control) project opportunities
- ✓ Describe the objective of each DMADV phase
- ✓ Complete a project financial and risk analysis
- ✓ Develop and analyze a Quality Function Deployment
- ✓ Select concepts based on a Pugh Matrix
- ✓ Complete a design scorecard
- ✓ Design and analyze a robust designed experiment
- ✓ Describe the elements of a process and the transactional roadmap
- ✓ Predict output variability using techniques such as Monte Carlo simulations
- ✓ Analyze reliability data
- ✓ Predict service levels based on resource decisions
- ✓ Describe the principles of Design for Manufacturer and Assembly
- ✓ Define Inventory policies based on desired service levels
- ✓ Select appropriate maintenance strategies for products





Course Description:

Design of Experiments (DOE) is a methodology that can be effective for general problem-solving, as well as for improving or optimizing product design and manufacturing processes. Specific applications of DOE include identifying proper design dimensions and tolerances, achieving robust designs, generating predictive math models that describe physical system behavior, and determining ideal manufacturing settings.



Duration:
1-2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Decide whether to run a DOE to solve a problem or optimize a system
- ✓ Select the appropriate DOE experiment type (DOE Goal) for a given application
- ✓ Recognize the main principles and benefits of Robust Design DOE
- ✓ Decide when a Response Surface DOE should be run
- ✓ Recognize the structured process steps recommended when executing a DOE project
- ✓ Interpret Response Surface Outputs

*Simplified Taguchi is also available.





Course Description:

Design reviews are required for ISO 9001:2000+ compliance. They are becoming increasingly important in product liability litigation and are accepted as a cost-effective best practice and an effective application of knowledge management, valuable for accelerating the maturity of new products.

This seminar describes how formal design reviews can improve products by uncovering potential problems before they are discovered at a later stage of development or application, when the costs of correction are much higher. A broad range of effective techniques for organizing and conducting design reviews will be presented.

Specific guidance and tools to assist attendees in structuring design reviews tailored to their own company, specification, or contract requirements will also be provided. Material covered will be applicable to all types of development programs, ranging from components to complete vehicles, and for both OEMs and suppliers.



Duration:
1-2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Describe the relationship of the process to concurrent engineering and knowledge management
- ✓ Establish the requirements for a successful design review process
- ✓ Describe the types and timing of reviews
- ✓ Organize a typical design review
- ✓ Conduct a review and get positive results



Course Description:

This workshop teaches participants how the Process Flow Diagram, Process and Product Failure Mode and Effects Analysis (FMEA), Process Control Plan (PCP) and Standardized Work (work instructions, gauging plans, etc.) should be used to reduce risks and minimize defects and variation.

While FMEA is most fruitful as a proactive quality planning tool, it can also be effectively applied as a continuous improvement tool after product launch.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Know the benefits, requirements and objectives of an FMEA
- ✓ Explore the steps the methodology uses to analyze an FMEA
- ✓ Expand knowledge of tools utilized when performing an FMEA
- ✓ Identify corrective actions or controls and identify their importance in minimizing or preventing failure occurrence



Course Description:

This workshop provides participants with information on how the Process Flow Diagram, Process (and Product) Failure Mode and Effects Analysis (P-FMEA), Process Control Plan (PCP) and Standardized Work (work Instructions, gauging plans, etc.) should be used to reduce risks and minimize defects and variation. While FMEA is most fruitful as a proactive quality planning tool, it can also be effectively applied as a continuous improvement tool after product launch.

The Process Control Plan captures the controls implemented (or that will be implemented) on a particular manufacturing process to ensure the resulting product meets or exceeds customer requirements and expected quality measures. It improves overall quality and productivity by reducing process variation. The PCP considers tooling and fixtures, controllable product and process characteristics, gauging, sample frequency and reaction protocols.

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Identify features of FMEA and Control Plans
- ✓ List benefits, requirements and objectives of an FMEA
- ✓ Explain steps and methodology used to analyze FMEAs
- ✓ Use FMEAs and other inputs to complete Control Plans



Course Description:

Explore practical ways to implement popular tools in product/process design, manufacturing, reliability assurance and safety operations. Fault Tree/Success Tree Analysis are proven devices for improving the design of a product or process by revealing logical failure paths and appropriate actions for implementing design changes or controls.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Define Fault Tree and Success Tree Analysis
- ✓ Identify the terminology and methodology used in Fault Tree/Success Tree Analysis
- ✓ Compare the benefits of Fault Tree/Success Tree Analysis to the product/ process design and development process
- ✓ Evaluate Fault Tree/Success Tree Analysis in relation to other tools
- ✓ Demonstrate qualitative and quantitative analysis using the Fault Tree/Success Tree approach



Course Description:

This course covers the GD&T system per ASME Y14.5-2009, including why it reduces costs, how to interpret the symbols, and how to apply these tolerances correctly. Participants will learn the basic definitions and rules, gauging the importance of datums, the meaning of each tolerance, and sample ways of gauging geometric tolerances. Participants are encouraged to bring sample parts and/or prints (with or without GD&T already applied) to class for questions. Time is reserved for discussing the application of GD&T to specific parts/prints.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Describe the tolerance zones defined by each symbol
- ✓ Determine when to use Rule #1 to control form and when other controls are appropriate
- ✓ Recognize correct syntax for feature control frames
- ✓ Relate common gauging and inspection methods to geometric tolerance zones and feature control frames
- ✓ Correctly apply and interpret the MMC modifier and other modifiers
- ✓ Assess various datum schemes against product functionality and manufacturing and inspection performance
- ✓ Recognize the need for product-specific GD&T guidelines and list the steps required to create them



Course Description:

