



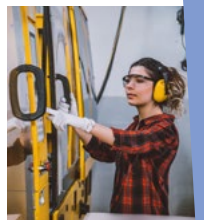
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State-Funded Employee Training since 1985

Customized Employment Training

Catalog of Courses

- Maximize Your Competitive Advantage
- Enhance Your Operations and Meet Your Goals
- Train Your Employees to New Levels of Success
- Reduce Training Costs

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As the leader in Southern California's State-Funded training, the focus of the Professional Development Center (PDC) of Glendale Community College is to expand on the college's mission by investing in State of California's economic growth and helping improve employees' job skills by means of providing customized courses and training.

PDC is committed to the success of businesses it serves and provides support through premier business and industry-specific training, workforce development, and contributing to a highly skilled and productive workforce in the region.

Glendale Community College is the Greater Los Angeles Region's premier learning community where all students achieve their informed educational goals through outstanding instructional and student services, a comprehensive community college curriculum, and educational opportunities found in few community colleges.

Glendale Community College District is committed to providing an equal opportunity for admissions, student financing, student support programs and activities, and employment regardless of race, religious creed, color, age, sex, sexual orientation, national origin, ancestry, marital status, medical condition, or disability in accordance with federal, state, and local regulations.

OUR SERVICES AND COURSES

The Professional Development Center (PDC) of Glendale Community College has been providing state-funded and fee-based training in Southern California since 1985.

The PDC was founded by Glendale Community College in cooperation with the State Chancellor's Office and the California Employment Training Panel (ETP). Training is funded through ETP disbursement of a percentage of the unemployment tax paid by California employers.

Over the past 40 years, the Professional Development Center of Glendale Community College has enhanced the knowledge and skills of over **40,000 professionals** from more than **5,000 companies and organizations**. **Our goal is to train employees to new levels of productivity.**

In addition to scheduled classes, the PDC specializes in **creating customized training programs** for all qualified companies, both large and small.

To develop employees' skills to meet the challenges of today's economy the PDC:

- **Facilitates employee skills assessment**
- **Provides customized training to meet the needs and specifications of companies**
- **Administers ETP funds to cover training costs for qualified employers**
- **Features expert trainers and instructors with exceptional industry-specific experience**
- **Measures student learning outcomes and evaluates companies' return on investment**

PDC's long-standing record of excellence includes its exceptional trainers who engage employees in training with their industry knowledge and hands-on projects.

Today, the Professional Development Center of Glendale Community College is acclaimed as one of the most innovative training agencies in the State of California.

Get Started Today

Whether you are a self-starter looking to enhance your skills in the field you are currently working in, or you are an employer who is trying to help your employees better themselves, the Professional Development Center of Glendale Community College can provide you with the courses you need.

Contact the PDC to schedule your training and begin developing your employees' vocational skills.



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PDC is on the I-TRAIN List

I-TRAIN is a directory of job training organizations such as colleges and private training programs that have been found to be qualified to be reimbursed with federal funds for training individual job trainees.

This Regional Training Vendor Directory is also recognized and used by the State of California and many local Workforce Investment Boards and One-Stop employment organizations. It is maintained by the South Bay Workforce Investment Board in partnership with City of Inglewood.

PDC is on the ETPL List

State of California's Employment Development Department (EDD) Eligible Training Provider List (ETPL) was established in compliance with the Workforce Investment Act of 1998 and amended by Workforce Innovation and Opportunity Act of 2014 to provide customer-focused employment training resources for adults and dislocated workers.

As part of California's statewide list of qualified training providers, PDC offers a wide range of training programs to improve the skills of those individuals who are actively seeking jobs in the region.

PDC is on the CalJobs List

CalJobs is California's online resource to help job seekers and employers navigate the state's workforce services. PDC is on the CalJobs list of providers for training the California's workforce in enhancing their professional skills and achieving vocational objectives.

**APICS (American Production and Inventory Control Society)
ASCM (Association of Supply Chain Management)**

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APICS
(American Production and
Inventory Control Society)

ASCM
(Association of Supply Chain
Management)



APICS: CPIM CERTIFICATION (CERTIFIED IN PLANNING AND INVENTORY MANAGEMENT)

Time Investment

This class is **64** hours of instruction in two 2-hour sessions over the course of **16** weeks.

Course Description

The APICS Certified in Planning and Inventory Management (CPIM) provides a comprehensive body of knowledge, best practices and standards to allow candidates to better respond to supply disruptions, respond to demand variations and manage supply chain risk.

Earning the APICS CPIM demonstrates mastery of an organization's internal operations and an in-depth understanding of materials management, master scheduling, forecasting, production planning and how it applies across the extended supply chain.

In addition to the guidance that you will receive in the classroom, you will also receive the APICS CPIM Learning System. The Learning System provides access to both printed and digital materials. The online platform also includes learning activities, a personalized study experience, microlearning, and convenient access to reading materials. The Certification Exam is NOT included in the class fees for this course but may be purchased separately when candidates are ready to take the Certification exam.

Audience

This course would be of interest to a Supply Chain professional wanting to enhance career opportunities up to Management level and beyond.

Professional development is highly valued by employers. Employees with just one certification, certificate or credential earn 17% more than those without. APICS certification is particularly in demand, as people with at least one APICS certification earn 25% more than those without.

Additionally, more than just a supply chain degree is needed to increase one's value in the field. Professionals with a BA in supply chain and an APICS certification earn 18% more than those with a supply chain BA alone. — 2022 ASCM Supply Chain Salary and Career Report.

Prerequisites

Although there are no formal prerequisites for this course, experience in Supply Chain, such as Operations, Inventory, Planning, or Procurement

would be beneficial. Those that do not have this experience are recommended to take the Essential Skills of Operations and Supply Chain Management class. This is an excerpt from the CPIM Exam Content Manual published by ASCM:

"...there is a strong assumption that the candidate has experience and/or knowledge of basic methodologies related to planning and inventory management."

This is a college-level course that provides in-depth Planning and Inventory Management knowledge. This class and materials can stand alone as a valuable professional development tool, however; for those preparing to achieve certification designation by passing the exam, a minimum of an additional 100 hours of self-study using the included learning system is highly recommended.

Topics and Course Content

This course will cover topics such as:

- Supply Chains and Strategy
- Sales and Operations Planning
- Demand
- Supply
- Detailed Schedules
- Inventory
- Distribution
- Quality, Technology and Continuous Improvement

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Increase inventory accuracy and reduce inventory in an efficient manner
- ▶ Improve forecasting
- ▶ Improve the S&OP process
- ▶ Manage and apply capacity resource planning
- ▶ Work more productively with your company's ERP system
- ▶ Learn from an experienced instructor who provides expertise, insights, and one-on-one guidance
- ▶ Network, share experiences, and discuss topics with a diverse group of professionals
- ▶ Stay on track to earn certification with a structured learning experience

APICS: CPIM PART 2 MASTER THE INTERNAL OPERATIONS AND SUPPLY CHAIN

Time Investment

This class is **64** hours of instruction in 4-hour sessions over the course of **16** weeks.

Course Description

This course is part 2 of a two-part series for those who intend to pursue their APICS Certified in Planning and Inventory Management (CPIM) Certification. This course provides a comprehensive body of knowledge, best practices and standards to allow participants to better respond to supply disruptions, demand variations and manage supply chain risk.

CPIM Part 1 covers the Basics of Supply Chain Management concepts and terminology, while Part 2 covers Supply Chain applications of the concepts presented in Part 1. A candidate would need to pass exams provided by APICS for both Part 1 and Part 2 to become certified. APICS Exams are NOT included with this class.

CPIM Part 2 expands on concepts managing the complete flow of information and materials in an organization’s internal supply chain and operations including materials management, master scheduling, forecasting, production planning, and how they apply across the extended supply chain. This course is suitable for manufacturing, distribution, service, and retail industries.

Audience

This course is intended for operations and supply chain professionals who want to improve their knowledge and skills, gain practical knowledge, and develop skills that can be immediately used on the job. This course is also designed for those who would like to master the APICS body of knowledge terminology and concepts with the intent to pursue certification. Planners, buyers, master schedulers, demand planners, inventory management, supply chain management, production control management, operations management, cost accounting, quality management, and other professionals who wish to expand their knowledge and ability in the planning of resource allocation will benefit from this training.

Prerequisites

None. It is highly recommended that students enrolling in this class have a strong foundation in the APICS Body of Knowledge, by either having completed the CPIM Part 1 course or the Basics of Supply Chain Management (BSCM) course. Note: To earn the APICS CPIM certification you must take and pass both the CPIM Part 1 and Part 2 exams.

Topics and Course Content

This course will cover and expand on CPIM Part 1 topics such as:

- Business Strategy
- Sales and Operations Planning
- Demand
- Supply
- Inventory
- Detailed Schedules
- Distribution
- Quality, Continuous Improvement, and Technology

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand expanded concepts in various supply chain environments
- ▶ Increase inventory accuracy and reduce inventory
- ▶ Improve forecasting
- ▶ Improve the S&OP process
- ▶ Manage and apply capacity resource planning
- ▶ Work more productively with company’s ERP system
- ▶ Utilize the printed and online study tools to confidently take the certification exam



APICS: ESSENTIAL INVENTORY CONTROL SKILLS

Time Investment

This class is **24** hours of instruction in two 2-hour sessions over the course of **6** weeks.

Course Description

This course focuses on universally accepted inventory planning and control processes and systems used by Stockroom and Inventory Management professionals: The concepts presented in this course are applicable to managing inventory in all Manufacturing, Service, and Distribution companies. All terms and concepts taught in this course are based on the APICS Body of knowledge and taught by ASCM Recognized Instructors.

Audience

This course is ideal for both new and experienced employees whose job deals with planning and controlling inventory including Stockroom personnel, Shipping and Receiving employees, Material Handlers, Inventory Planners, Cycle counters and other inventory control associates who want to hone their job skills and gain practical knowledge in the field of Stockroom and Inventory Management.

Prerequisites

None. It is strongly recommended that students have a basic knowledge or some experience in Stockroom or Inventory activities.

Topics and Course Content

This course will cover topics such as:

- **Introduction to Inventory Management (FIM-2)**
 - Inventory Management
 - Inventory Flows
 - Financial Aspects of Inventory Management
- **Purpose & Function of Inventory (FIM-3)**
 - Five functions of inventory
 - Elements of inventory cost, Inventory valuation
- **Inventory Replenishment Management (FIM-4)**
 - Inventory replenishment methods and objectives
 - Order point, safety stock, and EOQ

- **Inventory Measurement & Control (FIM-5)**
 - ABC Inventory Control
 - Inventory Accuracy Tool Kit
 - Measuring Inventory Performance
 - Lean Inventory (FIM-7)
 - Lean concepts and practice
 - Lean techniques
- **Introduction to Purchasing and Procurement (FIM-8)**
 - Purchasing to Procurement
 - The Purchasing Cycle

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Utilize learned basic terms, concepts, systems, and best practices used by Planning professionals
- ▶ Apply learned material in performing their current job and/or be prepared for a next level job opportunity
- ▶ Use terminology and concepts learned in this course in preparing for the APICS Production and Inventory Management (CPIM) Certification exams



APICS: ESSENTIAL PURCHASING SKILLS FOR BUYERS

Time Investment

This class is **32** hours of instruction in two 2-hour sessions over the course of **8** weeks.

Course Description

This course addresses the basic functions performed by buyers and purchasing employees and defines Purchasing Department’s relationship with the rest of the organization and its impact on other business functions. In this course, students will be exposed to best practices in purchasing and sourcing strategies. All terms and concepts taught in this course are based on the APICS Body of knowledge.

Audience

The course is ideal for new and intermediate level Buyers, Buyer/Planners, Sourcing Specialists, Source Inspectors, Accounts Payable Clerks, and other employees directly associated with purchasing who want to hone their job skills and gain practical knowledge in the field of Procurement.

Prerequisites

None. It is strongly recommended that students have a basic knowledge or some experience with purchasing activities.

Topics and Course Content

This course will cover topics such as:

- **Fundamentals of Purchasing (PIM-8)**
 - Purchasing Function, Categories, and Responsibilities
 - Purchasing’s Role and Interface with Other Business Functions
 - Buyer/Planner Concept/Role
 - Financial Impact of Purchasing
 - Legal Aspects of Purchasing and Terms & Conditions

- **Sourcing Strategies (PIM-9)**
 - Strategic vs. Tactical Sourcing Strategy
 - Single vs. Multiple Sourcing Strategy
 - Make or Buy (Outsourcing)
 - Spend Analysis and Cost Avoidance
- **Material Planning MRP (PMM-4 & 5)**
 - MRP Mechanics and Logic
 - MRP Inputs and Outputs
 - Working with MRP Action Messages
 - Re-Planning
- **Legal Aspects of Purchasing**
 - Agency Law and Contracts
 - Terms & Conditions

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Utilize learned basic terms, concepts, systems, and best practices used by purchasing professionals
- ▶ Apply learned material in performing their current job and/or be prepared for a next level job opportunity
- ▶ Use terminology and concepts learned in this course in preparing for the APICS Production and Inventory Management (CPIM) Certification exams



APICS: ESSENTIAL SKILLS FOR PLANNERS

Time Investment

This class is **32** hours of instruction in two 2-hour sessions over the course of **8** weeks.

Course Description

This course focuses on standard planning and control processes and systems used by Planners in manufacturing companies including Production and Material Planning & Control (MRP), Capacity Planning & Control (CRP), and Production Activity Control (PAC). All terms and concepts taught in this course are based on the APICS Body of knowledge.

Audience

This course is ideal for both new and experienced Planning employees (Production Control Supervisors, Production Planners, Material Planners, Capacity Planners, Planner/Buyers, Schedulers, Expeditors and Coordinators), and other P&IC associates who want to hone their job skills and gain practical knowledge in the field of Production Planning.

Prerequisites

None. It is strongly recommended that students have a basic knowledge or some experience in Planning.

Topics and Course Content

This course will cover topics such as:

- **Introduction to Manufacturing Management (PMM-2)**
 - Product and Process Choices
 - Manufacturing Strategy and Development
 - Manufacturing Production Methods
- **Product Structures (PMM-3)**
 - Structuring BOM's
 - Importance of Bill of Material Accuracy
 - Routing and Work Center Data
- **Material Planning MRP (PMM-4)**
 - Dependent and Independent Demand
 - MRP Inputs and Outputs
 - MRP Mechanics
- **Managing with MRP (PMM-5)**
 - MRP Explosion, Netting and Offsetting
 - Working with MRP Action Messages
 - MRP Performance Measurements

- **Capacity Management (PMM-7)**
 - Relationship Between Priority and Capacity Planning
 - Capacity Requirements Planning (CRP)
 - Managing Over / Underloads
- **Production Activity Control PAC (PMM-8)**
 - Linkage Between PAC and Planning System
 - PAC Scheduling and Control Activities
 - PAC Data Management and Feedback
- **Advanced Scheduling (PMM-9)**
 - MRP vs Lean Scheduling (Push vs. Pull)
 - Resolving Schedule Conflicts
 - Managing Bottleneck Work Centers (Theory of Constraints)
- **Lean Production Management (PMM-10)**
 - The Lean Production Methodology
 - Lean Production in Practice
 - Lean Scheduling

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Utilize learned basic terms, concepts, systems, and best practices used by Planning professionals
- ▶ Apply learned material in performing their current job and/or be prepared for a next level job opportunity
- ▶ Use terminology and concepts learned in this course in preparing for the APICS Production and Inventory Management (CPIM) Certification exams



APICS: ESSENTIAL SKILLS FOR WAREHOUSE AND DISTRIBUTION EMPLOYEES

Time Investment

This class is **24** hours of instruction in two 2-hour sessions over the course of **6** weeks.

Course Description

This course focuses on fundamental concepts related to Warehousing and Distribution Management. It addresses the sourcing, stocking, and distribution of products direct to customers or through complex supply chain distribution channels. Major topics covered in this course are: Inventory Planning and Control, Warehouse Management, Logistics, and Transportation, and Distribution Planning.

Audience

This course is ideal for both new and experienced warehouse employees including Stock Clerks, Shipping and Receiving Clerks, Material Handlers, Inventory Planners Transportation Specialists, and other warehouse associates who want to hone their job skills and gain practical knowledge in the field of Warehouse & Distribution Management.

Prerequisites

There are no prerequisites for this course. However, it is strongly recommended that students have a basic knowledge or some experience in warehouse operations.