This course covers the Production Part Approval Process (PPAP) with reference to the ISO/TS16949:2009 standard. Emphasis is placed on fully understanding the process and process requirements from customer notification to levels of submission. Different approval status is reviewed as well as record retention.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1–3 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Define the Production Part Approval Process (PPAP)
- ✓ Identify the requirements of PPAP and its processes
- ✓ Implement and comply with PPAP requirements
- ✓ Identify submission requirements for the automotive industry



Course Description:

This course provides basic skills in PLC fundamentals. Course topics include PLC instructions, hardware, communication devices and troubleshooting navigation of PLC controller's software and components. Participants will have a basic understanding of PLC circuits, hardware and applications.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
*3 Days
(time can be
customized)*

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Identify and explain the application of programmable logic controllers (PLC)
- ✓ Read and interpret PLC ladder logic prints
- ✓ Describe PLC hardware including racks and power supply
- ✓ Maintain and troubleshoot programmable logic controllers
- ✓ Troubleshoot I/O device failures using programmable logic controllers
- ✓ Identify and explain the uses of types of communication cabling
- ✓ Employ local, remote I/O and network communications
- ✓ Monitor, edit, upload and download PLC programs
- ✓ Complete PLC programming labs
- ✓ Demonstrate knowledge of PLC programming
- ✓ Perform basic troubleshooting techniques with PLC logic
- ✓ Use software to write simple programming instructions using AND, OR, timers, counters
- ✓ Execute program to operate simple electromechanical circuits such as pushbuttons, sensors and contactors



Course Description:

Quality Function Deployment (QFD) is an excellent technique for determining and understanding customer requirements and then translating these requirements into the company's internal technical language for use in product design through final assembly.

QFD is a method for converting customer requirements into company requirements. Participants will strengthen QFD skills during monitored practice sessions and thought-provoking question and answer periods.



Duration:
1-2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Define Quality Function Deployment (QFD)
- ✓ Identify the terminology and methodology used in QFD
- ✓ Recognize the workable benefits of QFD to the product/process design and development process
- ✓ Review methods for determining and monitoring the "Voice of the Customer"
- ✓ Describe two accepted approaches to QFD
- ✓ List the requirements for QFD's success



Course Description:

Statistical Process Controls helps your organization improve quality to achieve higher percentage yield or higher quality products or services.

This session provides information on and application with tools such as quality characteristics charting, measurement systems, sampling strategies, types of control charts and control chart interpretation. Using these tools will provide consistent results and will improve quality and lower costs for scrap and rework.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Describe the purpose and uses of SPC
- ✓ Explore different tools available
- ✓ Select the best measurement system to use for a specific application
- ✓ Identify an appropriate process sampling strategy
- ✓ Collect data and construct basic control charts
- ✓ Determine the basic type of control chart to use
- ✓ Interpret control chart results



Course Description:

This course is designed to help product design personnel create tolerance stacks for parts and assemblies that use Geometric Dimensioning & Tolerancing.

The course begins with a quick review of ASME Y14.5 concepts, and then introduces the benefits and uses of a tolerance stack spreadsheet. Participants learn detailed procedures for performing tolerance stacks on parts and assemblies, beginning with coordinate tolerances and moving on to geometric tolerances.

The course will eliminate confusion over how to include the bonus and shift in a tolerance stack; for example, when using tolerance of position with the MMC modifier.

The simple, manual spreadsheet method used throughout the course produces a straightforward documentation trail that is easily interpreted, and readily adaptable to any company's electronic spreadsheet program. Results can be quickly and easily checked, and revisions can be made with ease. Students receive extensive practice at creating stacks.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Correctly calculate and apply bonus, shift, virtual condition, and resultant condition
- ✓ Perform and develop a tolerance stack-up analysis
- ✓ Correctly enter geometric feature control frame data into a tolerance stack



Course Description:

This course is an introduction to blueprint reading and covers interpretation of various kinds of lines, position of views, symbols, conventions, dimensioning practices, sectioning, auxiliary views and symmetry with emphasis on techniques employed to show details in relation to assembly drawings.



Duration:
4 days
(time can be customized)

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Describe drawing measurement, unit of measure, surfacing, tolerancing, fastening and indexing systems
- ✓ Interpret types of sectioning, read and draw the following with 80% accuracy sections, half sections, revolved sections and removed sections
- ✓ Identify industrial castings, welding drawings, steel specifications, structural steel shapes, assembly drawings and geometric dimensioning and tolerancing



Course Description:

This course is a review of basic arithmetic, including whole numbers, fractions, decimals, signed numbers, grouping symbols, square root, ratio and proportion, flat and round tapers, simple and complex gear ratios; practical industrial shop problems are employed.



Duration:
4 Days
(time can be customized)

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Process applications of the arithmetic processes using whole numbers and decimals
- ✓ Solve mechanical problems using the applications of fractions (ratios)
- ✓ Utilize arithmetic processes with ratio and proportion to solve industrial shop problems



Course Description:

Preparation for a career in the trades is assessed through an overview of industrial processes. A review of math, blueprint reading, and measuring tools relative to shop application are major components of this course. Students receive diagnostic evaluation through testing in these major areas.