Topics and Course Content

This course will cover topics such as:

- **Inventory Management (PDL-4)**
 - Basic Functions and Types of Inventory
 - Strategic Inventory Management
 - Inventory Replenishment and Safety Stock
- **Warehouse Management Concepts (PDL-7)**
 - Warehouse Management Functions
 - Warehouse Strategies, 3PL's
 - Warehouse Roles and Activities
- **Distribution and Logistics (PDL-2)**
 - Supply and Distribution Channel Structure
 - Distribution Function Roles and Activities
 - Logistics Strategy

- **Distribution Planning (PDL-5)**
 - Push vs. Pull Systems
 - Distribution Requirements Planning DRP
- **Packaging and Material Handling (PDL-8)**
 - Warehouse Design and Layouts
 - Materials Handling and Storage Systems
- **Transportation Management (PDL-9)**
 - Fundamentals of Transportation Management
 - Logistics and Outsourcing Models

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Apply the basic terms, concepts, and best practices used by Warehouse and Distribution Management professionals in performing their current job and/or preparing for a next level job opportunity
- ▶ Use the terminology and concepts learned in this course to aid them in preparing for APICS Certification exams for Production & Inventory Management (CPIM), Supply Chain Management (CSCP) or Logistics, Transportation & Distribution (CLTD)



APICS: ESSENTIALS OF OPERATIONS AND SUPPLY CHAIN MANAGEMENT

Time Investment

This class is **32** hours of instruction in two 2-hour sessions over the course of **8** weeks.

Couse Description

This course addresses the fundamental principles and practices of Operations and Supply Chain and business processes and systems. Major topics covered in this

course include: Demand Management, Sales and Operations Planning, Master Production Scheduling, Material Planning (MRP), Capacity Planning, Inventory Management and Control, Production Planning and Control, Purchasing, and Lean Management practices. Students will be introduced to accepted APICS Body of Knowledge concepts and terminology. While this class is not designed as an APICS Certification preparation course, it provides a strong foundation for students to prepare for the CPIM Certification.

Audience

This course is developed for Operations and Supply Chain professionals and practitioners who want to gain practical knowledge and skills that can be applied immediately in jobs and that will prepare them for additional professional development and certification. Planners, Buyers, Master Schedulers, Demand Planners, Production Planners, Material Planners, Production and Inventory control coordinators, cost accountants, Quality Control personnel, and others who are involved in the day-to-day activities of operations and supply chain management.

Prerequisites

There are no prerequisites for this course. It is strongly recommended that participants have some experience or knowledge in the field of supply chain and operations management activities such as Production and Inventory Control, Purchasing, Demand Management, Sales and Operations Planning, Master Production Scheduling, Material Planning (MRP), Capacity Planning, or Lean Operations.

Topics and Course Content

This course will cover topics such as:

- Demand Management Principles and Practices (FOP-4)
 - Forecast performance / error
 - MAD and Standard Deviation
 - Customer Relationship Management CRM
- Fundamentals of Sales and Operations Plan (FOP-5)
 - S&OP Process
 - MTS vs MTO Planning (inventory vs backlog)
 - S&OP policy and procedures
- Master Scheduling Foundations (FOP-8)
 - Relationship of MPS with S&OP planning
 - Master scheduling mechanic
 - Available to promise ATP
- Basics of Material Planning (FMM-4)
 - Dependent and independent demand
 - MRP inputs and output
 - MRP mechanics
- Capacity Planning and Management (FMM-7)
 - Relationship between priority and capacity planning
 - Capacity Requirements Planning CRP
 - Managing over / underloads



■ **Fundamentals of Inventory Management (FIM-2)**

- Inventory management objectives and strategy
- Function and purpose of inventory
- Inventory trade off decisions

■ **Fundamentals of Purchasing (FIM-8)**

- Purchasing Function and its relationship to the rest of the organization
- Activities and responsibilities of purchasing.
- Buyer/planner concept/role

■ **Introduction to Distribution & Logistics (FDL-2)**

- Supply and Distribution Channel structure
- Distribution function roles and activities
- Logistics strategy

■ **Lean Production Management (FMM-10)**

- Lean concepts
- Lean plant layout and scheduling (pull vs push)
- Lean tools and techniques
- Process Improvement and Performance (FMO-9)

■ **Process improvement methods and tools**

- Six sigma quality
- Balanced scorecard

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Explain fundamental concepts related to Operations and Supply Chain Management
- ▶ Be familiar with the terminology of Operations and Supply Chain Management
- ▶ Complete simple exercises demonstrating their understanding of the subject matter
- ▶ Apply the skills and practices that they have learned in their own jobs and *companies*
- ▶ Develop the foundation for taking APICS exams



APICS: SUPPLIER RELATIONSHIP MANAGEMENT CERTIFICATE

Time Investment

This class is **20** hours of instruction in two 2-hour sessions over the course of **5** weeks.

Course Description

This is a certificate course that provides participants with comprehensive knowledge of the concepts, tools, and trends related to supplier relationship management.

This course increases the knowledge and skills needed to create long-term and low-risk relationships with valuable suppliers. The included self-paced online program is 20 hours of additional education and a comprehensive final exam. After passing the exam, the participants will earn a certificate and digital badge.

Audience

This course is geared towards those who wish to further their careers by obtaining a certificate and digital badge from the Association of Supply Chain Management (ASCM), including those that are considering Procurement careers or have a few years of experience and are looking to expand their career options in Supply Chain Management or wish to stand out in a competitive job market. It may also be of interest to those that wish to gain education from ASCM, which is generally accepted as the "Gold Standard" in Supply Chain education, training, and development, or as a pathway for those who wish to achieve ASCM certifications such as a CPIM or CSCP.

Professional development is highly valued by employers. Employees with just one certification, certificate or credential earn 17% more than those without. [2022 ASCM Supply Chain Salary and Career Report]

Prerequisites

None, but some experience with purchasing and procurement would be beneficial.

Topics and Course Content

This course will cover topics such as:

- Introduction to Supplier Relationship Management
- Supplier Selection and Evaluation
- Supplier Development
- Supplier Performance Management
- Supplier Risk Management
- Supplier Relationship Management Best Practices

Learning Goals and Results

At the conclusion of this course, the participants will have the knowledge to:

- ▶ Discover and identify the different types of supplier relationships, contracts and agreements, and challenges associated with supplier relationship management
- ▶ Understand the importance behind strategic supplier selections and how to use criteria ranking methodology to identify supplier capabilities
- ▶ Examine the various roles and responsibilities for supplier relationship management, types of financial assistance, and how supplier collaboration can lead to innovation for your organization
- ▶ Understand the industry standards and best practices for monitoring, evaluating, reporting, and communicating performance expectations and how to assess and evaluate supplier performance to ensure expectations are met
- ▶ Learn how to identify and assess the risks associated with different suppliers and the strategies and practices for monitoring, managing, and mitigating supplier risks
- ▶ Determine how to manage supplier relationships through clear communication, collaboration, and performance monitoring and discover how to leverage technology to streamline SRM processes

APICS: SUPPLY CHAIN PLANNING CERTIFICATE

Time Investment

This class is **20** hours of instruction in two 2-hour sessions over the course of **5** weeks.

Course Description

This is a certificate course covering planning at all levels of the organization. Synchronization is critical to fast, accurate production, and delivery. By engaging all parts of the business, professionals can align planning processes and enable their supply chain organizations to experience significantly fewer disruptions. ASCM's Supply Chain Planning Certificate program introduces these essential planning fundamentals and clearly explains how to integrate all planning functions within a company.

Audience

This course will be of interest to those who wish to further their careers by obtaining a signed certificate and digital badge from the Association of Supply Chain Management (ASCM), including those that are considering Planning careers or have a few years of experience and are looking to expand their career options in Supply Chain Management or wish to stand out in a competitive job market. It will also be of interest to those that wish to gain education from ASCM, which is generally accepted as the gold standard in Supply Chain education, training, and development, or as a first step by those who wish to achieve ASCM certifications such as a CPIM or a CSCP.

Professional development is highly valued by employers. Employees with just one certification, certificate or credential earn 17% more than those without. [2022 ASCM Supply Chain Salary and Career Report]

Prerequisites

There are no formal prerequisites to this course, but some experience with planning at any level in the organization will be beneficial.

Topics and Course Content

This course will cover topics such as:

- Synchronized Planning
- Strategic Planning–Business Planning
- Strategic Planning–Demand Planning and S&OP
- Tactical Planning–Master Scheduling/MR
- Operations Execution–Purchasing and Production Activity Control, APS
- Distribution and Logistics Planning

Learning Goals and Results

At the conclusion of the course, the participants will have the knowledge to:

- ▶ Trace the flow of planning from business plan to execution
- ▶ Link business strategy to company plans
- ▶ Interpret and manage the master production schedule
- ▶ Interpret and manage the material requirements plan
- ▶ Help advance sales and operations planning meetings
- ▶ Identify technologies to support synchronous planning
- ▶ Create a channel tree design for a distribution system
- ▶ Determine order and reorder points
- ▶ Contribute to production and control activities



APICS: SUPPLY CHAIN PROCUREMENT CERTIFICATE— FUNDAMENTALS OF PURCHASING AND PROCUREMENT

Time Investment

This class is **20** hours of instruction taken in two 2-hour sessions over the course of **5** weeks.

Course Description

This is a certificate course covering procurement at all levels of the organization. The Supply Chain Procurement Certificate program is a foundational education program designed to help both entry-level and experienced supply chain professionals expand their procurement knowledge and skills. The course provides an overview of procurement fundamentals, sourcing strategies, supplier relationship management, negotiations, evaluation metrics and more.

Audience

This course will be of interest to anyone who is in any way involved with the procurement function, directly or indirectly. This includes: purchasing, quality engineering, materials management, marketing and finance employees who wish to further their formal knowledge in procurement and obtain a signed certificate and digital badge from the Association of Supply Chain Management (ASCM). It is also intended for anyone who is considering a new career in procurement or someone who has experience in the field and is looking to expand their career options and stand out in a competitive job market. It may also be of interest to anyone who wishes take the first step in furthering their Supply Chain Management knowledge and professional development by attaining an ASCM CPIM, CSCP and/or CLTD certification. ASCM certifications are generally recognized as the gold standard in Supply Chain Management education.

Professional development is highly valued by employers. Employees with just one certification, certificate or credential earn 17% more than those without. [2022 ASCM Supply Chain Salary and Career Report]

Prerequisites

There are no formal prerequisites to this course, but some experience with purchasing or procurement at any level in the organization will be beneficial.

Topics and Course Content

This course will cover topics such as:

- Fundamentals of Purchasing and Procurement
- Sourcing Strategies
- Purchase Order Management and Performance Measurement
- Contract Management and Negotiations
- Sustainability and Ethical Sourcing
- Procurement Evaluation Metrics and Intelligent Supply Chains

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Develop a strategic sourcing strategy
- ▶ Establish effective procurement policies
- ▶ Effectively score supplier capabilities and select optimal suppliers
- ▶ Engage in more effective contract management negotiations
- ▶ Trace the purchase order flow from requirements identification to purchase order close-out
- ▶ Review supplier and internal procurement organization performance using data and metrics
- ▶ Engage in sustainable and ethical sourcing



APICS: SUPPLY CHAIN RESILIENCE CERTIFICATE

Time Investment

This class is **20** hours of instruction in two 2-hour sessions over the course of **5** weeks.

Course Description

This is a certificate course covering resilience in the supply chain. The Supply Chain Resilience Certificate program is a premier continuing education certificate designed to help experienced supply chain professionals expand their resilience knowledge and skills. This course provides the participants with comprehensive knowledge of the concepts, practices, and trends related to organizational and strategic supply chain resilience.

Audience

This course will be of interest to those who wish to further their careers by obtaining a signed certificate and digital badge from the Association of Supply Chain Management (ASCM), including those who are considering Supply Chain careers or have a few years of experience and are looking to expand their career options in Supply Chain Management or wish to stand out in a competitive job market. It will also be of interest to those that wish to gain education from ASCM, which is generally accepted as the “Gold Standard” in Supply Chain education, training, and development, or as a first step for those who wish to achieve ASCM certifications such as a CPIM, CSCP, or CLTD.

Professional development is highly valued by employers. Employees with just one certification, certificate, or credential earn 17% more than those without. [2022 ASCM Supply Chain Salary and Career Report]

Prerequisites

None, but some experience in supply chain will be beneficial.

Topics and Course Content

This course will cover topics such as:

- Foundations of Supply Chain Resilience
- Risk Management in Supply Chains
- Strategic Planning, Data-Driven Decision-Making, and Collaboration
- Secure and Flexible Systems
- Leadership and Resilient Organizational Culture
- Sustainability, Innovation and Technology in Supply Chain Resilience

Learning Goals and Results

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

- ▶ Identify critical resources needed to create a resilient supply chain and the benefits of achieving end-to-end visibility
- ▶ Identify risks and analyze their impact, steps for developing a risk management plan, and the role of risk management training in a supply chain organization
- ▶ Discover strategic sourcing in supply chain resilience, define data analytics and key performance indicators, and explain the importance of information flows
- ▶ Understand the key elements of a secure supply chain and how different distribution and order management components can build resilience
- ▶ Understand how supply chain leaders must balance resilience and efficiency to secure your network during a disruption and how your leadership style can affect your supply chain
- ▶ Understand how implementing sustainable practices and utilizing technology can improve the resilience of your supply chain

APICS: SUPPLY CHAIN TECHNOLOGY CERTIFICATE

Time Investment

This class is **20** hours of instruction in two 2-hour sessions over the course of **5** weeks.

Course Description

This is a certificate course covering the use of technology in the supply chain. Technologies like AI, advanced analytics, cybersecurity, and additive manufacturing allow for more transparent supply chains, help predict future events, provide specific recommendations based on available data, automate routine tasks, streamline operations, cut costs and shorten delivery times. Staying up-to-date with technology and acquiring skills to align with your company's transformation goals is crucial for supply chain professionals in every job function.

Audience

This course will be of interest to those who wish to further their careers by obtaining a signed certificate and digital badge from the Association of Supply Chain Management (ASCM), including those that are working with technology in their Supply Chain careers or are looking to expand their career options in Supply Chain Management or wish to stand out in a competitive job market. It will also be of interest to those who wish to gain education from ASCM, which is generally accepted as the "Gold Standard" in Supply Chain education, training, and development, or as a first step by those who wish to achieve ASCM certifications such as a CPIM, CSCP, or CLTD.

Professional development is highly valued by employers. Employees with just one certification, certificate, or credential earn 17% more than those without. [2022 ASCM Supply Chain Salary and Career Report]

Prerequisites

None, but some experience in supply chain will be beneficial.

Topics and Course Content

This course will cover topics such as:

- Advanced Analytics and Automation
- Demand Planning Technologies
- Cybersecurity
- Blockchain
- Internet of Things
- Additive Manufacturing (3D Printing)

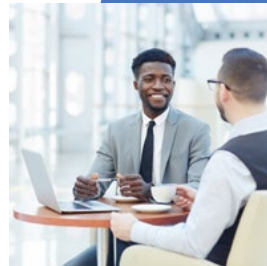
Learning Goals and Results

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

- ▶ Know how predictive analytics uses machine learning algorithms and data mining to predict future events and how prescriptive analytics takes it one step further by providing specific recommendations based on available data
- ▶ Understand how artificial intelligence and robotics can be implemented in supply chains to automate routine tasks
- ▶ Identify the reliability of supply chain forecasting technology, the integration of enabling technology, and the role of data and pattern recognition for inventory management and production
- ▶ Know the latest governance in cybersecurity, anti-hacking technology and access controls to manage, assess, mitigate and monitor your network
- ▶ Know how blockchain can allow for more transparent supply chains, improve product traceability, and enable smart contracts within the industry to maintain a digital record of workflows and processes
- ▶ Understand the infrastructure of the Internet of things — what it means for supply chain, and how digital twins can help companies make data-driven decisions
- ▶ Understand how connected logistics and smart production can streamline operations, cut costs, and shorten delivery times
- ▶ Learn about additive manufacturing in supply chain, appropriate use cases, and in-house vs. outsourcing considerations



Basic Skills



BUSINESS MATH ESSENTIALS

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

Participants will work to improve their basic math skills and be able to apply them on the job. Basic mathematical concepts and calculations commonly used in business settings are applied. Topics include basic operations with fractions and decimals, the order of operations for simple and complex equations, solving formulas, and using ratios and percentages.

Audience

This course is designed for the working individual who has a reasonable mastery of fundamental arithmetic and wants to improve or review the essentials as they are applied in the workplace.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Real Numbers
- Common and Mixed Fractions
- Decimals
- Ratios and Proportions
- Measurements
- Percentages
- Introduction to Geometry

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand the fundamentals of mathematics
- ▶ Use math as it applies to the workplace
- ▶ Improve their proficiency in critical thinking in math
- ▶ Apply math to real-world situations

Please Note: Course content and time investment can be customized to an individual company's needs.



FUNDAMENTALS OF ENGLISH

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

This course is designed to strengthen the language learner's basic communication skills. Participants learn parts of speech, punctuation, and common words, as well as the methods for writing sentences and paragraphs. The course includes email writing, composition basics, and common business documents.

Audience

This course is for all employees who struggle with basic English concepts and is especially helpful for non-native speakers who want to improve their writing and grammar skills.

Prerequisites

Participants should have some basic reading ability.

Topics and Course Content

This course will cover topics such as:

- Parts of Speech in English
- What Makes a Complete Sentence
- Writing Paragraphs
- Rules of Punctuation and Spelling
- Writing Emails
- Word Usage
- Pronunciation
- Word Devils

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand the essentials of English usage
- ▶ Create cohesive sentences and paragraphs
- ▶ Apply the rules of English grammar and style to common business documents
- ▶ Use everyday phrases to communicate messages

Please Note: Course content and time investment can be customized to an individual company's needs.