Duration:
4 Days
(time can be customized)

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Demonstrate the skills and knowledge necessary to interpret and solve mechanical problems using mathematics in an industrial environment
- ✓ Interpret and apply blueprints in an industrial environment including understanding spatial relationships
- ✓ Describe the basic structure of a blueprint and interpret special and section views found on a blueprint
- ✓ Interpret the types of dimensions, symbols, tolerances and common shop terminology used on a blueprint
- ✓ Describe basic and precision measurement
- ✓ Use scales, micrometers, and calipers to layout and measure elements found in a machine shop environment
- ✓ Describe the proper care of measuring tools



Course Description:

This course will examine the formulas and calculations used to determine pneumatic system performance and operational parameters. The course is designed to analyze the terminology and formulations required to design, manufacture, install, and operate automated pneumatic machinery. Course topics include general gas laws, flow coefficients, air flow demands, air distribution circuits, and energy efficiency.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Describe the general gas laws and their effects on pneumatic systems
- ✓ Identify types of compressed air distribution systems
- ✓ Remove condensate from compressed air distribution systems
- ✓ Convert PSIA to PSIG
- ✓ Calculate cylinder and motor air flow requirements
- ✓ Calculate compression ratios
- ✓ Convert CFM to SCFM
- ✓ Determine proper pipe sizes
- ✓ Determine proper air compressor sizes
- ✓ Calculate surge tank formulas
- ✓ Calculate flow coefficients for pneumatic control valves
- ✓ Calculate Pascal's law



Course Description:

This course is designed to provide the participants with an understanding of the Occupational Safety and Health Administration (OSHA) control of hazardous energy standard. Discussion will include Lock out Tagout (LOTO) requirements, types of hazardous energy, LOTO hardware and devices, and lockout placards to identify and locate hazardous energy sources. The class will also discuss and understand the company specific LOTO plans.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Describe the general gas laws and their effects on pneumatic systems
- ✓ Understand the requirements of the Lockout Tagout Standard
- ✓ List different types of hazardous energy sources
- ✓ Understand requirements for Lockout Tagout Devices
- ✓ Understand the dangers of stored energy
- ✓ Understand the company LOTO program
- ✓ Understand Lockout Tagout Requirements and any exceptions
- ✓ Understand types of Hazardous Energy



Course Description:

This half-day course is designed to introduce the requirements and responsibilities of a material handler. Focus will be on safety including proper lifting and forklift safety along with handling stock and scrap. Concepts of housekeeping, maintenance and 5S methodology will be introduced.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:

½ Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Practice material handling safety including forklift and lifting safety
- ✓ Understand when to fill stock and remove finished product
- ✓ Properly move, store, or dispose of different types of scrap
- ✓ Understand how to manage non-conforming materials
- ✓ Properly complete company forms and required documentation
- ✓ Properly label and store raw materials and finished stock
- ✓ Understand and perform basic maintenance tasks
- ✓ Define the importance of housekeeping
- ✓ Understand and practice the 5S methodology



Course Description:

This course is designed to provide information about the aspects of steel compositions, heat treating, plating and surface treatments available on the market. Course topics include, but are not limited to, explanations of various heat treatments plus case hardening treatments as well as operations such as electroplating, anodizing, black oxidizing and others.

This course is based upon active learning with rich, interactive exercises, and applied experiences.



Duration:
½–1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Explore compositions of various steels and their contribution to toolmaking
- ✓ Identify the temperatures used in various heat treatments and their expected outcomes
- ✓ Explain the structures expected for various heat treatments and their relationship to toolmaking
- ✓ Identify various treatments placed on the surface of steels and their significance to alloy durability
- ✓ Explain in detail what the different surface processes do for steel
- ✓ Identify the differences between alloy steels, stainless steels and tool steels



Course Description:

This course provides an understanding of Motor Control. Course topics include AC/DC motor operations, control circuit components, motor control wiring, connections, ladder diagrams, and interpretation of electronic motor control schematics.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1–5 days
(time may be customized)

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Explain the theory of operation for typical AC Motors
- ✓ Describe the operations of a synchronous motor
- ✓ Explain information found on the motor AC and DC nameplates
- ✓ Explain the theory of operation for typical DC Motors
- ✓ Identify DC motor components
- ✓ Describe variable speed motors
- ✓ Describe control circuit components
- ✓ Differentiate manual to automatic control operation
- ✓ Identify pilot devices both physically and schematically, and describe their operating principles
- ✓ Interpret motor control wiring, connection, and ladder diagrams
- ✓ Identify contactors and relays both physically and schematically, and describe their operating principles
- ✓ Select timing relays for use in specific electrical motor control systems
- ✓ Identify control components to use for motor control circuit
- ✓ Troubleshoot motor control circuit using electrical troubleshooting skills
- ✓ Read and interpret electronic motor control schematics



Course Description:

This course provides a fundamental understanding of pneumatics circuits and applications. Course topics include basic laws, pneumatic components and troubleshooting common pneumatic components.

Attendees will be able to define pneumatics, list the advantages and disadvantages of pneumatics, and list the basic components of virtually every pneumatic system. They will also be able to read pneumatic schematics, interpret pneumatic symbols, and troubleshoot pneumatic components.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
1-5 Days
(Overview is 1 day)

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Define pneumatic safety
- ✓ Define the basic laws of energy and motion
- ✓ Define the basic laws of force, pressure, area, and volume, including Pascal's law, Bernoulli's law, and Boyle's law
- ✓ Describe pneumatic power and the components used in the design of pneumatics systems
- ✓ Identify and explain common pneumatic components
- ✓ Describe basic pneumatic theory
- ✓ Explain common circuit applications
- ✓ Describe preventive maintenance actions including removing, replacing, and cleaning common pneumatic components
- ✓ Interpret ANSI symbols and drawings to explain the functions of specific pneumatic systems
- ✓ Troubleshoot common pneumatic components
- ✓ Design and build a pneumatic circuit



Course Description:

This course covers the basics of electrical concepts, stressing the safe use of electricity. Participants will first gain an understanding of the safety and concepts of electrical schematics, components, voltage, current and resistance. These fundamentals will be applied by understanding how to safely operate a digital multi-meter, power supplies and scope meter.