WORKPLACE ENGLISH ESSENTIALS

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

This course is designed to help non-native participants develop basic English-speaking skills in the modern workplace environment. Participants will spend time learning how to use words and phrases that are most commonly used in many businesses, thereby allowing them to improve their communication abilities with their supervisors and coworkers.

Audience

This course is designed for the non-native employees who want to improve their workplace English communication skills.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- The English Alphabet
- Writing, Spelling, Vocabulary, and Grammar Usage
- Workplace English
- Frontline Worker Roles
- Safety in the Workplace
- Work Communications
- The Problem-Solving Process
- Continuous Improvement

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Recite the English alphabet
- ▶ Identify principle jobs
- ▶ Define critical safety practices in English
- ▶ Use English workplace vocabulary
- ▶ Ask and answer basic questions about workplace processes

Please Note: Course content and time investment can be customized to an individual company's needs.



WORKPLACE SKILLS ESSENTIALS

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

The modern workplace requires that we communicate effectively, work with people of different cultures, solve problems, follow procedures, resolve conflicts, use a computer, work safely, and adapt to change. This course focuses on raising the basic skill levels of employees so they can more completely contribute to the success of an organization.

Audience

This course is geared to frontline workers who are seeking to improve their workplace skills.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Improving Reading and Writing Skills in English
- Communication Skills
- Basic Math
- Critical Thinking Skills
- Introduction to Computer Technology

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Improve their Problem-Solving abilities
- ▶ Apply some fundamental mathematical concepts
- ▶ Improve their communication skills
- ▶ Develop their reading skills to understand basic English-written materials at work such as safety procedures

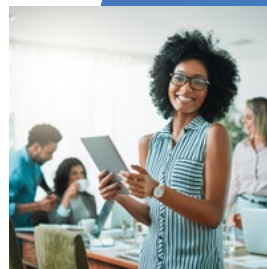
Please Note: Course content and time investment can be customized to an individual company's needs.







Business Skills



BUSINESS WRITING SKILLS

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

The effective flow of information is the lifeline of a business. In this business writing course, participants gain a fundamental understanding of good writing for any context – the workplace and beyond. Starting with some simple strategies to clarify business objectives and audience needs, we study the principles of good writing structure and apply them to several everyday business documents. This class will help employees who communicate throughout the day to write effectively, reply to the steady stream of correspondence, and write reports, procedures, manuals, and proposals.

Audience

This business writing course is aimed at early or mid-career professionals who need to learn or improve their core skills in business writing. They might be those who are moving into managerial roles, people returning to the workforce after extended leave, or office managers wanting to adopt current best practices in their workplace.

Prerequisites

Students are assumed to have a basic proficiency in written English (at least a high school graduate's level). Computers with MS Word will be used so participants should be familiar with the basic functions of a computer operating system such as navigating the environment using a mouse and keyboard.

Topics and Course Content

This course will cover topics such as:

■ Planning

Understanding audience needs, confirming your objectives, and choosing the right level of formality before starting to write

■ Structure

An overview of the structures that apply to almost any format (narrative, hierarchy or topic-based), followed by hands-on practice of some standard formats in the essential items of everyday business communication: emails and brief proposals

■ Flow

Practicing the rules of good paragraph structure, with a topic sentence and strong linking techniques, and ensuring a distinctive call to action

■ Navigation

Helping the reader scan for information, through features such as clear formatting, different heading levels, bullets, graphs and charts that replace dense and heavy text

■ Review

An overview of good grammar and business writing styles, with an introduction to self-editing using the right techniques at different stages of the writing process

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Write for a specific context, audience, and purpose
- ▶ Choose the right level of formality for that context
- ▶ Choose the right structure (or template) for the task at hand
- ▶ Write jargon-free communications that are clearer and more concise
- ▶ Self-check for content, structure, expression and style

Please Note: Course content and time investment can be customized to an individual company's needs.



BUILDING WORK RELATIONSHIPS

Time Investment

This class is **24** hours of instruction in 4-hour sessions over the course of **6** weeks.

Course Description

In complex situations, work is accomplished through the cooperative efforts of many people. Conflicts and differences are positive forces if we know how to connect them.

The ability to develop good interpersonal skills and create understanding in the workplace environment can “make or break” one’s career. In this course, the participants will become more mindful communicators. They will develop self-awareness, examine circumstances, and knowingly choose and use productive communication strategies. The students will find their communication/work style, identify strengths and weaknesses, and master the winning strategies to work harmoniously to achieve workplace goals.

Audience

This course is designed for people who want to improve their work relationships, boost impact, increase productivity, and push for results by applying successful communication skills and interpersonal management.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Effective Work Interactions
- Building work relationships
- Behaviors that strengthen or weaken relationships
- Communication and Perceptions
- Listening barriers
- Active listening
- Perceptions
- Building trust
- Mirroring and rapport

- Identifying your communication style: how you relate most often
- Sharpening verbal and nonverbal behaviors and skills
- Building Better Relationships
- Perceptions
- Styles
- Flexing the Styles
- Relationship Building
- Managing preconceptions
- Building trust
- Managing personal attitudes
- Communicating Needs
- Needs Assessment
- Assertiveness
- Personal SWOT (Strengths, Weaknesses, Opportunities, Threats) Assessment
- Flexible Communication
- Using feedback and questioning skills for mutual communication
- Managing Change and Conflict
- Dealing with conflict and relational change
- Understanding your conflict-resolution style
- Win-win conflict resolution

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Build better relationships with colleagues
- ▶ Develop flexibility in actions, thoughts, and feelings to better handle most situations
- ▶ Reduce misunderstandings that may result from misinterpretation or poor listening
- ▶ Recognize strengths, weaknesses, and opportunities in work relationships
- ▶ Grasp the concepts for excellent communication by observing, listening, analyzing, planning, and communicating

Please Note: Course content and time investment can be customized to an individual company’s needs.

CONDUCTING EFFECTIVE MEETINGS

Time Investment

This class is **8** hours of instruction in 4-hour sessions over the course of **2** weeks.

Course Description

Our ability to manage effective meetings is critical to organizational success. To work successfully with people so that they produce desired results, while feeling respected and motivated, is a challenge. This interactive program focuses on the skills, qualities, techniques, and tools needed to plan and conduct successful meetings. Meetings are a means to bring out the best ideas, use resources for effective problem solving, and resolve conflicts that impact effectiveness. Through a series of participative activities, students have a chance to learn how to plan, run, and contribute in highly productive meetings that facilitate information exchange. Participants will acquire valuable tools and skills for keeping people focused, following through on decisions and actions, and achieving desired outcomes.

Audience

Team leaders and members wishing to improve their ability to run effective meetings.

Prerequisites

None



Topics and Course Content

This course will cover topics such as:

- Identifying Barriers to Good Meetings
- Setting the Stage for a Positive Environment
- Planning Objectives and Setting a Meeting Agenda
- How to Inform Participants so They Come Prepared to a Meeting
- Communicating During a Meeting
- Setting Up the Ground Rules For a Meeting
- Setting Up the Meeting Parking Lot
- Structure And Control Of a Meeting
- Managing Time to Keep The Meeting Moving Forward
- Following Up on Action Items
- Summarizing and Recording the Results of a Meeting
- Evaluating the Meeting

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Plan a meeting and structure an effective agenda
- ▶ Better manage the three phases of a meeting—before, during, and after
- ▶ Apply the tools and structures to run an effective meeting
- ▶ Facilitate challenging situations
- ▶ Lead an analysis of meeting success

Please Note: Course content and time investment can be customized to an individual company's needs.

CONFLICT RESOLUTION

Time Investment

This class is 8 hours of instruction in 4-hour sessions over the course of 2 weeks.

Course Description

This course will focus on conflict resolution in the workplace and will provide skills for participants to recognize, manage, and resolve conflict in a constructive manner. Participants will learn to strengthen their personal and professional relationships by constructively addressing conflicts between individuals and within their organizations.

Audience

This course is meant for working professionals who want to expand their conflict management skills, understand their own responses and behaviors when addressing conflict, and seek constructive techniques to manage conflict.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Understanding Workplace Conflicts
- Recognizing workplace conflicts
- Understanding personal responses to conflict
- Investigating obstacles to conflict management
- Conflict Strategies
- Identifying your preferred strategies for responding to conflict
- Understanding the five conflict strategies
- Exploring appropriate strategies to minimize/manage conflict
- Processing Conflict Situations
- Identifying personal responses to particular conflicts
- Applying the ACCESS Model
- Using Trust to Reduce Conflicts
- Building Trust
- Recognizing interests behind positions
- Difficult Behaviors

- Defining difficult behavior
- How to handle the different behaviors
- Resolving Conflicts
- Defining positions in a specific conflict
- Establishing mutual beneficial goals
- Planning for the future

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand the fundamental causes of conflict in the workplace
- ▶ Assess their personal conflict style
- ▶ Recognize the different conflict styles
- ▶ Address interpersonal conflict using a systematic method
- ▶ Outline methods to develop flexible responses to conflict situations
- ▶ Apply strategies to improve responses to conflicts

Please Note: Course content and time investment can be customized to an individual company's needs.



CUSTOMER SERVICE SKILLS

Time Investment

This class is **20** hours of instruction in 4-hour sessions over the course of **5** weeks.

Course Description

Delivering customer service that inspires customer loyalty requires great communication skills and a service-oriented mindset. Participants will learn to understand customer expectations and guide customer conversations to achieve a superior level of customer satisfaction. They will also learn to use problem solving tools around difficult customer requests.

Audience

This program is designed for service providers and their leaders who want to build and manage world class service.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Exceptional customer service standards
- Benefits of customer loyalty
- Understanding and exceeding customer expectations
- Building internal customer service
- Communicating and listening to your customers
- Creative solutions to difficult situations
- Defusing angry customers
- Learning techniques for service recovery

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Describe exceptional customer service
- ▶ Identify the benefits of great customer service
- ▶ Recognize barriers to the delivery of outstanding customer service
- ▶ Adapt to specific customer behavior styles
- ▶ Understand customer service satisfaction and take corrective actions
- ▶ Develop a personal action plan to improve customer service skills

Please Note: Course content and time investment can be customized to an individual company's needs.



EFFECTIVE COMMUNICATION AND TIME MANAGEMENT

Time Investment

This class is **24** hours of instruction in 4-hour sessions over the course of **6** weeks.

Course Description

This Time Management training course will help participants become more productive and more efficient in whatever role they may have in an organization. Using the tools presented in this workshop, managers, leaders, and employees will understand the benefits of time management and take control of multiple priorities with greater ease. The course enables participants to understand how to become more effective while minimizing activities that reduce personal productivity.

Audience

Leaders and employees that want to make better use of their time

Prerequisites

None



Topics and Course Content

This course will cover topics such as:

- Personal Activity Analysis
- Identifying Time Wasters
- Identifying Roles And Their Goals
- Setting Goals and Planning for Success
- Organizing to Increase Productivity
- Organizing Workstations
- Daily and Weekly Planning
- Prioritizing
- Managing Meetings
- Effective Delegation
- Controlling Telephone Time
- Setting Boundaries

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Prioritize long-term goals
- ▶ Manage multiple priorities
- ▶ Develop organization habits
- ▶ Apply scheduling strategies

Please Note: Course content and time investment can be customized to an individual company's needs.

FRONTLINE LEADERSHIP

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **15** weeks.

Course Description

The Frontline Leadership training course is designed to help up-and-coming leaders get ready for their new tasks and obligations. Participants will discover the essentials of true leadership. Through self-assessment tests, role-playing, and other leadership situations, they will explore leadership roles as planner, mentor, coach, manager, cheerleader, guide, and team member.

Audience

Supervisors or managers who need leadership training as they walk into a leadership role or who are about to take on new leadership duties.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Making the Transition from Colleague to Captain
- Strategies for Successful Leadership
- Analyzing Behavior Styles
- Effective Communication Skills
- Hiring the Right People
- Coaching and Motivating for Results
- Providing Constructive Feedback
- Conducting Performance Reviews
- Managing Conflicts
- Progressive Discipline
- Decision-Making Tools
- Time Management and Setting Smarter Goals

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Develop strategies for building strong working relationships
- ▶ Understand the differences in employees' behavior styles
- ▶ Recognize positive results to motivate employees
- ▶ Set goals and manage priorities
- ▶ Give constructive feedback
- ▶ Establish performance reviews
- ▶ Develop strategies for handling conflicts
- ▶ Conduct behavior-based interviews

Please Note: Course content and time investment can be customized to an individual company's needs.



INTERPERSONAL SKILLS DEVELOPMENT

Time Investment

This class is **45** hours of instruction in 3-hour sessions over the course of **15** weeks.

Course Description

In this program, participants will discover how perceptions influence interactions and learn to accept differing perceptions. They will also learn how to resolve conflict while maintaining constructive relationships with others. They will learn to use listening and feedback skills to build understanding and clarify issues.

Audience

This course is designed for all employees who wish to improve the interpersonal skills necessary for succeeding in building effective working relationships.

Prerequisites

None



Topics and Course Content

This course will cover topics such as:

- The Power Building Professional Relationships
- Understanding Communication and Work Styles
- How Perceptions Influence Interactions
- Skills for Listening—Verbal And Nonverbal Communication
- Assertive Communication
- Clear Self-Expression Without Blame or Judgment
- Resolving Conflicts
- Anticipating Reactions
- Learning to View Everyone As Your Customer

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Build personal credibility
- ▶ Negotiate for win-win outcomes
- ▶ Develop listening skills for understanding
- ▶ Communicate appropriately with peers and managers
- ▶ Develop the appropriate skills for handling conflict
- ▶ Give and receive constructive feedback

Please Note: Course content and time investment can be customized to an individual company's needs.

INTERVIEWING SKILLS: SELECTING THE RIGHT EMPLOYEE

Time Investment

This class is **8** hours of instruction in 4-hour sessions over the course of **2** weeks.

Course Description

Employers continuously face the challenge of hiring the right employees. It is important to hire the best people who can produce the results needed. By using methods and techniques taught in this course, participants will develop an increased success rate in selecting the best candidate for the job. In this interactive program, participants will learn how to match skills and competencies to positions that need to be filled.

Audience

Managers, supervisors, team members or human resources professional responsible for interviewing and selecting employees. This program is designed for those who would like to learn how to hire more effectively to meet changing business needs.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Preparing for the Interview
- Conducting the Behavior-Based Interview
- Legal and Illegal Questions
- Evaluation and Selection
- Role Playing Practice

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Plan and conduct a logical, structured interview
- ▶ Increase their effectiveness by applying an interview model and format
- ▶ Improve skills for probing and obtaining more truthful information
- ▶ Sharpen their interviewing skills with hands-on practice
- ▶ Understand different hiring techniques with an in-depth study of the behavioral approach to interviewing
- ▶ Define job requirements and specifications
- ▶ Develop effective targeted questions to identify the best qualified candidate
- ▶ Understand how to handle legally sensitive areas

Please Note: Course content and time investment can be customized to an individual company's needs.



LEADERSHIP ESSENTIALS

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **15** weeks.

Course Description

Students in this course will have the opportunity to gain an understanding of the critical skills that are necessary to develop to support successful leadership in organizations. By participating in several assessment activities, students will gain an understanding of their own personal assets and liabilities. Throughout the course, students will gain an understanding of the most important skills associated with leadership.

Audience

Any individual interested in motivating employees, developing team members' skills, and developing a continuous improvement culture.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Making the Transition from Buddy to Boss
- Ten Leadership Functions
- Work Styles and Motivation
- Communication Skills
- The Leader's Role in Defining Quality
- Managing Conflict
- Adaptable Leadership-The Four Leadership Styles
- Managing Meetings
- Time Management
- Team Development
- Present with Confidence and Power
- Effective Interviewing
- Performance Management
- Progressive Discipline
- Electronic Business Communication

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand what a leader is and is not
- ▶ Know own unique leadership style
- ▶ Make a smooth transition to the first leadership position
- ▶ Find out what people expect and respect in a leader
- ▶ Learn how to motivate a team, including difficult people

Please Note: Course content and time investment can be customized to an individual company's needs.



LEADERSHIP SKILLS DEVELOPMENT

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **15** weeks.

Course Description

This course is designed to provide leaders with skills to enhance organization goals and improve bottom-line results. During the course, participants will have an opportunity to identify and discover their strengths and the areas that need improvement. This training focuses on developing key leadership abilities that will result in high-performing individuals and teams.

Audience

Leaders and managers that wish to fine-tune their leadership abilities

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Ten Modern Functions of the Leadership Role
- Flexible Leadership Styles
- Communication Strategies
- Connecting Performance Goals With the Organization's Vision
- Creating and Leading a High Performing Team
- Motivating and Influencing Others for Win-Win Outcomes
- Coaching for Optimal Performance
- Managing Change
- Leading Effective Meetings
- Time Management

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Have a deeper understanding of their leadership role and responsibility
- ▶ Communicate more effectively
- ▶ Adapt their leadership style to appropriate situations
- ▶ Apply delegation strategies
- ▶ Use effective coaching to maximize performance
- ▶ Apply time management tools and techniques

Please Note: Course content and time investment can be customized to an individual company's needs.



LEADERSHIP SKILLS DEVELOPMENT II

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **15** weeks.

Course Description

This course is a follow-up program to the PDC's Leadership Essentials course. This course is highly interactive with hands-on exercises throughout all topic areas. In this course, participants will continue to explore topics critical to developing effective leadership skills such as motivation, team development, and communication, with a particular emphasis on business communication skills, such as modern business writing.

Audience

This course is intended for organizational leaders, key support staff and operational managers, as well as graduates of the PDC Leadership Essentials course.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Business Ethics
- Emotional Intelligence
- Communications II/Appreciative Inquiry
- Five Practices of Exemplary Leadership
- Business Etiquette
- Managing in a Multigenerational Environment
- Collaborative Business Writing
- Communication Strategies
- Critical Thinking
- Employee Onboarding
- Hiring Strategies and Employee Recruitment
- Project Management Essentials
- Presentations Skills-Persuasive
- Risk Assessment and Management
- Social Intelligence
- Stress Management
- Train the Trainer

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Build a leadership style that creates trust
- ▶ Understand the key executive leadership skills and techniques you need to create a winning strategy
- ▶ How to build an extraordinary team that works together to deliver results
- ▶ Develop keen emotional intelligence for professional achievement and satisfaction
- ▶ Identify the characteristics of effective leadership
- ▶ Develop an executive leadership style that adapts to the person and situation
- ▶ Improve performance through effective delegation
- ▶ Clearly communicate values

Please Note: Course content and time investment can be customized to an individual company's needs.



LEADERSHIP FOR NEW AND FUTURE SUPERVISORS

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **15** weeks.

Course Description

This course is designed for new and future supervisors who want to grow their leadership skills and management techniques to become more confident leaders. Participants will learn how the transition from individual contributor to supervisor and how to establish authority, credibility, and direction for their team. They will also learn how to motivate employees and handle challenging situations. This course is also suitable for new managers that can benefit from new techniques and tools to enhance their leadership skills. Participants will learn how to communicate, coach, and build effective teams.

Audience

This course is for employees that are new to their leadership positions and interested in enhancing their abilities to motivate employees and developing team members' skills.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- **From Colleague to Captain**
Managing the transition from friend and co-worker to boss of former peers
- **Ten Modern Leadership Functions**
The key traits all new leaders must have
- **Work Styles and Motivation**
Working with each of Four Communication Styles for improved communication and motivation
- **Meeting Management**
Proven methods for productive and efficient meetings
- **Managing Conflicts**
Using the TKI Theory of Conflict Styles to manage conflicts
- **Communication Skills for Leaders**
Communication, listening skills, and feedback

- **Effective Interviewing**
Techniques and tools for selecting the right person for the job
- **Team Development**
Leading teams and running better meetings
Applying the "Rule of 7"
- **Presentation Skills**
The fundamental tools for developing and delivering Informative and Persuasive Presentations
- **Flexible Leadership Styles**
Tools for using the appropriate style to the situation and person
- **Business Writing: Writing Emails**
Modern email etiquette
- **Coaching, Evaluations and Feedback**
Coaching and feedback skills for the leader
Devising coaching strategies
- **Progressive Discipline**
Working through issues of performance using progressive discipline strategies
- **Managing Change**
Understanding how to implement changes and breaking down the old paradigms
- **Training for the Trainer**
Teaching and training techniques for training in a work environment using adult learning theory

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Develop strategies for building strong working relationships
- ▶ Understand the differences in employees' behavior styles
- ▶ Recognize positive results to motivate employees
- ▶ Set goals and manage priorities
- ▶ Give constructive feedback
- ▶ Manage meetings more efficiently
- ▶ Develop strategies for handling conflicts
- ▶ Avoid common leadership mistakes

Please Note: Course content and time investment can be customized to an individual company's needs.

LEADING A LEAN ORGANIZATION

Time Investment

This class is **80** hours of instruction in 4-hour sessions over the course of **20** weeks.

Course Description

This course relates both traditional and new marketing concepts to today's fast-paced, competitive, and segmented business environment, with emphasis on relating marketing theory to practical and effective real-world solutions.

This course surveys the business practices involved in the activities of moving goods and services from the producer to the ultimate consumer.

Audience

This course is intended for leaders, support staff, and production operators interested in coming together to build a world-class organization driven by quality, responsiveness and customer satisfaction.

This course explores the underlying philosophies of high performance work systems and the tools and techniques necessary to achieve exceptional performance. The format of the course focuses on intact work teams and engages all levels of the organization through education, practical applications, and continuous improvement projects.

Prerequisites

Fundamentals of Lean Principles.

Topics and Course Content

This course will cover topics such as:

- Ten Modern Leadership Functions
- The Leader's Role in Defining Quality
- Identifying and Examining Costs
- Setting Direction and Purposing for High Performance
- Creating the End-State Vision
- Installing Metrics that Measure Critical Business Indicators
- Installing the Lean Project Office
- Communication Styles/Work Styles
- Coaching and Motivation

- Active Listening and Maintaining Healthy Attitudes
- Implementing Change
- Implementing the Open Systems Model
- Input 4 Transformation 4 Output analysis
- Analyzing the External Environment
- Five and 6S and Audit Check List
- Problem Solving
- Process Mapping
- Flowchart Techniques
- Value Stream Analysis
- Inventory Control
- Total Productive Maintenance
- Project Implementation
- Resistance to Change
- Thinking Styles
- Dealing with Difficult People
- Giving and Receiving Feedback
- Conflict Management
- Progressive Discipline
- Negotiation Skills
- Presentation Skills
- Presentations and Graduation

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Apply key leadership skills to implement lean
- ▶ Know how to build amazing teams that work together to deliver results
- ▶ Apply and teach the tools of lean
- ▶ Manage the necessary culture change
- ▶ Develop continuous improvement engagement throughout the workforce
- ▶ Coaching and develop team members to pursue improvements in safety, quality, and productivity

Please Note: Course content and time investment can be customized to an individual company's needs.

LEADING A MULTI-GENERATIONAL ENVIRONMENT

Time Investment

This class is **8** hours of instruction in 4-hour sessions over the course of **2** weeks.

Course Description

In this course, students will explore generational diversity by taking a closer look at the five generations that currently make up today's workforce, and by exploring some of the differences in each generation's work habits. By utilizing the tips and suggestions presented in this course, students will become more aware of practices at work which bridge differences between the multiple generations of employees in their workplace.

Audience

Leaders that need to know how to work at a diverse and multi-generational workforce.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- The Five Generations in the Workplace
- How Events Influenced the Outlook of Each Generation
- Integrating Into a Multigenerational Workforce
- Realities And Biases of a Multigenerational Workforce
- Motivators
- Coaching Expectations of Each Generation

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Identify the different generations that make up today's workforce
- ▶ Describe the major differences between the generational approaches to work
- ▶ Develop strategies to work and communicate more effectively with co-workers from each generation

Please Note: Course content and time investment can be customized to an individual company's needs.



MANAGING CHANGE

Time Investment

This class is **8** hours of instruction in 4-hour sessions over the course of **2** weeks.

Course Description

Modern organizations need to be flexible and able to change to remain competitive. This program helps participants deal successfully with managing change. They will use tools and develop skills to communicate the change in a manner that will have a positive impact. By dealing directly with the challenge of change, participants in the course will develop personal leadership strategies that will move any change initiative more smoothly.

Audience

Those responsible for or influenced by the implementation of changes in their organizations

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Defining Change
- Developing Strategies to Create a Change-Proficient Organization
- Leading Change
- Dimensions and Types of Change
- Preparing for Change
- Managing the Impact of Change
- Managing Resistance to Change
- Developing a Communication Plan for Change
- Implementing Change

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Form a plan for change
- ▶ Develop strategies to optimize change initiatives
- ▶ Understand the dynamics of change
- ▶ Utilize strategies to neutralize negative responses to change

Please Note: Course content and time investment can be customized to an individual company's needs.



MANAGING CONFLICT SITUATIONS

Time Investment

This class is **8** hours of instruction in 4-hour sessions over the course of **2** weeks.

Course Description

Conflict in the workplace is inevitable and can potentially cause irreparable harm to effective working relationships and cost the company losses in productivity. In this course, participants will have the opportunity to relate personal insights to the ways in which they might modify their behaviors to achieve greater rapport in their workplace relationships and identify several approaches to effectively resolve and manage conflicts. This course will help supervisors, managers, and employees to distinguish between differences and conflict, and identify professional strategies in order to resolve conflict positively and proactively.

Audience

This class has been designed for anyone working in partnership with others to achieve specific objectives and who must enhance their ability to deal positively with conflict.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Understanding Sources of Conflicts
- Discovering the Barriers to Conflict Management
- Conflict Style Self-Assessment
- Listening to Others' Points of View for Better Understanding
- Assess and Resolving Conflict Situations Appropriately
- Determining Common Ground / How to Reinstate Trust
- Analysis of Conflict Case Studies

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand both the positive and negative aspects of conflict
- ▶ Describe both the causes and effects of conflict situations
- ▶ Choose how to modify their behavior to improve their conflict management style
- ▶ Apply their knowledge of how to build collaborative working relationships
- ▶ Turn the phrase "Win/Win" from a cliché into a working concept

Please Note: Course content and time investment can be customized to an individual company's needs.



MARKETING AND SALES

Time Investment

This class is **32** hours of instruction in 4-hour sessions over the course of **8** weeks.

Course Description

Participants in this program will learn the components to developing a strategic marketing plan and develop the skills needed to communicate the benefits of their company's products and services. They will also learn to identify their target audience and respond to a potential customer's buying signals. The content includes the essential elements required to build effective rapport, understand the customer's needs, and gain commitment for the sale.

Audience

This course is for all employees who want to contribute to increasing sales and customer retention levels.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Scope of Sales and Marketing
- Methods of Market Research
- Identifying Customers
- Market Trends and Competitors
- Sales and Marketing Strategies
- What Makes a Successful Salesperson
- Effective Communication
- Managing Customer Expectations
- Gaining Commitment to the Sale
- Making a Sales Presentation

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Describe the relationship between marketing and sales
- ▶ Develop a marketing plan with sales goals
- ▶ Effectively communicate the benefits of products and services

Please Note: Course content and time investment can be customized to an individual company's needs.



MARKETING STRATEGIES

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

This course relates both traditional and new marketing concepts to today's fast-paced, competitive and segmented business environment with the emphasis on relating marketing theory to practical and effective real-world solutions. Participants will study the business practices involved in the activities of moving goods and services from the producer to the ultimate consumer.

Audience

This course has been designed for those already in marketing, new marketing people without a formal marketing background, and non-marketing people who are interested in reviewing basic marketing concepts and need a better understanding of marketing.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Understanding Marketing and the Marketing Process
- Marketing in a Changing World: Creating Customer Value and Satisfaction
- Strategic Planning and the Marketing Process
- The Global Marketing Environment
- Developing Marketing Opportunities and Strategies
- Marketing Research and Information Systems
- Consumer Markets and Consumer Buyer Behavior
- Business Markets and Business Buyer Behavior
- Market Segmentation, Targeting, and Positioning for Competitive Advantage
- Developing the Marketing Mix
- Product and Services Strategy

- New-Product Development and Product Life-Cycle Strategies
- Pricing Products: Pricing Considerations and Approaches
- Pricing Products: Pricing Strategies
- Distribution Channels and Logistics Management
- Retailing and Wholesaling
- Integrated Marketing Communication Strategy
- Advertising, Sales Promotion, and Public Relations
- Personal Selling and Sales Management
- Direct and Online Marketing
- Managing Marketing
- Competitive Strategies: Building Lasting Customer Relationships
- The Global Marketplace
- Marketing and Society: Social Responsibility and Marketing Ethics
- Marketing in the New Economy: The Challenges and Opportunities

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand the theory behind marketing, the latest catchphrases and how marketing activities fit within businesses and organizations of all sizes and sectors
- ▶ Understand the importance of identifying clear marketing objectives
- ▶ Recognize the key components of the marketing mix, and how to utilize these to meet marketing or organizational goals
- ▶ Feel confident applying a range of marketing tools and templates in their day to day work

Please Note: Course content and time investment can be customized to an individual company's needs.

MOTIVATING AND MENTORING EMPLOYEES

Time Investment

This class is **24** hours of instruction in 4-hour sessions over the course of **6** weeks.

Course Description

When stepping into a leadership position, one should be able to coach others. Yet, who prepares leaders to be good coaches? This course provides participants with skills needed to help others they work with become as successful as possible.

Audience

Leaders that would like to improve their coaching and motivating skills.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Coaching and Motivation as Management Functions
- Guiding Employees Toward Maximizing Individual Abilities
- Developing a Coaching Strategy
- Monitoring Performance
- Goals and Methods of Coaching
- Improving Interpersonal Communication Skills
- Strategies to Deal with Conflict
- Communicating Goals and Expectations

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Develop a coaching partnership
- ▶ Identify coaching opportunities
- ▶ Transform difficult employees into high-performing employees
- ▶ Gain commitment to shared goals
- ▶ Effectively use constructive feedback to empower and motivate

Please Note: Course content and time investment can be customized to an individual company's needs.



NEGOTIATIONS SKILLS

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

The development of on-going customer relationships is key to any successful organization. Unless negotiations achieve a win-win outcome, it is likely that such relationships will break down over time. This training will demystify the process and the underlying core skills of effective negotiation. It will give participants the knowledge, skills and confidence they need to become effective negotiators, in a wide range of face-to-face and telephone situations.

Audience

This course is designed for professionals in a re-seller market arena focusing on:

- Communication and Behavioral Styles: Individual Assessments
- Definitions and Descriptions of Negotiation
- Common Sense Rules Negotiation
- Common Sense Ethics of Negotiation

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Getting to Yes
 - Don't Bargain Over Positions
 - Separate the People from the Problem
 - Focus On Interests, Not Positions
 - Invent Options for Mutual Gain
 - Insist On Using Objective Criteria
 - What If They Are More Powerful?
 - What If They Won't Play?
 - What If They Use Dirty Tricks
 - Ten Questions People Ask About Getting To Yes
- The Negotiating Game
 - The Negotiating Society
 - Winners and Losers
 - What Makes a Good Negotiator
 - What's Your Aspiration Level
 - You Have More Power than You Think
 - People Who Influence
 - Inoculation Against Influence
 - Status
 - The Role of Role
 - Needs, Goals and Action
 - The Anatomy of Negotiation
 - Strategy
 - Tactics, Deadlock and Countermeasures
 - The Successful Manager Negotiates
 - Organize to Win Your Objectives
 - The Wheel of Negotiation
- The Win-Win Negotiator
 - The PRAM Model
- In Business as In Life, You Don't Get What You Deserve, You Get What You Negotiate
 - How Winners Win
 - Areas Other than Price to Look for Win-Win Solutions
- The Only Negotiating Guide You'll Ever Need
 - What Is Negotiation?
 - Negotiations Four Possible Outcomes
 - Three Critical Elements of Negotiation
 - Questioning Skills: How to Uncover Your Counterpart's Needs
 - Listening Skills: A Powerful Key to Successful Negotiating
 - Non-Verbal Behavior: The Language of Negotiating
 - Building Trust in Negotiation
 - Sharks, Carps and Dolphins: Your Negotiating Counterparts
 - The Role of Negotiating Styles
 - 101 Ways to Win
 - "Thirteen Common Errors of Negotiators"
 - Applying Kaizen to Negotiation
 - Video Simulated Negotiations with Review

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Be more confident in negotiation situations
- ▶ Strike better deals
- ▶ Strive for win-win agreements
- ▶ Foster ongoing customer relationships
- ▶ Gain best outcomes from inter-personal interactions
- ▶ Develop a range of transferable skills

Please Note: Course content and time investment can be customized to an individual company's needs.



PERFORMANCE MANAGEMENT

Time Investment

This class is **24** hours of instruction in 4-hour sessions over the course of **6** weeks.

Course Description

This course is designed to help managers and supervisors develop the skills needed to create a rigorous approach to performance management, including activities that ensure goals are consistently being met in an effective and efficient manner. Performance appraisals often raise the anxiety levels of both managers and employees. Thus, special emphasis will be placed on how to prepare for and conduct performance discussions that are objective, complete, and defensible. In this interactive course, the participants will share experiences and participate in various exercises to ensure that they fully understand how to get the best possible performance from employees.

Audience

Leaders responsible for evaluating and giving feedback to employees

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Establishing Performance Goals
- Common Performance Issues
- Observing and Providing Feedback
- Evaluating and Rewarding Performance
- Performance Improvement and Development Plans
- Setting Objectives
- Coaching to Performance
- Skills for Appraisal and Performance Reviews
- Progressive Discipline

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Gain a working knowledge of performance management processes
- ▶ Communicate effectively on issues relating to performance management
- ▶ Align the strategic goals to individual performance plans
- ▶ Conduct an effective performance appraisal

Please Note: Course content and time investment can be customized to an individual company's needs.