Duration:
4 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Explore the theory and applications of electrical and electronics as they apply to a broad base of technologies
- ✓ Describe basic characteristics and hazards of electricity
- ✓ Describe safety related electrical work practices
- ✓ Describe electrical system safeguards
- ✓ Define electricity
- ✓ Operate a digital multi-meter, power supplies and scope meter
- ✓ Perform basic electrical print reading
- ✓ Know the difference between conductors and insulators
- ✓ Identify a short or an open circuit
- ✓ Measure current, voltage and resistance



Course Description:

This overview course is designed to enhance participant knowledge of tool room processes and safety in advanced manufacturing facilities. The participants will receive instruction along with specific company policy review on safety and lockout procedures.



Duration:
½ Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Operate tool room equipment in a safe manner
- ✓ Explore general feeds and speeds
- ✓ Apply tool room safety procedures
- ✓ Provide information on company safety and lockout procedures



Course Description:

This class provides entry-level general industry workers with information about their rights, and the employer's responsibilities. Participants explore how to file a complaint, identify, abate, avoid and prevent job related hazards on a job site. The class covers a variety of general industry safety and health hazards. Class focus is on hazard identification, avoidance, control and prevention.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences. Each participant successfully completing the class receives an OSHA 10 certification.



Duration:
10 Hours
(plus time for breaks)

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Explain the history of OSHA and its impact on industry
- ✓ Explain an illness prevention program and identify inspections strategies
- ✓ Compare walking and working surfaces and material handling
- ✓ Illustrate how falls can be prevented
- ✓ Determine proper personal protection equipment (PPE) required
- ✓ Differentiate the components of emergency action planning
- ✓ Avoid electrical and machinery hazards
- ✓ Summarize the importance of ergonomics in the workplace



Course Description:

The Occupational Safety and Health Administration (OSHA) for Construction teaches construction workers about their rights, employer responsibilities, and how to file a complaint as well as how to identify, abate, avoid and prevent critical construction-related hazards. Federal Occupational Safety and Health Administration (OSHA) and Michigan Occupational Safety and Health Administration (MIOSHA) standards that relate to hazard identification and control will be covered.

Training emphasizes hazard identification, avoidance, control and prevention. Students who successfully complete the course will receive an OSHA 30-hour card in Construction.

This course is based upon lecture, hands-on activities and question and answer.



Duration:
30 Hours
(plus time for breaks)

Learning Objectives

At the end of this course, participants will be able to

- ✓ Explain the history of OSHA and the impact it has had on industry
- ✓ Explain what an Illness Prevention program consists of how inspections should be conducted
- ✓ Compare walking and working surfaces and material handling
- ✓ Determine proper personal protection equipment (PPE) that is needed and training for a specific job
- ✓ Differentiate the components of emergency action planning
- ✓ Avoid electrical and machinery hazards
- ✓ Demonstrate Lockout/Tagout
- ✓ Summarize the importance of ergonomics in the workplace
- ✓ Demonstrate the use of a power industrial vehicle
- ✓ Explain hazard communication and global harmonization
- ✓ Illustrate how falls can be prevented



Course Description:

The Occupational Safety and Health Administration (OSHA) for General Industry course teaches general industry workers about their rights, employer responsibilities, and how to file a complaint as well as how to identify, abate, avoid and prevent job related hazards. Federal Occupational Safety and Health Administration (OSHA) and Michigan Occupational Safety and Health Administration (MIOSHA) standards that relate to hazard identification and control will be covered.

Training emphasizes hazard identification, avoidance, control and prevention. Students who successfully complete the course are eligible for the OSHA 30- hour card in General Industry.

This course is based upon lecture, hands-on activities and question and answer.



Duration:
*30 Hours
(plus time for
breaks)*

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Explain the history of OSHA and the impact it has had on industry
- ✓ Explain what an Illness Prevention program consists of how inspections should be conducted
- ✓ Compare walking and working surfaces and material handling
- ✓ Determine proper personal protection equipment (PPE) that is needed and training for a specific job
- ✓ Differentiate the components of emergency action planning
- ✓ Avoid electrical and machinery hazards
- ✓ Demonstrate Lockout/Tagout
- ✓ Summarize the importance of ergonomics in the workplace
- ✓ Demonstrate the use of a power industrial vehicle
- ✓ Explain hazard communication and global harmonization
- ✓ Illustrate how falls can be prevented



Course Description:

This course is designed to provide information for maintaining occupational injury and illness records following OSHA criteria. Participants will explore how to complete OSHA logs and the summary of work-related injuries and illnesses. Definitions of terms used to classify cases as injuries or illnesses will be emphasized.

The course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies.



Duration:

½ Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Complete OSHA logs
- ✓ Summarize work-related injuries and illnesses
- ✓ Identify language used in OSHA related records



Course Description:

This course is specifically designed for individuals working in the plastics industries who wish to increase their understanding of plastic materials and processing. Focus is on understanding plastic materials, tooling, and processing and testing, with an emphasis on injections molding. Participants may take the entire series or select the most relevant class modules:

Materials, Processing, Injection Molding, Additives and Reinforcements, and Testing.

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies.



Duration:
*24 Hours
(individual
modules may
be taken)*

Learning Objectives

At the end of this course, participants will be able to

- ✓ Relate application test requirements to material application
- ✓ Classify additives and reinforcement used in plastic materials
- ✓ Identify the physical and chemical characteristics for different types of plastic materials.
- ✓ Explore how various materials are selected for end use applications.
- ✓ Distinguish the different types of plastic processing techniques including their advantages and limitations.
- ✓ Apply the concepts and knowledge of plastic materials for designing plastic parts that meet the end user requirements.
- ✓ Recognize the components of tooling hardware used to manufacture plastic parts.
- ✓ Apply engineering fundamentals to the testing methods of plastic parts and relating these test methods for developing applications that meet customer specifications.
- ✓ Classify the additives and reinforcements used in plastic materials and how they affect the properties of plastic materials.