PRESENTATION SKILLS

Time Investment

This class is **12** hours of instruction in 4-hour sessions over the course of **3** weeks.

Course Description

If a business presentation is not delivered well, chances are it will not be heard at all. In this course, participants will learn the skills necessary to build their confidence and self-assurance to present to any audience. They will learn to become comfortable with their own presentation style and learn to present their ideas with conviction and without fear. They will learn how to conquer the lectern and deliver presentations that get results. From vibrant openings to inspiring closings, participants will have an opportunity to practice and refine their public speaking skills.

Audience

Anyone who needs to develop or improve their presentation skills, speak in front of groups (large or small) or sell ideas to others will benefit from taking this course.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Fundamentals of a Good Presentation
- Analyzing Your Audience
- Developing and Organizing Your Content
- The Three Main Parts of a Great Presentation
- Using Visual Aids
- Practice Presenting Skills

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Apply fundamental presentation skills
- ▶ Adapt the presentation to the Audience
- ▶ Overcome nervousness
- ▶ Use voice and gestures to animate the presentation

Please Note: Course content and time investment can be customized to an individual company's needs.



PROBLEM SOLVING

Time Investment

This class is **48** hours of instruction in 4-hour sessions over the course of **12** weeks.

Course Description

Problems are a fact of everyday life, and this includes the workplace environment. This course introduces a systematic approach to solving problems both individually and collaboratively. Participants will learn the basic problem solving process, as well as tools and techniques for when they get trapped on a particularly tough problem. Participants will apply problem solving tools to solve actual challenges they are facing in the workplace.

Audience

Anyone who needs to develop or improve their problem solving skills at the workplace environment will benefit from taking this course.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- The Problem-Solving Process
- Team Roles And Responsibilities
- Obstacles to Effective Problem Solving
- Defining the Problem
- Collecting and Analyzing Information
- Root Cause Analysis
- Creating Solutions
- Decision-Making
- Consensus-Building
- Action Planning
- Implementation

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Define the problem from different viewpoints
- ▶ Define the gap that exists between the current state and the desired state
- ▶ Develop approaches to identify the root causes of a problem
- ▶ Use various tools to collect and analyze data
- ▶ Employ creative solutions to repair the problem
- ▶ Measure the results

Please Note: Course content and time investment can be customized to an individual company's needs.



PROJECT MANAGEMENT PROFESSIONAL (PMP® AND CAPM®) PREPARATION

Time Investment

This class is **56** hours of instruction in 3.5-hour sessions over the course of **16** weeks.

Course Description

Learn the Project Manager and Associate Project Manager roles and how to add value to your organization through best practice Project Management.

This course is designed for persons who want in-depth coverage of project management topics with exposure to a multitude of time-tested PM tools, techniques, and lessons learned. In this course, the participant will learn globally recognized practices of project management, acknowledged by the Project Management Institute (PMI®), to successfully manage projects.

The course includes comprehensive topics required to adequately prepare for Project Management Professional (PMP®) or Certified Associate in Project Management (CAPM®) certifications, as well as comparison/contrast of methodologies including Waterfall, Agile Scrum and Kanban. This course incorporates a variety of learning techniques to engage the students such as presentations, project scenario activities, group discussions, one-on-one workshops, sample certification questions, and workbook exercises.

Note: This Certificate of Achievement meets the minimum hours of contact credit for PMI Certifications.

Audience

Team Leads, Engineers, Project Managers, Coordinators, Project Office Managers, Supervisors, Systems Analysts, Developers or Individuals wanting to transition to or understand the Project Manager or Associate Project Manager roles.

Prerequisites

Students taking this course should have some experience working on projects.

Topics and Course Content

This course will cover topics such as:

- **Examining Professional Project Management**
 - Identify Project Management Processes
 - Identify Professional and Social Responsibilities
 - Identify the Interpersonal Skills Required for a Project Manager
- **Initiating a Project**
 - Examine the Project Management Context
 - Examine Project Selection
 - Prepare a Project Statement of Work
 - Create a Project Charter
 - Identify Project Stakeholders
- **Planning Project Work**
 - Identify Elements of the Project Management Plan
 - Document Stakeholder Requirements
 - Create a Scope Statement
 - Develop a Work Breakdown Structure
- **Developing Project Schedules**
 - Create an Activity List
 - Create a Project Schedule Network Diagram
 - Estimate Activity Resources
 - Estimate Duration for Project Activities
 - Develop a Project Schedule
 - Identify the Critical Path
 - Optimize the Project Schedule
 - Establish a Schedule Baseline
- **Developing Cost Estimates and Budgets**
 - Estimate Project Costs
 - Estimate the Preliminary
 - Cost Baseline
 - Reconcile Funding and Costs
- **Planning Project Quality, Staffing, and Communications**
 - Create a Quality Management Plan
 - Document the Project Roles, Responsibilities, and Reporting Relationships
 - Create a Communications Management Plan

■ Analyzing Risks and Planning Risk Responses

- Examine a Risk Management Plan
- Identify Project Risks and Triggers
- Perform Qualitative Risk Analysis
- Perform Quantitative Risk Analysis
- Develop a Risk Response Plan
- Planning Project Procurement
- Plan Project Procurements
- Prepare a Procurement Statement of Work
- Prepare a Procurement Document

■ Executing Project Work

- Identify the Direction and Manage Project Execution Process
- Execute a Quality Assurance Plan
- Acquire the Project Team
- Develop the Project Team
- Manage the Project Team
- Distribute Project Information
- Manage Stakeholder Relationships and Expectations

■ Managing Project Procurement

- Identify the Conduct Project Procurements Process
- Obtain Responses from Sellers
- Determine Project Sellers

■ Monitoring and Controlling Project Work

- Identify the Monitor and Control Project Work Process
- Develop an Integrated Change Control System
- Review Deliverables and Work Results
- Control the Project Scope

■ Monitoring and Controlling Project Schedule and Costs

- Control Project Schedule
- Control Project Costs

■ Monitoring and Controlling Project Performance and Quality

- Quality Control
- Report on Project Performance

■ Monitoring and Controlling Project Risk and Procurements

- Monitor and Control Project Risk
- Administer Project Procurements

■ Closing the Project

- Close Project Procurements
- Close the Project or Phase

■ Project Integration Management

■ Project Interpersonal Skills

■ Professional Conduct and Responsibilities

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Describe professional project management
- ▶ Initiate a project
- ▶ Plan project work
- ▶ Develop project schedules
- ▶ Develop cost estimates, and budgets
- ▶ Plan project quality, staffing and communications
- ▶ Analyze project risks
- ▶ Plan project procurement
- ▶ Manage project procurement
- ▶ Execute project work
- ▶ Monitor and control project work
- ▶ Monitor and control project schedule and costs
- ▶ Monitor and control project quality, staffing, and communications
- ▶ Monitor and control project risks and contracts
- ▶ Close the project

Please Note: Course content and time investment can be customized to an individual company's needs.



PURCHASING AND SOURCING

Time Investment

This class is **48** hours of instruction in 4-hour sessions over the course of **12** weeks.

Course Description

This course is taught by certified instructors who will walk through every step of the purchasing management process, including negotiating, vendor relations, and materials management. Participants will have a better understanding of the impact they have on the business.

Audience

This course is designed for those in purchasing who would like to increase their professional approach to purchasing and the related supply management disciplines. Participants may also pursue their Certified Professional in Supply Management (CPSM) credential through the Institute for Supply Management (ISM).

After completing the course, participants will have an improved understanding of procurement, sourcing and leadership concepts consistent with the CPSM and CSM body of knowledge.

Prerequisites

Purchasing experience

Topics and Course Content

This course will cover topics such as:

- **Section 1: Sessions 1 thru 4**
 - Contracting and Negotiation
 - Cost and Finance
 - International
 - Social Responsibility
 - Sourcing
 - Supplier Relationship Management
 - Section Review and Analysis, consistent with ISM practices

- **Section 2: Sessions 5 thru 8**

- Forecasting
- Logistics
- Materials and Inventory
- Organization/Department Assessment
- Planning
- Product and Service Development
- Project Management
- Quality
- Section Review and Analysis, Consistent with ISM Practices
- Visual Workplace and 5S Strategy
- Brainstorming Visual Workplace Tools
- Standard Work Exercise
- 5S Process Review

- **Section 3: Sessions 9 thru 12**

- Leadership
- Risk and Compliance
- Strategic Sourcing
- Section Review and Analysis, Consistent with ISM Practice

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand modern procurement strategies and techniques
- ▶ Define the essential expertise, knowledge, and skills necessary for success as a purchasing agent
- ▶ Delineate the standards for successful selection of suppliers
- ▶ Manage relationships to reduce costs, improve quality, and improve performance
- ▶ Know legal requirements and concerns
- ▶ Apply negotiation techniques in the current environment

Please Note: Course content and time investment can be customized to an individual company's needs.

STRATEGIC PLANNING

Time Investment

This class is **24** hours of instruction in 4-hour sessions over the course of **6** weeks.

Course Description

Strategic planning is vital for ensuring an organization will still be a leader in its field far into the future. The ability to develop working strategies and to take those business strategies from plan to action sets true leaders apart from their peers. In this interactive course, participants will learn strategic business planning and strategy formulation. The entire strategic planning process is covered in detail, from the basics of strategy formulation to the implementation of business strategies.

Audience

Those responsible for developing and implementing strategic plans in their organization

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Fundamentals of Strategic Planning
- Understanding the Strategic Planning Process
- Clarifying Organizational Mandates
- Clear Statement of the Company's Vision, Mission and Objectives
- SWOT Analysis
- Designing and Validating Tactics
- Developing a Competitive Advantage Business Plan
- Communicating the Plan
- Updating and Revising the Plan

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Apply analytical and conceptual approaches to strategic planning
- ▶ Integrate strategy, objectives, metrics and performance
- ▶ Use a SWOT analysis
- ▶ Create a business plan to gauge progress toward the end goal

Please Note: Course content and time investment can be customized to an individual company's needs.



STRESS MANAGEMENT

Time Investment

This class is **8** hours of instruction in 4-hour sessions over the course of **2** weeks.

Course Description

There are numerous causes of stress in our lives, many of which, unfortunately, cannot be avoided. The goal is to learn to reduce the amount of stress in participants' lives while at the same time increasing their ability to manage it when unavoidable situations occur.

This Stress Management Training Course provides participants with techniques to manage your stress. Effective stress management will lead to better health and greater productivity for all.

Audience

This course is designed for participants who need to learn how to cope with workplace stress

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Personal Stress Analysis
- What Is Stress
- How Stress Affects Us
- Identifying Stressors in Our Lives
- Stress Reduction Techniques
- Managing Stress
- Building Skills to Manage Stress

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Recognize the symptoms of stress
- ▶ Identify stressors
- ▶ Assess their own stress condition
- ▶ Learn ways to manage stress

Please Note: Course content and time investment can be customized to an individual company's needs.



TEAM BUILDING AND WORKING COLLABORATIVELY

Time Investment

This class is **24** hours of instruction in 4-hour sessions over the course of **6** weeks.

Course Description

In our constantly changing work environment, we must quickly integrate new associates from many different work disciplines. A team structure adapts most easily to changing conditions and has the greatest potential for breakthrough solutions with new approaches to work challenges. This interactive course provides participants with effective communication tactics that can help build strong working relationships with customers, colleagues, managers, and internal customers. Whether a team is an ongoing work group or a special project-based team of short duration, participants will rapidly increase its effectiveness with the use of these teamwork tools and skills.

Audience

Individuals who will benefit from this course include managers, supervisors, project leaders, team leaders, and team members.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Dealing with Different Behavior and Communication Styles
- Developing Listening and Communication Skills
- Goals and Processes of Teams
- Stages of Team Development
- Meeting Management Skills
- Goal Setting and Problems Solving
- Managing Conflict

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Employ techniques for building strong working relationships with others
- ▶ Identify how to work with different personalities and identify the best way to communicate with each one
- ▶ Demonstrate different strategies on how to assemble an effective team
- ▶ Analyze one's personal perception and how that relates to others

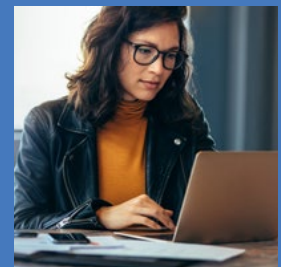
Please Note: Course content and time investment can be customized to an individual company's needs.







Computer Skills



CYBER SECURITY

Time Investment

This class is **35** hours of instruction in 3.5-hour sessions over the course of **10** weeks.

Course Description

This course covers the interdisciplinary field of cybersecurity by discussing the evolution of information security into cybersecurity, cybersecurity theory, and the relationship of cybersecurity to nations, businesses, society, and people. Participants will review multiple cybersecurity technologies, processes, and procedures, learn how to analyze the threats, vulnerabilities and risks present in these environments, and develop appropriate strategies to diminish potential cybersecurity problems.

Audience

This course is for anyone with none to three years of cybersecurity experience. Also, professionals with responsibility in the areas of audit, risk, compliance, information security, government and legal functions with a familiarity of basic IT/IS concepts who are new to cybersecurity or are interested in entering the field of cybersecurity.

Prerequisites

Students taking this course should have a basic understanding of computers and the essentials of their operating systems.

Topics and Course Content

This course will cover topics such as:

- **Foundation of Security**
 - Essential Terminologies
 - Potential Losses Due to Security Attacks
- **Securing Operating Systems**
 - Threats to System Security
 - Guidelines for Windows OS Security
- **Protecting System Using Antiviruses**
 - How Does Antivirus Software Work?
 - Steps to Install Antivirus on Your Computer
- **Data Backup**
 - Online Backup Service Providers
 - Back Up the Data Using Windows Backup

- **Internet Security Settings**
 - Understanding Cookies
 - Risks Involved Online
- **Securing Online Transactions**
 - Online Shopping
 - Trustworthy and Untrustworthy Websites
- **Securing Email Communications**
 - Email Security Treats
 - Email Security Procedures
- **Social Engineering and Identity Theft**
 - Protecting from Identity Theft
 - What to Do if Identity is Stolen?
- **Security on Social Networking Sites**
 - Security Risks Involved in Social Networking Sites
 - Facebook Privacy Settings
- **Securing Mobile Devices**
 - Mobile Device Security Risks
 - Threats to Bluetooth Devices

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Explain Information Assurance (IA) principles
- ▶ Identify the key parts of a cybersecurity network
- ▶ Describe risk management processes and practices as it applies to cybersecurity
- ▶ Identify security tools
- ▶ Distinguish system among the types security threats and vulnerabilities
- ▶ Describe different categories of attacks
- ▶ Define types of incidents including responses and timelines for response
- ▶ Analyze threats and risks within context of the cybersecurity
- ▶ Review cybersecurity incidents to apply appropriate response
- ▶ Evaluate decision making outcomes of cybersecurity scenarios

Please Note: Course content and time investment can be customized to an individual company's needs.

MICROSOFT® OFFICE ACCESS

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

If you are familiar with Excel and you need to manage and analyze large amounts of data, Microsoft Access® may be the next logical tool for you. Microsoft Access® is an information management tool that allows the user to store, report, and analyze information within a relational database. Access makes it easy to keep sort, organize, and track data.

In this course, the participants will learn about the important features of the program and how to use them. Once the basics are reviewed, the more advanced features will be covered for a complete understanding. If you have used Access before, the first few lessons will be a refresher, after which you will become familiar with the updates you'll encounter in the newest version of Microsoft Access.

Audience

This course is designed for students who wish to establish a foundational understanding of Microsoft Office Access®, including the skills necessary to create a new database, construct data tables, design forms and reports, and create queries.

Prerequisites

Students taking this course should have a basic understanding of computers and the essentials of their operating systems. They should also have good keyboarding skills and know how to use a computer mouse.

Topics and Course Content

This course will cover topics such as:

- Access Requirements and Setup
- Databases and Normalization
- Access Database Objects
- Navigating Microsoft Access®
- Creating a Database and Adding Tables
- Object Views
- Creating Simple Forms

- Introduction to Controls and Formatting Forms
- Queries
- Using Criteria, Operators, and Wildcards
- Parameter Queries
- Relationships and Joins
- Creating Calculated Expressions
- Summarizing Data
- Pivot Tables
- Pivot Charts
- Reports
- Designing Your Report
- Advanced Formatting for Reports
- Macros
- Printing and Exporting Reports
- Importing and Exporting Data

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Describe databases and normalization
- ▶ Demonstrate the creation of a database and add tables
- ▶ Summarize object views
- ▶ Create simple forms
- ▶ Apply usage of queries and their criteria
- ▶ Use parameter queries
- ▶ Summarize data
- ▶ Demonstrate the usage of pivot tables
- ▶ Design, create and print reports
- ▶ Use macros
- ▶ Import and export data

Please Note: Course content and time investment can be customized to an individual company's needs.

MICROSOFT® OFFICE ESSENTIALS FOR SMALL COMPANIES

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **15** weeks.

Course Description

This course introduces the basic features of Microsoft Office, Windows, and file management. It helps participants develop familiarity with Word, Excel, Access, PowerPoint, email, and Internet basics.

Audience

This course is intended for shop floor personnel, production operators and support staff interested in inputting data, corresponding effectively by email and preparing charts and simple reports, among other things.

Prerequisites

Familiarity with the keyboard is recommended

Topics and Course Content

This course will cover topics such as:

■ MICROSOFT WINDOWS

Introduction to Windows: Windows desktop, window elements, windows accessories, keyboard layout, minimize and maximize and restore a window, move and size a window, scrolling a window, programs and dialog boxes, Windows screen layout, starting applications, basic keyboard typing practice.

■ MICROSOFT WORD

Getting Started with Word: wrap text and correct spelling, delete and insert text, combine and split paragraphs, saving files, printing, and building typing speed on the computer.

Editing Skills: selecting and editing text, viewing and scrolling through a document, undo and redo actions, formatting characters, applying underline and other character effects, change case, and continue practice building typing speed on the computer.

■ FILE MANAGEMENT

Taskbar, windows explorer, displaying and changing folders, creating folders, moving and copying files, deleting files, finding files.

■ MICROSOFT EXCEL

Getting Started with Excel: screen elements, using menus and toolbars, undo and redo, navigating within a worksheet, entering and editing data, changing column widths, aligning labels, creating a simple worksheet.

Designing and printing a worksheet: planning and sketching a worksheet, entering row and column labels, entering text data, entering formulas, naming worksheet tabs, creating user documentation, protecting a worksheet, previewing a worksheet prior to printing, choosing page orientation, formatting on the page, printing a worksheet.

Worksheet editing and formulas: copying and pasting data, displaying multiple toolbars, naming individual and groups of cells, naming a constant, creating formulas using cell and variable names, spell checking, and using Find and Replace.

■ MICROSOFT INTERNET EXPLORER & OUTLOOK EMAIL

Exploring the Internet: what is the Internet, typing Internet addresses, searching the Internet, navigating web pages, finding text in a web page, printing a web page.

Introduction to Outlook and E-Mail: starting outlook, identifying parts of the outlook window, addressing, composing, and sending e-mail, sending attachments, reading e-mail, printing e-mail.

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Recognize when to use each of the Microsoft Office programs to create professional business documents
- ▶ Use Microsoft Office programs to create personal and/or business documents following current professional and/or industry standards
- ▶ Pursue future courses specializing in one or more of the programs
- ▶ Apply skills and concepts for basic use of computer hardware, software, networks, and the Internet in the workplace

Please Note: Course content and time investment can be customized to an individual company's needs.

MICROSOFT® EXCEL (LEVELS 1, 2 AND 3)

Time Investment

Each level is **48** hours of instruction in 4-hour sessions over the course of **12** weeks.

Course Description

In this course participants will work with Microsoft Office Excel® to create spreadsheets and workbooks that can be used to store, manipulate, and share data.

In the higher levels, the participants will work with charts and tables along with other useful formatting tools. They will also learn to create formulas that use built-in functions to perform advanced analysis. The class also covers the creation of shared workbooks and the tracking of changes within them.

Audience

Designed for individuals interested in increasing their knowledge and proficiency with Excel, this workshop can be of great value for participants transitioning from older versions of Excel and anyone wishing to move their Excel skills to a higher level.

Prerequisites

Prospective students should be familiar with basic computer terminology, be proficient with the use of the mouse and keyboard, and have at least six months' experience using Microsoft Excel for level 2. Level 3 participants should have taken levels 1 and 2. Participants should understand basic mathematical principles to obtain full advantage of what the workshop offers.

Topics and Course Content

This course will cover topics such as:

■ LEVEL 1 – COURSE OUTLINE

- Program Fundamentals
- Getting Started with Worksheets
- Performing Calculations
- Modifying a Worksheet
- Formatting a Worksheet
- Printing Workbook Contents
- Create and Work with Charts

■ LEVEL 2 – COURSE OUTLINE

- Create Advanced Formulas
- Analyze Data with Logical and Lookup Functions
- Create and Modify Tables
- Sort and Filter Data
- Create, Modify, and Format Charts
- Create a PivotTable, Filter Data, and Analyze Data
- Insert and Modify Graphic Objects
- Customize Workbooks
- Create and Work with Templates

■ LEVEL 3 – COURSE OUTLINE

- Working with Macros
- Auditing Worksheets
- Analyzing Data
- Working with Multiple Workbooks
- Exporting Excel Data
- The Web and External Data
- Customizing Excel

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Level 1 participants will be able to create a basic worksheet, perform calculations, modify a worksheet, create and work with charts, print workbook contents, and manage an Excel workbook
- ▶ Level 2 participants will be able to use advanced formulas, organize worksheet and table data using various techniques, create and modify charts, analyze data using PivotTables, Slicers, and Pivot Charts, insert and modify graphic objects in a worksheet, and customize and enhance workbooks
- ▶ Level 3 participants will be able to automate common tasks, create and edit a macro, audit workbooks to avoid errors, export data, and share data through exports and the web

Please Note: Course content and time investment can be customized to an individual company's needs.

MICROSOFT® EXCEL (INTERMEDIATE-ADVANCED)

Time Investment

The class is **48** hours of instruction in 4-hour sessions over the course of **12** weeks.

Course Description

In this course participants will work with charts and tables along with other useful formatting tools. They will also learn to create formulas that use built-in functions to perform advanced analysis. The class will cover the creation of shared workbooks and the tracking of changes within them. Participants will cover a number of topics and will be introduced to a wide range of software capabilities in the subjects of calculation, data management, data analysis, visualization and reporting. Students will participate in creating various worksheet models as guided by the instructor.

Audience

The course is designed for individuals who are seeking to learn the ever-increasing capabilities of the Microsoft Excel application. This course can be a great value for participants seeking personal growth opportunities to improve their workplace performance, participants transitioning from older versions of Excel and anyone wishing to move their Excel skills to a higher level.

Prerequisites

Prospective students should have experience using Excel. Generally, 6 months or more is optimal. However, students having experience in other Microsoft applications such as Outlook or Word will likely adapt quickly.

Topics and Course Content

This course will cover topics such as:

- PivotTables and PivotCharts
- Introduction to Power Query and Power Pivot
- Advanced Functions:
 - Lookups (VLOOKUP, XLOOKUP, INDEX, MATCH, etc.)
 - Data Statistical (DSUM, DAVERAGE, DGET, etc.)
 - Logical (IF, AND, OR)
 - Text (UPPER, LOWER, CONCAT, etc.)

- Tables
- Workbook Auditing
- Conditional Formatting
- Charts (Column, Bar, Pie, Pareto)
- What If Analysis (Data Tables, Scenario Manager)
- Custom Function Creation (LAMBDA, VBA)
- Templates
- Macros (VBA and Keyboard Recorded)

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Automate common tasks
- ▶ Create and edit a macro
- ▶ Audit workbooks to avoid errors
- ▶ Export data
- ▶ Share data through exports and the web

Please Note: Course content and time investment can be customized to an individual company's needs.



MICROSOFT® OFFICE OUTLOOK

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

Today, email has become one of the most widely used methods of business communication. In most organizations, email is the preferred form of communicating information among employees. As email grows in popularity and use, most organizations have found the need to implement a company communication management system such as Microsoft Office Outlook®.

Audience

Designed for individuals interested in increasing their knowledge and proficiency with Outlook, this workshop can be of great value for participants transitioning from older versions of Outlook and anyone wishing to improve their skills following current professional and/or industry standards.

Prerequisites

Prospective students should be familiar with basic computer terminology, have a basic understanding of how to work with Microsoft® Office Windows®, and be proficient with the use of the mouse and keyboard.

Topics and Course Content

This course will cover topics such as:

- Composing Messages
- Organizing Messages
- Managing Contacts
- Scheduling Appointments
- Scheduling Meetings
- Managing Tasks and Notes
- Setting Calendar Options
- Customizing Message Options
- Managing Tasks
- Customizing the Outlook Environment
- Locating Outlook Items
- Working with Public Folders
- Personalizing Email

- Organizing Outlook Items
- Managing Outlook Data Files
- Working with Contacts
- Saving and Archiving Email

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Navigate outlook to read and respond to email
- ▶ Use the address book, format and spell check new messages
- ▶ Attach files and insert illustrations to messages
- ▶ Customize read and response options
- ▶ Use flags, categories, and folders to organize messages
- ▶ Create and work with contacts
- ▶ Create appointments and schedule meetings in calendar
- ▶ Create and work with tasks and notes
- ▶ Sort messages
- ▶ Work with calendar settings
- ▶ Manage contact groups
- ▶ Import and export contacts

Please Note: Course content and time investment can be customized to an individual company's needs.



MICROSOFT® OFFICE OUTLOOK & ONENOTE

Time Investment

This class is **32** hours of instruction taken in 4-hour sessions over the course of **8** weeks.

Course Description

This course is essentially a deep dive into the use of email, meetings, tasks and contacts in Microsoft Outlook. Combined with Microsoft OneNote, students will gain experience and insight into creating a more cohesive, efficient, and effective information management system; thus, increasing their ability to communicate and participate as team members in a professional environment.

Audience

This course is for individuals interested in gaining more knowledge and proficiency with Microsoft Outlook while experiencing the benefits of adding Microsoft OneNote to their tool kit. Students who use Outlook as their primary information management tool, and are hoping to improve their knowledge and capabilities, are encouraged to attend.

Prerequisites

None. Prospective students should be familiar with basic computer terminology, have a basic understanding of how to work with Microsoft Office Windows, and be proficient with the use of the mouse and keyboard.

Topics and Course Content

This course will cover topics such as:

- **Email**
 - Composing Messages
 - Opening and Responding to Messages
 - Organizing Messages
 - Rules and Categorization of Messages
 - Customizing Message Options
- **Appointments and Meetings**
 - Scheduling Appointments
 - Scheduling Meetings
 - Setting Calendar Options
- **Tasks**
 - Recording and Scheduling Tasks and To-Dos
 - Setting Task Priorities

- **Contacts**
 - Creating and Managing Contacts
- **Outlook General**
 - Customizing the Outlook Environment
 - Locating Outlook Items
 - Personalizing Outlook
- **OneNote**
 - Organize and Manage all information in OneNote's electronic notebook
 - Leverage the integration of OneNote with Outlook and other Microsoft Office applications
 - Increase efficiency and effectiveness of meeting notes, project information, reporting, and communication

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Combine Outlook and OneNote to create their own Information Management System
- ▶ Become a more effective communicator in using email, attending meetings, and as a project team member
- ▶ Better organize Outlook items (messages, to-dos, contacts) for quicker access
- ▶ Respond more efficiently and confidently to requests from co-workers, clients, etc

Please Note: Course content and time investment can be customized to an individual company's needs.



MICROSOFT® OFFICE POWERPOINT

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

Today's audiences are accustomed to high-impact multimedia content. By learning how to use the vast assortment of features within PowerPoint, participants will gain the ability to organize their content, augment it with high-impact displays, and deliver it with power. In this course, participants will be able to create appealing and vibrant multimedia presentations.

Audience

This course is designed for students who wish to gain a solid understanding of Microsoft PowerPoint that is necessary to create and develop powerful multimedia presentations.

Prerequisites

Participants should be familiar with using personal computers and should have experience using a keyboard and mouse. Students need to be comfortable in the Windows environment and be able to use the operating system to manage information such as files and folders on their computers.

Topics and Course Content

This course will cover topics such as:

- Creating a PowerPoint Presentation
- Performing Editing and Formatting Procedures
- Adding Graphical Elements
- Modifying Objects
- Adding Tables and Charts
- Delivering Your Presentation
- Modifying the PowerPoint Environment
- Customizing Design Templates
- Adding SmartArt
- Adding Audio, Video, and Animations to a Presentation

- Sharing a Presentation on the Web
- Customizing a Slide Show
- Broadcasting, Recording, and Distributing a Presentation

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Identify the basic features and functions of PowerPoint
- ▶ Develop a PowerPoint presentation
- ▶ Perform advanced text editing processes
- ▶ Add graphical elements
- ▶ Modify objects
- ▶ Add tables and charts

Please Note: Course content and time investment can be customized to an individual company's needs.



MICROSOFT® OFFICE PROJECT

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

This course is designed to help project managers in planning, executing, and managing projects of all sizes by learning how to develop a plan, create tasks, assign resources, manage a budget, and track progress in Microsoft Office Project.

Audience

This course is meant for users new to Microsoft Project, those upgrading from previous versions, anyone new to a project management role, and anyone who wants to learn about project management and Microsoft Project.

Prerequisites

It is recommended that participants have a basic knowledge of Microsoft Windows and understand how to manage files. It is also helpful to have a fundamental understanding of the principles of project management.

Topics and Course Content

This course will cover topics such as:

- Overview of Project Management and Microsoft Project® Fundamentals
- Entering and Scheduling Tasks
- Gantt Chart wizard
- Entering and Assigning Resources
- Viewing the Project Database
- Update and View Project Progress
- Balancing Project Progress
- Project Reports
- Working with Multiple Projects
- Customizing Project
- Comprehensive Review

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Define project phases deliverables and detailed tasks
- ▶ Develop a plan for a project
- ▶ Create a project using the Microsoft Project program
- ▶ Identify project costs and determine contingencies
- ▶ Manage, assign, and track resources
- ▶ Work with deadlines and constraints
- ▶ Use and work with dependencies
- ▶ Apply the tools to report on progress updates
- ▶ Create baselines and interim plans
- ▶ Run reports

Please Note: Course content and time investment can be customized to an individual company's needs.



MICROSOFT® OFFICE WORD

Time Investment

This class is **40** hours of instruction for each level in 4-hour sessions over the course of **10** weeks.

Course Description

Participants will achieve a polished, professional look for their documents. With each level, they will advance their skills using powerful formatting features including tables, text, and images. With Microsoft Word's more advanced features, you can augment your skills with advanced tools such as mail-merge and automatic headers and footers.

Audience

This course is for anyone that wants to develop or improve their Microsoft Word skills. This course is also for anyone that is using an older version, but wants to learn newer versions of Microsoft Word.

Prerequisites

Prospective students should be familiar with basic computer terminology, be proficient with the use of the mouse and keyboard, and have at least six months' experience using Microsoft Word for Level 2. Level 3 participants should have taken Levels 1 and 2.

Topics and Course Content

This course will cover topics such as:

■ Level 1 – Course Outline

- Creating a Basic Document
- Editing a Document
- Formatting Text
- Formatting Paragraphs
- Adding Tables
- Inserting Graphic Objects
- Controlling Page Appearance
- Grammar and Spell Check

■ Level 2 – Course Outline

- Managing Lists
- Working with Tables and Charts
- Customizing Formatting with Styles and Themes
- Using Images in a Document
- Creating Customized Graphic Elements
- Inserting Content Using Quick Parts

- Controlling Flow of Text
- Using Templates to Automate Document Creation
- Using Mail Merge
- Using Macros to Automate Tasks

■ Level 3 – Course Outline

- Microsoft Office Word® with Other Programs
- Collaborating on Documents
- Managing Document Versions
- Adding Reference Marks and notes
- Making Long Documents Easier to Use
- Securing a Document

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

Level 1

- ▶ Work with the basic features of word
- ▶ Work with a document
- ▶ Display documents using various views
- ▶ Use a range of font formatting techniques
- ▶ Format paragraphs
- ▶ Create and modify tabs and tables
- ▶ Insert and work with clip art and pictures
- ▶ Print a document

Level 2

- ▶ Use a range of formatting techniques
- ▶ Work with a PDF document
- ▶ Work with word options and document properties
- ▶ Create and apply styles
- ▶ Create and use templates
- ▶ Insert and work with headers and footers in a document
- ▶ Perform various merging tasks
- ▶ Draw and format shapes
- ▶ Insert and work with text boxes
- ▶ Use table features to improve the layout and format of tables

Level 3

- ▶ Create and work with master documents
- ▶ Using autocorrect properly
- ▶ Create and use building blocks
- ▶ Use a range of document proofing features
- ▶ Understand and use the tracking feature in Word
- ▶ Compare multiple versions of the same document
- ▶ Create and remove several forms of protection for your document
- ▶ Understand, insert and work with fields in a document
- ▶ Create and work with electronic forms in Word
- ▶ Create and work with macros

Please Note: Course content and time investment can be customized to an individual company's needs.



QUICKBOOKS® PRO

Time Investment

This class is **40** hours of instruction in 3-hour sessions, 2 sessions per week. The final 2 sessions will be 2 hours each over the course of **7** weeks.

Course Description

QuickBooks can be used for almost all financial business processes. This course is for anyone who wants to gain control over the financial aspects of a small business. QuickBooks® can be used for entering receipts, tracking expenses, invoicing, payment tracking, tax tracking, purchase orders, and for the preparation of reports and statements regarding finances.