Course Description:

Problems can occur in manufacturing environments due to inability to read mechanical drawing/blueprints. This course provides participants with the necessary skills to be able to read and interpret both company and customer drawings.

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Describe the layout of a drawing
- ✓ Recognize the various types of lines
- ✓ Explore common drafting symbols
- ✓ Describe general tolerances
- ✓ Use the drawing to determine component dimensional requirements
- ✓ Looking at the drawing, determine which views of the components are shown
- ✓ Recognize weld symbols
- ✓ Describe the relationship of CAD Model to Drawings
- ✓ Explain general surface texture



Course Description:

This course provides students the basic skills and understanding of the science of measurement. Metrology is important to all stages of manufacturing, including design to the quality of the finished product. The course will cover measurement instruments, scales, gauges, micrometers, and calipers.

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies.



Duration:

1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Identify measuring Instruments
- ✓ Explore scales and reading inch decimal and metric
- ✓ Determine how to use and measure using micrometers
- ✓ Define measurement procedures for using depth micrometer
- ✓ Explore inside micrometer
- ✓ Explain telescoping and small hole gauges
- ✓ Demonstrate measurements using calipers, digital, dial and Vernier
- ✓ Define reading height gauge
- ✓ Understand dial indicators and their uses
- ✓ Describe the use of gauge blocks
- ✓ Recite surface plate and measurement
- ✓ Discover uses for snap and bore gauges



Course Description:

This one-day course will cover the symbols and diagrams commonly used on piping and instrumentation diagrams (P&ID) and Process Flow Diagrams (PFD).

Focus is placed on identifying the types of diagrams, identifying instrument symbols and line symbols used on P&ID's, understanding the types of information typically found on a legend, using a P&ID to locate the components of a system, and reading a PFD to trace the flow paths of a system.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Identify the different types of drawings that contain P&ID
- ✓ Describe lettering and numbering standards based on ISA instrumentation symbols
- ✓ Determine the instrument type from the symbol information
- ✓ Describe valve and valve actuator symbols
- ✓ Identify control valve designations
- ✓ Describe symbols for line standards
- ✓ Use a legend to correctly identify instrumentation on a drawing
- ✓ Describe piping systems
- ✓ Understand simple instrument loops
- ✓ Perform P&ID print reading exercise



Course Description:

This course provides a basic understanding of Print Reading and Geometric Dimensioning and Tolerancing with an introduction to caliper usage. The instructor will use company prints and calipers to make learning points and provide opportunities to practice.

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies.



Duration:
2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Describe the layout of a drawing
- ✓ Recognize the various types of lines
- ✓ Explore common drafting symbols
- ✓ Describe general tolerances
- ✓ Identify the rules, definitions, and symbols of ASME Y14.5 -2009
- ✓ Interpret specified feature control frames
- ✓ Interpret and simulate specified datum reference frames
- ✓ Describe the shape, size, and location of tolerance zones
- ✓ Make conversions to metrics
- ✓ Read metric micrometers and calipers
- ✓ Apply conversions in basic print reading



Course Description:

Business, industry and government agencies require technical writers. By helping participants develop and hone technical writing skills, this course prepares them to compete effectively for technical writing jobs in a broad range of fields and industries.

This 1-4 day course explores the principles and techniques of technical writing. It builds on basic writing skills, help participants develop critical-thinking skills and teaches them to apply those skills to writing about technical subjects. The course emphasizes practical (“real-world”) applications and “lessons learned.”

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies. Participants will practice writing skills in the class using company-based documents.



Duration:
1-4 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Explain the purpose and essential characteristics of technical writing
- ✓ Explain the process of researching a topic, selecting and analyzing relevant information
- ✓ Plan and write concise, clear and accurate texts on technical subjects, for in-house and client communication, and technical or trade media
- ✓ Write conclusions derived from data
- ✓ Describe the principles of business communications (including letters, memos and email) and their effective use in a technical work environment



Course Description:

The proven Global 8 D approach improves operational and financial performance by identifying causes and implementation solutions to significant or costly recurring problems.

Global 8 D is available in two formats:

1 Day • Global 8 D Method and Tools Overview—includes methods and tools overview and case studies tying new skills to company business-related problems.

2 Days • Global 8 D Workshop—includes methods and tools overview, case studies and opportunities to practice on specific company business-related problems.



Duration:
1-2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Identify the 8 steps in the Global 8 D process
- ✓ Explore problem solving tools and techniques (e.g., Is/Is Not Analysis, Cause-Effect Diagram, 5-Whys, and others)
- ✓ Discover underlying root causes
- ✓ Apply methods for problem definition, cause identification and solutions selection
- ✓ Focus on problem prevention
- ✓ Approach problems in an efficient, systematic and team-oriented manner
- ✓ Recognize components of the continuous improvement process
- ✓ Apply the 8 steps to a current company project



Course Description:

Process mapping develops a visual roadmap of a work process – including inputs, decision points, and output requirements. This allows team members to explore how interrelated work tasks lead to current outcomes. When outcomes fall short of desired quality, cost or cycle-time requirements, strategies to improve the process can be applied.

Process Mapping can assist with increasing quality, productivity and profits by reducing uncertainty and waste in work processes. Process maps can also be used as tools for process improvement, training, and documentation.

This course is based upon active learning with rich, interactive exercises, applied experiences, and business-related case studies.



Duration:
1–2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Explore methods that allow a visual look at work performed
- ✓ Find ways to improve workplace performance
- ✓ Define job procedures prior to writing standards or other instructions
- ✓ Develop a process map and identify several improvement actions



Course Description:

This course is designed to inform management (including but not limited to: Top Management, EMS/QMS Management Representatives, Environmental Health and Safety Managers and Process Owners) about how ISO 14001:2015 will impact its current QMS and EMS. The course stresses the requirements of ISO 14001:2015 and what changes may need to be addressed as a result of the transition. Information is provided to assist in developing an effective transition plan.



Duration:
½ Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Interpret the new High-Level Structure (HLS) used by ISO
- ✓ Explore the changes for ISO 14001:2015 and how these changes apply to their QMS and EMS (with emphasis regarding the role of management)
- ✓ Apply the concept of Risk-Based Thinking
- ✓ Apply the concept of Organizational Knowledge
- ✓ Explain management roles in both the transition and maintenance of updated QMS and EMS
- ✓ Roll out the changes to the organization and lead the transition effectively and efficiently
- ✓ Identify transition timing and steps needed to engage the registrar



Course Description:

This course provides an in-depth understanding of the ISO 14001:2015 internal auditing process. The participant will learn the requirements of ISO 14001 and its impact on auditing processes and systems. Participants will learn how to conduct a process-based audit, write the audit report, and take corrective action.

A class project of auditing a system and/or process is included (under instructor supervision) to ensure the participants have effectively grasped the concepts of auditing.



Duration:
*2 Days (or 3 days
with optional
auditing practice)*

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Interpret the new High-Level Structure (HLS) used by ISO
- ✓ Explain the ISO 14001:2015 Standard and its requirements
- ✓ Perform process auditing
- ✓ Prepare for internal audits
- ✓ Explore how to prepare audit reports
- ✓ Document audit nonconformances
- ✓ Perform follow up audits



Course Description:

This course is designed to provide the basic skills needed to troubleshoot electrical repair and maintenance procedures of robotic electrical systems. Course topics include robot electrical component identification and function of the robot electrical controller. Robotics safety, programming, troubleshooting basic robotic electrical functions, troubleshooting and recommended electrical preventive maintenance will be covered.



Duration:
4 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Follow safety guidelines, demonstrate the use of emergency stops and servo disconnects
- ✓ Properly power down and power up the controller and demonstrate basic fault recovery
- ✓ Perform robot mastering at Zero position and single axis
- ✓ Save, restore, and back up software
- ✓ Locate robot inputs and outputs screen to determine status of system or equipment
- ✓ Identify common electrical component issues
- ✓ Connect and trouble shoot internal robot communication cables between all components of the robot system
- ✓ Connect, configure, and troubleshoot end effector and tooling I/O
- ✓ Identify the functions of the controller following components and robot electrical drawings
- ✓ Properly use position screen, alarms screen, status screens, LEDs and indicators for troubleshooting
- ✓ Troubleshoot robot communications, FANUC block I/O modules, communications
- ✓ Utilize the UOP inputs and outputs to determine if problems are actual cell or robot faults
- ✓ Utilize input and output screens for trouble shooting



Course Description:

This course is designed to provide the fundamentals of gas metal arc welding (GMAW) and prepare for an American Welding Society (AWS) certification combined with basic robotic operations. Discover the basics of robotic programming by writing, editing and troubleshooting programs to operate the robotic welder.



Duration:
90 Hours

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Set up equipment: manual welding and robotic welding
- ✓ Operate equipment safely using personal protection equipment (PPE)
- ✓ Determine characteristics of a good weld or a bad weld
- ✓ Troubleshoot problems for manual welding and robotic welding
- ✓ Modify, add and delete basic program instruction for robotic cell
- ✓ Save, load and delete basic program to robot



Course Description:

This course is designed to provide a basic understanding of what metallography is, when and why it is used, and how it is done. The lecture portion of the course will give an overview of basic structures of common materials and the steps needed to see them. A demonstration and hands-on activities will reinforce the concepts. Students will be provided handouts to support the lecture and lab outlines to support the hands-on portion of the course. The amount of time spent on each activity will depend on the level of experience of the students.

This course is based upon active learning with rich, interactive exercises, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Define basic terms and concepts of metallography
- ✓ Classify common micro-structures and what influences them
- ✓ Utilize proper lab safety protocols
- ✓ Implement 4 steps in sample preparation
- ✓ Review common ferrous and non-ferrous steps for sample preparation
- ✓ Demonstrate basic microscopy



Course Description:

This course is designed to provide an overview of basic mechanical properties (stiffness, strength, ductility, hardness and toughness) along with some of the testing methods used to quantify them. Students will be provided handouts to support the lecture and lab outlines to support the hands-on portion of the course. The amount of time spent on each activity will depend on the level of experience of the students.

This course is based upon active learning with rich, interactive exercises, and applied experiences.



Duration:
1 Day

Learning Objectives

At the end of this course, participants will be able to: Define basic terms and concepts of metallography

- ✓ Classify common micro-structures and what influences them
- ✓ Utilize proper lab safety protocols
- ✓ Implement 4 steps in sample preparation
- ✓ Review common ferrous and non-ferrous steps for sample preparation
- ✓ Demonstrate basic microscopy



Course Description:

Participants will gain the skills and knowledge to operate CNC equipment, including basic programming commands in a CNC machining environment. Manual machining, blueprint reading, and inspection of parts provide participants a solid understanding of machining. The skills learned in this course address the CNC basic requirements in the aerospace, automotive, and defense industries.