Audience

A small business owner can use the software program to set up a chart of accounts, reconcile checking accounts, track payables, track inventory, create estimates and generate reports.

Prerequisites

Prospective participants should be familiar with basic computer terminology, comfortable with the use of the mouse and keyboard, and have file management experience.

Topics and Course Content

This course will cover topics such as:

- **Introducing QuickBooks**
 - Course Introduction
 - Introducing QuickBooks
 - Getting Around in QuickBooks
 - All the Accounting You Need to Know
 - Exiting QuickBooks
 - Setting up QuickBooks
 - Creating a QuickBooks Company
 - Entering Company Info
- **Setting Up QuickBooks Preferences**
 - Choosing a Start Date
 - Setting Up Income and Expense Accounts
 - Providing Details About Your Income
 - Entering Opening Balances
 - Finishing the Interview
 - Getting Help While Using QuickBooks
- **Working with Lists**
 - Using QuickBooks Lists
 - Editing the Chart of Accounts
 - Working with the Customer Job List
 - Working with the Employee List
 - Working with the Vendor List
 - Adding Custom Fields
 - Managing Lists
- **Working with Bank Accounts**
 - Writing a QuickBooks Check
 - Using Bank Account Registers
 - Entering a Handwritten Check
 - Transferring Money Between Accounts
 - Reconciling Checking Accounts
- **Using Other Accounts in QuickBooks**
 - Other Account Types in QuickBooks
 - Tracking Credit Card Transactions
 - Working with Asset Accounts
 - Working with Liability Accounts
 - Understanding Equity Accounts
- **Entering Sales and Invoices**
 - Using Sales Forms in QuickBooks
 - Filling in a Sales Form
 - Memorizing a Sale
 - Entering a New Service Item
 - Using Multiple Price Levels
- **Receiving Payments and Making Deposits**
 - Recording Customer Payments
 - Making Deposits
- **Entering and Paying Bills**
 - Handling Bills in QuickBooks
 - Using QuickBooks® for Accounts Payable
 - Entering Bills
 - Paying Bills
- **Analyzing Financial Data**
 - Reports and Graphs Help You Understand Your Business
 - Creating Quick Reports
 - Creating and Customizing Preset Reports
 - Saving Report Settings
 - Printing Reports
 - Exporting Reports to Microsoft Excel
 - Creating Graphs
- **Setting up Inventory**
 - Turning on The Inventory Feature
 - Entering Products into Inventory
 - Ordering Products
 - Receiving Inventory
 - Entering a Bill for Inventory
 - Manually Adjusting Inventory

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Create a company file
- ▶ Navigate QuickBooks
- ▶ Create a chart of accounts
- ▶ Add the accounts you need to your chart of accounts
- ▶ Set up customers, vendors, and the products you sell in QuickBooks®
- ▶ Create and send invoices and sales receipts
- ▶ Enter and pay bills
- ▶ Make journal entries
- ▶ Track expenses and income
- ▶ Manage your account receivable and accounts payable
- ▶ Connect to your bank through QuickBooks
- ▶ Create budgets and run reports

Please Note: Course content and time investment can be customized to an individual company's needs.



SOCIAL MEDIA MARKETING

Time Investment

This class is **32** hours of instruction in 4-hour sessions over the course of **8** weeks.

Course Description

This course is designed for individuals who would like to gain knowledge and skills to use social media effectively to market a business. The course will teach the basics of content creation and management for social media. It will introduce popular platforms such as Facebook, Twitter, YouTube, LinkedIn, etc. This course also will give the participants the tools to determine which platforms are the best fit for a company. The emphasis of this course is on understanding consumers' social interactions, the various social media channels available to marketers, and learning how to build social marketing strategies.

Audience

This course is designed for anyone who has a business need for social media—either as someone who is an entrepreneur or has the responsibility within an organization.

Prerequisites

Although not explicitly required, students taking this course should have a basic understanding of computers and the essentials of their operating systems. They should also have good keyboarding skills and know how to use a computer mouse.



Topics and Course Content

This course will cover topics such as:

- Marketing Fundamentals
- Marketing in Old Economy
- Marketing in New Economy
- Word of Mouth and Viral Marketing
- What is Social Media
- Getting your company ready for Social Media
- Facebook
- Twitter
- YouTube
- LinkedIn
- Google+
- Podcasting
- Blogs
- Search Engine Optimization (SEO)
- Introduction
- Submitting to Search Engines
- Organic Search
- Collaborative Marketing
- Company Website Design

Learning Goals and Results

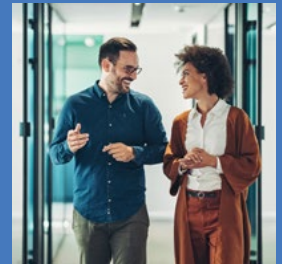
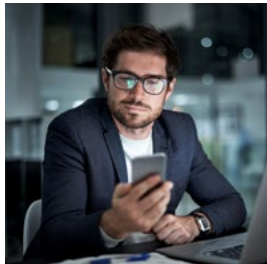
At the conclusion of the course, the participants will be able to:

- ▶ Describe current marketing trends and how to tap them in the workplace
- ▶ Understand the main search engine marketing techniques
- ▶ Apply suitable keywords around target themes
- ▶ Demonstrate the essentials for designing a company website
- ▶ Understand Facebook and Twitter add-ons for social network distribution

Please Note: Course content and time investment can be customized to an individual company's needs.



Continuous Improvement



8 DISCIPLINES PROBLEM SOLVING

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

In this course, the participants will learn about and how to apply the eight disciplines (8D) model for problem solving. It is an approach characteristically used by quality engineers or other professionals and commonly used in the automotive industry. Its purpose is to identify, correct, and eliminate recurring problems, and it is useful in product and process improvement.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Overview of 8D
- D1 - Select the Team
- D2 - Describe the Problem
 - Problem Statement
 - Customer Surveys/Interviews
- D3 - Interim Containment
 - Physical and Electronic Containment
 - Diffuse the problem
- D4 - Root Causes
 - Cause and Effect
 - FMEA
- D5 - Identify Corrective Actions
 - Capability Studies
 - Mistake Proofing
- D6 - Implement Corrective Actions
 - PDCA
 - Control Plans
- D7 - Prevent Recurrence
- D8 - Recognize Team

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand and use the 8-D process
- ▶ Work with problem-solving team
- ▶ Apply the appropriate problem-solving tools

Please Note: Course content and time investment can be customized to an individual company's needs.



COACHING SKILLS FOR NEW AND FUTURE MANAGERS

Time Investment

This class is **24** hours of instruction in 4-hour sessions over the course of **6** weeks.

Course Description

Professionals encounter an array of employee-related situations and challenges, along with a responsibility to uphold company policies and standards. It is a lot to manage, particularly in today's world, where organizations are racing to adapt to rapidly evolving markets, technology, and consumers. Organizations build a competitive advantage by helping employees proactively adapt to these changes for them to tackle goals with greater confidence. This course will cover The Change Cycle, Inside-Out Coaching, and Discover Your Natural Talents – StrengthsFinder to equip students with knowledge, skills, and tools to coach others through change. The models and tools found in these courses are currently widely used by leaders from all departments and functions, in large multinational organizations.

Audience

This course is open to all students seeking to develop their coaching skills through stages of change. This course is ideal for managers, supervisors, human resources professionals, undergraduate, or graduate students interested in understanding human response to change and effective coaching practices.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- **Change Cycle**
 - The Change Cycle™ model is a map that depicts our human experience of each stage of change – all changes, big or small. We know, when confronted with change, everyone goes from stage to stage. The goal of this class is to help people at all levels to take responsibility for how they react and respond to a changing work environment by giving tools of self-awareness and skills to understand options, make decisions, and take action.

- **Inside-Out Coaching — Powered by the GROW Model**

- More Leaders Coaching, More Often, For More Impact Coaching is no longer considered a competency of a good leader; it is a leader's primary job. Inside-Out Coaching is a manager-as-coach program that empowers leaders to dramatically improve their day-to-day coaching conversations. As a result, leaders become more effective at driving engagement and accountability, and applying coaching to drive business results.

- **Strengths Finder – By Gallup**

- This course will offer participants a new way to apply their natural strengths and talents, which improves performance and productivity. They will complete the Clifton StrengthsFinder assessment to jump-start their journey of discovering their inherent strengths, along with how it impacts others. The dimensions of strengths that participants are measured on include: Executing – Influencing – Relationship Building – Strategic Thinking. Participants will better understand their signature themes, apply their strengths, and maximize their potential.

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ How change is inevitable and not a one-time event. The goal is to step out of fear or survival mode, and rather learn the proper techniques to work through each stage of change
- ▶ Using a practical and simple coaching tool to facilitate a change process, either for self and/or others, which drives accountability and yields immediate results
- ▶ The application of their inherent strengths to not only work through change, but reach self-potential in further sharpening and applying natural talents in all aspects of life
- ▶ The principles in this course are based on psychological models, but translated and designed to be applied in practical ways across a variety of situations

Please Note: Course content and time investment can be customized to an individual company's needs.

COMMUNICATION SKILLS PRACTICUM

Time Investment

This class is **48** hours of instruction in 4-hour sessions over a period of **12** weeks.

Course Description

In this course students will learn how to attain and integrate key relational and communication skills that take the whole person into account. Students will also learn to develop skills that elicit natural affinity and cooperative contribution. These skills include working with words, feelings, commitment, expectation, and need. A group coaching setting will create the space in which new openness can take place and a new willingness to take creative action to make a difference can develop.

Audience

This course is for employees who want to improve their communication abilities and want to have more influence at work. Senior management who are ready to go beyond the academic understanding to connection that fosters innovation, practical process improvements, efficiency, productivity, and profits can benefit from this course. Also, human resources professionals who want higher employee retention and reduced turnover, as well as, anyone who longs to create a harmonious work environment that brings the best out of managers and employees alike can enroll in this course.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Effective Listening
- 3-Tier Listening: Words, Emotion, and Commitment
- Conflict Resolution
- Using Effective Listening & Principles of Constructive Communication
- The Platinum Rule
- Cooperative Synergy for Productivity, Efficiencies, and Eliminating Conflict before it starts
- Creating Win/Win/Win
- Building the Foundation to create Wins for all Stakeholders

- Who's Who
- Beyond the obvious Roles and Motivations
- More than Words
- Story, Facts, Assessments, Feelings, Wants, Responsibility, and Action
- Bringing Work Alive
- Discovering and empowering personal commitments and measures of satisfaction within the job

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Effect change in their organization or community, regardless of their official role
- ▶ Partner with others to discover mutuality of commitment, even in apparent conflict situations, and accomplish mutually fulfilling goals
- ▶ Understand and speak from other people's perspective, even when those contrast or conflict with their own
- ▶ Reduce personal reactivity and increase personal presence
- ▶ Identify desired wins/successes, attain them, and experience satisfaction
- ▶ Create personally satisfying plans of action to achieve goals at the workplace or in their personal life

Please Note: Course content and time investment can be customized to an individual company's needs.



CUSTOMER SERVICE ESSENTIALS

Time Investment

This class is **40** hours of instruction time in 4-hour sessions over the course of **10** weeks.

Course Description

Excellent customer service is a key element for business success, especially in today's fast changing world. This course will provide participants with the knowledge and skills required to ensure that products and services are delivered and maintained to the standards customers have come to expect. This customer service course will also provide participants with customer service skills for dealing with difficult situations while maintaining a strong focus on customer satisfaction and the customer experience. The customer service course will enhance each participant's ability to handle interactions with customers and ensure that they have the confidence to enable them to implement techniques, deliver satisfaction, and develop customer loyalty.

Audience

This course is for anyone who works and communicates with customers; either face-to-face, electronically, or by telephone.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- **Modern Rules of Customer Service**
 - Attracting, Interacting, and Cultivating Customers
 - Exceptional Customer Service and the Bottom Line
- **Delivering Exceptional Customer Service**
 - Positive Customer Experience
 - Calming Difficult Situations and Angry Customers
 - Managing the Attitude Virus
- **Communication with Customers**
 - Practicing Customer Sensitive Language
 - Putting your Best Voice Forward
 - Managing Emotions

■ The Cycle of Service

- Improving Service by Understanding the Cycle
- Demonstrating Respect

■ Understanding Customer's Attitudes and Expectations

- The Irate Customer
- Managing Customer's Complaints
- Becoming a Fantastic Fixer

■ Resolving Customer Issues

- Responsibilities
- Inappropriate Customer Comments
- Company Policies and Customers

■ Becoming a Top Performer

- Everyone is in Sales
- Responsibility + Accountability = Ownership
- Learning the Business

■ The Customer Service Cycle

- Create the Service Cycle for Your Company
- Policies, Procedures and Service

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand customers, identify their needs and create positive first impressions
- ▶ Listen actively to understand customer needs
- ▶ Build rapport with clients
- ▶ Implement the necessary steps of the service process
- ▶ Understand the importance of customer service for an organization's success
- ▶ Analyze who customers are and what they need to deliver excellent service
- ▶ Understand the benefits and opportunities derived from exceeding customer expectations
- ▶ Handle difficult customers in positive and effective manner
- ▶ Understand different customer behaviors and match your service delivery with their expectations
- ▶ Evaluate and report on customer service

Please Note: Course content and time investment can be customized to an individual company's needs.

EFFECTIVE COMMUNICATION SKILLS FOR PROFESSIONALS

Time Investment

This class is 24 hours of instruction in 4-hour sessions over the course of 6 weeks.

Course Description

This course is designed to improve communication skills across various modes, which include individual, group, or technologically based interactions. Particularly in a world with reliance on rapidly expanding technologies, building effective and professional communication skills require a set of skills to achieve desired outcomes. Participants start with an assessment (DiSC) to build self-awareness of their own communication styles and their impact on others. Students will highlight common barriers to effective communication, while exploring fundamental skills and tools to enhance verbal, written, and presentation skills.

Audience

This course is open to any professional who seeks to improve their communication skills. It is suitable for managers, supervisors, frontline employees, human resources professionals, undergraduate, or graduate students interested in developing or enhancing professional communication skills.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Going Beyond Words – Skills Needed for Effective Communication
- It Starts with You – Building Self-Awareness and Impact on Others Through DiSC
- Building Interpersonal Skills Through Active Listening
- Accelerate Alignment Through Verbal, Written, and Presentation Skills
- Demonstrate Professionalism in Various Settings (e.g. Work, Home, Digital)

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Better understand what effective communication means in today's world
- ▶ Build awareness on various communication styles, techniques, and processes (DiSC)
- ▶ Follow email etiquette and written communication techniques
- ▶ Improve business writing skills in areas such as business letters, proposals, filling forms, agreements, business emails, etc
- ▶ Learning ways to flex and adapt your style based on your audience
- ▶ Develop communication skills, including verbal, nonverbal, listening, and preparation
- ▶ Apply appropriate methods of communication for various modes of delivery (verbal, email, instant messenger, social media, meeting etiquette, presentations, etc.)
- ▶ Understand cultural implications on communication styles
- ▶ Recognize professional communication as a reflection of self and their organization

Please Note: Course content and time investment can be customized to an individual company's needs.



INTERNAL QUALITY MANAGEMENT SYSTEMS AUDITOR TRAINING (AS9100 REV. D)

Time Investment

This class is **32** hours of instruction in 4-hour sessions over the course of **8** weeks.

Course Description

This course offers a comprehensive understanding of the concepts of the current ISO 9001 and the AS9100 standards, principles, and practices of performing and reporting on effective internal audits in accordance with ISO 19011. The clauses are reviewed in detail and students will be guided through the internal audit process, which is required for creating and maintaining a quality management system. Students will gain auditing skills and knowledge through a balance of classroom training, practical role-playing, group workshops, case studies, and open discussions.

Audience

This course is designed for anyone involved in the auditing, maintaining, or monitoring a Quality Management System.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- **The Internal Quality System**
 - Overview of the elements making up a sound quality management system, requirements of the governing documents, and the relationship of quality policy, the quality manual, procedures, and instructions. Included is a discussion of the audit evidence necessary to comply with the current standards.
- **The Audit Cycle**
 - Using ISO 19011 as a guide, pre-audit activities, conducting the audit, postaudit, and follow-up activities are reviewed.
- **Planning and Conducting the Audit**
 - How to prepare for an audit and effectively manage resources and how to collect audit evidence and document observations, including techniques for effective questioning and listening.

- **Follow-Up Activities**

- How to verify effectiveness of corrective actions, close out an audit and conduct follow-up surveillances.

- **Case Studies and Simulations**

- Studies of fictional companies to reinforce the methods and techniques discussed

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand and effectively audit the intent of the current ISO 9001 and AS 9100 standards
- ▶ Properly interpret the standard and apply to real internal audit situation
- ▶ Design internal audit interview based on the requirements of the standard
- ▶ Develop and plan and conduct effective internal audits
- ▶ Review the organization and its context
- ▶ Describe the needs and expectations of interested parties
- ▶ Define the design and development controls
- ▶ Analyze leadership and commitment for the quality management system
- ▶ Understand risks and opportunities
- ▶ Determine requirements for products and services
- ▶ Audit control of externally provided products and services
- ▶ Evaluate QMS performance
- ▶ Identify and report non-conformances in the process audit
- ▶ Evaluate corrective actions for root cause and effectiveness
- ▶ Apply auditing techniques including effective auditing of management
- ▶ Manage and audit process
- ▶ Conduct mock and real opening meetings, closing meetings, and reports

Please Note: Course content and time investment can be customized to an individual company's needs.