Duration:
120 Hours

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Perform and calculate various shop math conversions and calculations
- ✓ Perform basic machine tool operations
- ✓ Identify CNC Mill Tools used for CNC Machining
- ✓ Identify CNC Lathe Tools used for CNC Machining
- ✓ Inspect basic components
- ✓ Develop CNC 2 and 3 axis Mill G&M code programs
- ✓ Develop CNC 2-axis Lathe G&M code programs
- ✓ Setup and define work offsets and tool length offsets
- ✓ Debug and edit G&M code programs on the shop floor
- ✓ Setup machines for production runs



Course Description:

Participants will review inspection techniques and utilize machine tool skills necessary for a CNC operator. Participants will practice set-ups and figure tool length offsets. Additionally, practice in basic CNC program edits and debug techniques will be covered.



Duration:
4 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Inspect basic components
- ✓ Set-up and define work offsets and tool length offsets
- ✓ Set-up machines for production runs
- ✓ Debug and edit G&M code programs



Course Description:

This assessment is designed as a prerequisite to the Structural Welding and Certification course. Participants will weld to code to determine gaps in knowledge and/or technique that can be taught in the subsequent course in order to gain American Welding Society Certification.



Duration:

½ Day

Learning Objectives

At the end of this assessment, participants will be able to:

- ✓ Complete several welds to code
- ✓ Understand American Welding Society specifications
- ✓ Understand the certification process
- ✓ Determine areas to improve or enhance



Course available onsite only.



Course Description:

This course is designed to enhance the technical knowledge of welding to a code using a welding procedure specification. Participants will receive instruction along with an extensive hands-on lab training.

The course will cover how to interpret a welding procedure specification and determine if a weldment meets the criteria of the American Welding Society (AWS) D1.1 code. Weldment troubleshooting, discontinuities, and weld/welding symbols will be emphasized. Participants will have an opportunity to pass a welding certification test through Schoolcraft College's AWS Accredited Test Facility.

This course is based upon active learning with rich, interactive exercises, and applied experiences.



Duration:

1-3 Days (Based upon Completion of Structural Welding Assessment)



Learning Objectives

At the end of this course, participants will be able to:

- ✓ Recognize safety and hazards within the workplace and welding equipment
- ✓ Understand and interpret a welding procedure specification
- ✓ Perform arc welds in and out of position following a welding procedure specification
- ✓ Recognize weld discontinuities and interpretation to a code
- ✓ Understand weld and welding symbols on a print
- ✓ Perform a weld certification performance test



Course available onsite only.



Course Description:

This course is designed to enhance the technical knowledge of welding to a code using a welding procedure specification. The participants will receive instruction, extensive hands-on lab training, and industry-recognized credentials.

Participants will learn how to interpret a welding procedure specification and determine if a weldment meets the acceptable criteria of the American Welding Society (AWS) D1.1 code. Weldment troubleshooting, discontinuities, and weld/welding symbols will be emphasized.



Duration:
5 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Recognize safety and hazards within the workplace and welding equipment
- ✓ Understand and interpret a welding procedure specification
- ✓ Perform arc welds in and out of positions following a welding procedure specification
- ✓ Recognize weld discontinuities and interpretation to a code
- ✓ Understand weld and welding symbols on a print
- ✓ Perform a weld certification performance test



Course Description:

This basic course is designed to enhance the technical knowledge of welding to a code using a welding procedure specification. The participants will receive instruction along with extensive hands-on lab training.

The course will cover how to interpret a welding procedure specification and determine if a weldment meets the acceptable criteria of the American Welding Society (AWS) D1 code. Weldment troubleshooting, discontinuities, and weld/welding symbols will be emphasized. Participants will have an opportunity to weld per TG/ODA specifications.

This course is based upon active learning with rich, interactive exercises, and applied experiences.



Duration:
Variable

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Turn on and properly set FCAW welding equipment
- ✓ Interpret a welding procedure specification
- ✓ Perform FCAW fillet welds in the flat position following a welding procedure specification
- ✓ Recognize weld discontinuities; good weld vs. bad weld
- ✓ Recognize weld and welding symbols in a print



Course Description:

This welding course is designed to promote the development of technical as well as hands-on skills to individuals with little or no experience in the GMAW welding processes. The participants will receive instruction along with hands-on lab instruction.

The course will cover basic understanding of GMAW process, equipment set-up, basic troubleshooting, hands-on GMAW manual welding, and identifying bad welds and their causes.

This course is based upon active learning with rich, interactive exercises, and applied experiences. Each participant will receive reference materials.



Duration:
3-4 Days
(time can be customized)

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Understand basic GMAW
- ✓ Understand introductory GMAW processes
- ✓ Explore safety and health in welding processes
- ✓ Practice GMAW equipment setup, start up and shutdown
- ✓ Identify GMAW equipment maintenance / troubleshooting
- ✓ Perform GMAW hands-on manual welding
- ✓ Explore weld inspection and identify bad welds and their causes



Course Description:

This course is designed to enhance the technical and hands-on knowledge of welding austenitic stainless steel. The participants will receive instruction along with an extensive hands-on lab training.

The course will cover how to weld a variety of thicknesses of stainless steel along with finishing techniques. Weldment troubleshooting, discontinuities, and sanitary applications will be emphasized.

This course is based upon active learning with rich, interactive exercises, and applied experiences.



Duration:
*1-3 Days
(Based upon
completion of
structural welding
assessment)*



Learning Objectives

At the end of this course, participants will be able to:

- ✓ Understand basic GTAW austenitic stainless welding
- ✓ Explore safety and health in welding processes
- ✓ Identify GTAW equipment maintenance / troubleshooting
- ✓ Perform GTAW hands-on manual welding
- ✓ Explore safety and health of finishing
- ✓ Identify and practice finishing techniques and troubleshooting
- ✓ Weld a required part from production (company may supply weld coupons)



Course available onsite only.



Course Description:

This course is designed to introduce and enhance the technical and hands-on knowledge of welding of steel, stainless steel and billet aluminum. This includes the use of gas tungsten arc welding (GTAW) and gas metal arc welding (GMAW). The participants will receive instruction along with extensive hands-on lab training. The course will cover how to weld a variety of thicknesses of materials along with specialized techniques to weld thin wall tubing. Weldment troubleshooting, discontinuities, and transfers will be emphasized.

This course is based upon active learning with rich, interactive exercises, and applied experiences.



Duration:
1-2 Days



Learning Objectives

At the end of this course, participants will be able to:

- ✓ Explore welding fundamentals and advanced welding techniques including set up.
- ✓ Recognize safety/health procedures for welding
- ✓ Utilize weld test gages
- ✓ Practice entry and advanced level welding based upon specific materials
- ✓ Troubleshoot GMAW and GTAW equipment maintenance
- ✓ Watch a demonstration of GMAW and GTAW
- ✓ Perform GTAW and GMAW hands-on ferrous and nonferrous material
- ✓ Explore basic metallurgy that pertains to ferrous and nonferrous material
- ✓ Identify and practice specialized techniques and troubleshooting on ferrous and nonferrous material
- ✓ Weld a required part from production (company to supply weld coupons)



Course available onsite only.



Course Description:

This course is designed to enhance the technical knowledge and skill of welding with an emphasis on pipe. Participants start with a basic overview of welding techniques which will lead to multi-position and advanced applications.

The participants will receive instruction along with hands-on lab training in both plate and pipe. The course will cover many facets of welding which includes how to interpret a welding procedure specification and determine if a weldment meets the acceptable criteria of the American Welding Society D1.1 code and the American Society of Mechanical Engineers code. Weldment troubleshooting, discontinuities, print reading, and basic pipe fabrication will be emphasized. Participants will have the opportunity to pass a welding certification or qualification in AWS D1.1 or ASME.



Duration:
1-3 Days



Learning Objectives

At the end of this course, participants will be able to:

- ✓ Explore welding fundamentals
- ✓ Recognize safety/health procedures for welding
- ✓ Explore the use of weld test gages
- ✓ Identify basic weld and welding symbols
- ✓ Troubleshoot GMAW/FCAW/GTAW equipment maintenance
- ✓ Watch a demonstration of GMAW/FCAW/GTAW manual welding



Course available onsite only.



Course Description:

Achieving proficiency in English language skills is essential in today's corporate world. The English as a Second Language courses equip participants with the grammar, conversational and listening skills they need to operate effectively within English speaking organizations.

Instruction is offered at multiple levels (levels 1-4) and is available based upon assessments of skill levels. The courses are designed for non-native speakers who wish to improve their English skills. Emphasis is on practical everyday English and communication and may be customized to include organization forms and documents.

Participants progress through topic-centered lessons that integrate skills from several areas, and several assessments to track progress are conducted during the courses.

These courses are based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:
5 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Demonstrate English skills necessary for interpersonal communication, listening and reading
- ✓ Demonstrate English skills necessary for business applications in specific worksites



Course Description:

As companies expand to global platforms through international acquisitions and mergers, the ability to speak Spanish is a critical communication link across the business enterprise. The ability to effectively communicate with employees is also key to future business success.

This introductory course introduces participants to conversational Spanish found in social settings, business meetings and travel.

This course is based upon active learning with rich, interactive exercises, case studies, and applied experiences.



Duration:

*12 Weeks
(2–3 hours per
week. Can be
customized.)*

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Improve English/Spanish communication across the business enterprise
- ✓ Explore common business terms
- ✓ Explore conversational terms and phrases
- ✓ Use grammar appropriately
- ✓ Converse in social settings, on the phone, and in travel situations



Course Description:

This course provides a foundation for caregivers working with patients experiencing dementia. Participants identify the significant changes in the brain associated with dementia and how this impacts disease progression. Emphasis is placed upon improving patient communication and exploring strategies and techniques for working with challenging behaviors.

Participants will also explore activities designed to promote “meaningful engagement” and recognize best practices for providing final-stage care. Additionally, attendees will practice exercises for caregiver stress reduction. Participants will receive handouts, a comprehensive reference manual, a Schoolcraft College Certificate of Completion, and optional Continuing Education Units (CEUs).



Duration:
2 Days

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Distinguish between the common forms of dementia including Alzheimer’s disease
- ✓ Develop strategies to improve communication
- ✓ Explore the root cause of challenging behavior
- ✓ Explore the impact of stress on caregivers
- ✓ Define and apply meaningful engagement
- ✓ Identify proper nutrition for persons living with dementia
- ✓ Define “wandering” and identify strategies to promote “safe” wandering
- ✓ Identify the signs/signals of end-stage dementia
- ✓ Explore best practices for final-stage care



Course Description:

This 60-hour course prepares participants to work in the allied health field as a Cardiac Monitor Technician. The course covers the basics of cardiac anatomy and physiology while concentrating on the electrophysiology of the cardiac conduction system. Participants will learn how to apply and interpret basic 3-lead cardiac rhythms. The course will end with basic cardiac management including Basic Life Support (CPR).



Duration:
60 Hours

Learning Objectives

At the end of this course, participants will be able to:

- ✓ Ability to comprehend, apply, and evaluate the clinical information relative to his/her role as an entry level electrocardiogram technician
- ✓ Technical proficiency in all skills necessary to fulfill the role of entry level electrocardiogram technician
- ✓ Personal behaviors consistent with professional and employer expectations for an entry level electrocardiogram technician



Course Description:

All levels of Microsoft Office are offered and are customized with client work sample documents used in the training, if desired. Duration varies depending upon the area and can also be tailored based upon the needs of the client.





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