LEAN OPERATIONS – PROJECT BASED

Time Investment

This class is **80** hours of instruction in 4-hour sessions over the course of **20** weeks.

Course Description

This course is designed to provide practical knowledge and tools to improve factory operations and to aid in continuing with Lean manufacturing efforts. Participants use highly interactive learning methods to introduce the concepts and skills of Lean. After completing the course, the participants will be able to demonstrate their ability to determine the necessary steps to start the organization's Lean Transformation, describe and identify the eight wastes, and develop and carry out a Lean action plan.

Audience

The target audience includes managers, supervisors, engineers, operators, and support staff that want to carry out a lean transformation in their company.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- **Introduction**
 - Course Introduction and Overview
 - Defining Quality
 - Defining Lean
 - Lean Methodology
 - Overview of Toolkit
- **Effective Communication**
 - Listening
 - Giving and Receiving Feedback
 - Resolving Communication Conflicts
 - Problem Solving
- **Visual Workplace and 5S Strategy**
 - Brainstorming Visual Workplace Tools
 - Standard Work Exercise
 - 5S Process Review
- **Lean Tools**
 - The Traditional Factory
 - Definition of the 8 Wastes
 - Value-Added and Non-Value-Added Activities
 - Workplace Organization
 - Cellular Layout
 - Batch and Queue Processing
 - Push vs Pull Systems
 - Takt Time
 - Kanban System
- **Theory of Constraints**
 - The five focusing steps
 - Types of constraints
 - Buffers
- **Problem Solving**
 - Root Cause
 - Corrective Action
 - Poke Yoke
- **Batch to Lean Workplace Layout**
 - Basic Flowcharting and Process Mapping
 - Value Stream Mapping
 - Spaghetti Diagrams
 - Continuous Flow Requirements
 - Pull Production Tools
 - Using a checklist for 5S
- **Team Selection and Process Mapping**
 - Assign Teams based on Company Requirements
 - Tool: Brainstorming Team Names and Multi-voting
 - Project Selection or Assignment
 - Criteria Selection Grid
- **Team Development and Meeting Management**
 - Communication Skills
 - Team Development Theory
 - SWOT analysis of assigned Teams
 - Meeting Management Process: 7 important steps
 - Hold Team Meetings and Analyze Process
 - Project Updates

■ Time Management

- Understand Reasons for Poor Time Management
- Effective Meetings
- Develop Reasons for Making Choices
- Prepare Overall Goals, Strategies, and Plans
- Learn Techniques for Using Time Efficiently
- Project Updates

■ Value Stream Mapping and the Current State

- Selected Team Process will Be Analyzed Using VSM Tools
- Examine and Challenge every Step
- Analyze Wait Times
- Project Updates

■ Value Stream Mapping and the Future State

- Standard Work Application
- Project Updates

■ Kaizen Event Planning

- Brainstorming
- Priority Grid
- Disaster Plan
- Kaizen Checklist

■ Project Presentations

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Achieve significant improvements in critical business processes
- ▶ Apply problem solving tools to an improvement project
- ▶ Eliminate waste and defects by applying lean concepts
- ▶ Collect, analyze, and quantify data that enable process improvements
- ▶ Learn how to execute the lean methodology
- ▶ Establish and define process variables
- ▶ Identify and eliminate dominant process variation sources
- ▶ Characterize and optimize processes
- ▶ Learn how to plan and implement controls to hold project gains

Please Note: Course content and time investment can be customized to an individual company's needs.



LEAN SIX SIGMA BLACK BELT

Time Investment

This class is **100** hours of instruction in 4-hour sessions over the course of **25** weeks.

Course Description

The Lean Six Sigma Black Belt course provides the participants with advanced understanding of Lean Six Sigma methodologies, tools and techniques and is an opportunity to master the subject matter by conducting a Black Belt-level improvement project. The goal of the course is to empower students to assume a Black Belt role in an organization and, ultimately, serve as a change agent to improve customer satisfaction and business productivity. Upon successful completion of the course, you will be a certified Lean Six Sigma Black Belt from The Professional Development Center of Glendale Community College.

Audience

The Lean Six Sigma Black Belt course is geared for professionals who want to learn how to manage Black Belt-level projects and oversee the projects of Green Belts in their organizations.

Prerequisites

Prerequisites for the Lean Six Sigma Black Belt are Lean Six Sigma Green Belt certification and:

- A defined and management-approved business improvement project that provides a significant business impact.
- Those who devote at least 25% of time at the work environment to work on their projects

Topics and Course Content

This course will cover topics such as:

■ Phase 1: Define

- Overview and Foundation of Lean and Six Sigma
- Voice of the Customer
- Lean Simulation
- Metrics
- Project Definition
- Charting and Tracking

- Theory of Constraints
- Data
- Project Planning Tools
- Project Documentation
- Basic Lean Six Sigma Measurements
- 5S
- Teams

■ Phase 2: Measure

- Process Mapping
- Cause and Effect Analysis
- Probability and Statistics
- Measurement Systems Analysis
- Data Collection and Summary
- Process Capability
- Value Stream Mapping

■ Phase 3: Analyze

- Hypothesis Testing
- ANOVA
- Regression
- Chi-square
- Graphical Analysis
- Lean Analysis Tools
- Fractional Factorial Experiments
- Catapult
- Split Plot Designs
- Advanced Lean Tools
- Review Implementation and Pilot Improvements
- Acceptance Sampling Plans
- Total Productive Maintenance
- Visual Management
- Probability
- Measurement System Reanalysis
- Control Plan

■ Phase 4: Improve

- Lean Improvement Tools
- Introduction to Design of Experiments
- Charting and Tracking
- Overview of Measure Phase
- Data Types
- Implementation and Validation Solutions
- Transition to Control
- Sustain Improvements

■ Phase 5: Control

- Standard Work
- Control Charting
- Control Plans
- FMEA
- Control Phase Transition
- Probability
- Advanced Process Capability
- Overview of Analyze Phase
- Regression
- Multivariate
- Logistic Regression
- Statistical vs Practical Significance
- Sample Size
- Central Limit Theorem and Confidence Intervals
- ANOVA
- Chi-Square and Contingency Tests
- Design for Six Sigma

■ Phase 6: Leadership and Management

- Enterprise Leadership
- Handling Roadblocks
- Change Management
- Performance Measures

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Realize significant improvements in critical business processes
- ▶ Apply statistical and problem solving tools to an improvement project
- ▶ Reduce process variation
- ▶ Eliminate waste and defects by applying Lean and Six Sigma
- ▶ Collect, analyze, and quantify data that enable process improvements
- ▶ Apply the Six Sigma methodology
- ▶ Establish and define process capability
- ▶ Identify and eliminate dominant process variation causes
- ▶ Characterize and optimize processes by applying statistical techniques
- ▶ Design, simulate, and execute designed experiments that depict validated improvement
- ▶ Learn how to plan and implement process control to maintain project improvements

Please Note: Course content and time investment can be customized to an individual company's needs.



LEAN SIX SIGMA GREEN BELT

Time Investment

This class is 60 hours of instruction in 4-hour sessions over the course of 15 weeks.

Course Description

This course introduces the more advanced tools applied in Continuous Improvement. Implementation of theory and improvements are achieved in this class through on-site projects in conjunction with classroom materials, and various simulations based on Lean Six Sigma Green Belt principles.

Audience

This course is designed for leaders from various organizational functions—operations, quality, logistics, finance, production, engineering and other staff functions. This course is intended for participants at all levels looking to pursue a Lean Six Sigma Green Belt role in their organization.

Prerequisites

Although not required, students taking this course should have some familiarity with Lean Principles and Problem Solving Processes.

Topics and Course Content

This course will cover topics such as:

■ Define

- Describe the Difference Between Lean and Six Sigma Methodologies
- Determine the Voice of the Customer
- Select Projects Based on Strategic Importance
- Create a Project Charter
- Prepare a SIPOC Chart (Supplier, Input, Process, Output, And Customer)
- Identify Potential Project Metrics
- Prepare a Measurement Plan
- Develop a Value Stream Map

■ Measure/Analyze (Statistical Tools)

- Define Types of Data Used in Descriptive Statistics
- Describe Four Types of Measurement Scales (Nominal, Ordinal, Interval, Ratio)
- Understand Methods of Gathering Data (Manual, Automatic, Data Coding)

- Explain Techniques for Assuring Data Accuracy and Integrity (Random Sampling, Sequential Sampling and Stratified Sampling)
- Calculate and Interpret the Following Descriptive Statistics:
 - ◆ Measures of Central Tendency (Mean, Median, Mode)
 - ◆ Measures of Dispersion (Range, Variance, Standard Deviation)
 - ◆ Coefficient of Variation (COV)
 - ◆ Probability Density Functions
 - ◆ Cumulative Distribution Functions
- Create and Interpret the Following Graphical Methods:
 - ◆ Box Plots
 - ◆ Run Chart
 - ◆ Scatter Diagrams
 - ◆ Correlation Coefficient (R)
 - ◆ Pattern and Trend Analysis
 - ◆ Histograms
- Explain the Benefit of the Central Limit Theorem
- Calculate and Interpret Variable and Attribute Statistical Process Control Charts.
 - ◆ X and R Chart
 - ◆ M X and MR Chart
 - ◆ X-MR Chart
 - ◆ X and S Chart
 - ◆ Median Charts
 - ◆ Short Run Charts
 - ◆ P Chart
 - ◆ NP Chart
 - ◆ C Chart
 - ◆ U Chart
- Measurement Systems Analysis
- Calculate and Interpret the Most Commonly Used Distributions.
 - ◆ Binomial
 - ◆ Poisson
 - ◆ Normal
 - ◆ Student's T
- Calculate And Interpret Short-Term And Long-Term Process Capabilities.
 - ◆ Cp and Cpk
 - ◆ Pp and Ppk

■ Measure/Analyze/Improve/Control (Lean Tools)

- Criteria for Identifying a Value-Added Step
- Value Stream Map Analysis
- Waste Identification
- The Effect of Inventory on Cycle Time
- 5 S
- One-Piece Flow
- Set-Up Time Reduction
- Total Productive Maintenance (TPM)
- Standard Work
- Visual Controls
- Poke Yoke
- Creating a Pull System
- Techniques for Smoothing Process Flow (Kanbans, Inventory Buffers)
- Explain Kaizen Organization and Deployment
- Identify Quick Wins

■ Improve/Control

- Project Management Tools
 - ◆ Stakeholder Analysis
 - ◆ Communication Plan
 - ◆ Work Breakdown Structure
 - ◆ Gantt Chart
 - ◆ Risk Planning
- Training Techniques
- Documentation Techniques
- Standard Work
- Process Auditing

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Work as a knowledgeable member of a Lean Six Sigma project team
- ▶ Lead process improvement projects
- ▶ Collect data and develop value stream maps
- ▶ Develop statistical hypotheses using simple statistical tools
- ▶ Design simple experiments and action plans that help analyze improvement options
- ▶ Apply problem solving methodologies to improvement projects
- ▶ Eliminate waste and defects by applying lean six-sigma tools
- ▶ Collect, analyze, and quantify data that enable process improvements
- ▶ Learn how to apply the problem-solving methodology
- ▶ Work with process owners to ensure process gains are sustained

Please Note: Course content and time investment can be customized to an individual company's needs.



LEAN SIX SIGMA YELLOW BELT

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

This course steps the participants through the DMAIC (Define, Measure, Analyze, Improve and Control) process of Six Sigma using team and problem-solving tools to drive and sustain improvements. The material supports the philosophy to eliminate defects and reduce variation for existing business processes. A Yellow Belt leads continuous improvement efforts within an organization by using the skills and tools taught in this course.

Audience

Yellow Belts contribute to a company by playing a supportive role in the larger Six Sigma Process. The ideal student has a desire to drive change and has a track record of producing results. They must have a basic knowledge of statistics, understand the products and processes within the organization, and be respected by others. Strong facilitation and communication skills, project management, and initiative are also desirable.

Prerequisites

Some knowledge of Fundamentals of Lean Principles is recommended but not required.

Topics and Course Content

This course will cover topics such as:

- **Background and Overview of Six Sigma**
 - The Roots of Six Sigma
 - Defining and Applying Six Sigma
 - Methodologies of Improvement
 - The DMAIC Approach
 - Roles and Responsibilities
 - Expectations of a Yellow Belt
- **Define Phase**
 - Select and Define Project
 - Problem Statement
 - Objective and Benefits
 - Scope
 - Process Owner/Stakeholder
 - Gap Analysis

- Team Building
- Align Project/Set Goals
- Customer Requirements (VOC)
- Business Driven Goals
- Operational Definitions
- Define Process and Identify Preliminary Families of Variations (FOV)
- Process Mapping
- Suppliers Inputs Process Outputs Costumers (SIPOC)
- Data Collection Planning

■ Measure Phase

- Establish Baseline Capability
- Data Collection/Sampling Plan
- Process Stability
- Baseline Process Capability
- Pareto
- Process Mapping
- Identify Sources of Variation and Waste
- Cause and Effect Diagram/Fishbone
- Five Whys
- Eight Wastes and 5 S

■ Control Phase

- Control Strategies
- Failure Mode and Effect Analysis (FMEA)

■ Control Plan

- Updated Process Flow
- Implement Process Controls
- Mistake Proofing/Poke Yoke
- Standard Operation Procedures

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Prepare a Project Charter and Business Case
- ▶ Assess the possible output of the Key Six Sigma tools
- ▶ Generate ideas and solution concepts
- ▶ Verify efficacy of solutions

Please Note: Course content and time investment can be customized to an individual company's needs.

PROCESS IMPROVEMENT

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

Modern organizations are made up of complex, interdependent processes. In this course, participants will learn to build their organization's competitive advantage by learning how to manage their integrated processes. This course covers the techniques that can be used to improve workflow, promote continuous improvement, and increase potential profit.

Audience

This course is designed for managers, executives, or team members who want to understand and implement process improvement within their organizations.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Fundamentals of Continuous Improvement
- Techniques to Streamline Process
- Identifying Value-Added Activities
- Implementing Immediate and Continuous Improvement
- Establishing Maintenance Actions for Continuous Improvement
- Managing the Organization from a Process Perspective
- Setting Up Process Improvement Projects
- Management of Process Improvement Initiatives
- Performance Metrics: Measuring Process Improvement
- Developing Cross-Functional Processes and Maps that Visualize the Future

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand the fundamentals of work simplification
- ▶ Streamline processes
- ▶ Identify value-added activities
- ▶ Identify process improvement opportunities

Please Note: Course content and time investment can be customized to an individual company's needs.



PROCESS MAPPING

Time Investment

This class is **12** hours of instruction in 4 - hour sessions over the course of **3** weeks.

Course Description

Process mapping is a tool used to describe how workflows from the beginning through to the end. It includes the people and tools involved and is the basis for process improvement. This course will show you the basics of mapping a process using tools that are easily understood.

Audience

This course is designed for professionals who need to understand how processes work within an organization or need to quickly show and document their work to others.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Success Factors for Process Improvement
- Critical Process Elements
- Value- And Non-Value-Added Activities
- Process Mapping: Collecting the Data and Creating a Process Map
- Analyzing the Data And Identifying Desired Process Improvements
- Steps to Implement Recommended Processes
- How to Use Flow Charting Symbols
- Creating Different Types of Process Maps
- Basic Flowcharts
- Top-down Flowcharts
- Deployment Flowcharts
- Swim lane Flowcharts
- Event Driven Process Diagrams
- Workflow Diagrams
- Value Stream Maps

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Map a process using different tools and techniques
- ▶ Identify process improvement opportunities
- ▶ Select the appropriate tool for the process being studied
- ▶ Understand how each process relates to the success of the organization
- ▶ Understand how to use a process map for Improving that same process

Please Note: Course content and time investment can be customized to an individual company's needs.



QUALITY IMPROVEMENT

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

Participants who are interested in applying quality improvement principles to assess processes, identify priorities, and drive change will benefit from this program. Participants will receive a comprehensive review and working knowledge of key elements in quality improvement, including quality improvement principles, techniques, tools, and on-the-job skills useful in a wide range of businesses and organizations.

Audience

This course is a good place to start for those participants who want to implement a simple continuous quality improvement or total quality management system for their organization.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Quality for Business Results
- Quality Improvement Goals
- Leadership, Organizational and Human Resource Issues
- Communicating and Learning Styles
- Motivational Concepts
- Management Theories and Styles
- Organizational Structures
- Team Evolution, Roles, and Making Teams Effective
- Training Needs Analysis, Development, Delivery, and Improvement
- SWOT, Gap Analysis, and Benchmarking
- Long and Short-Term Goals
- Customer and Market Focus

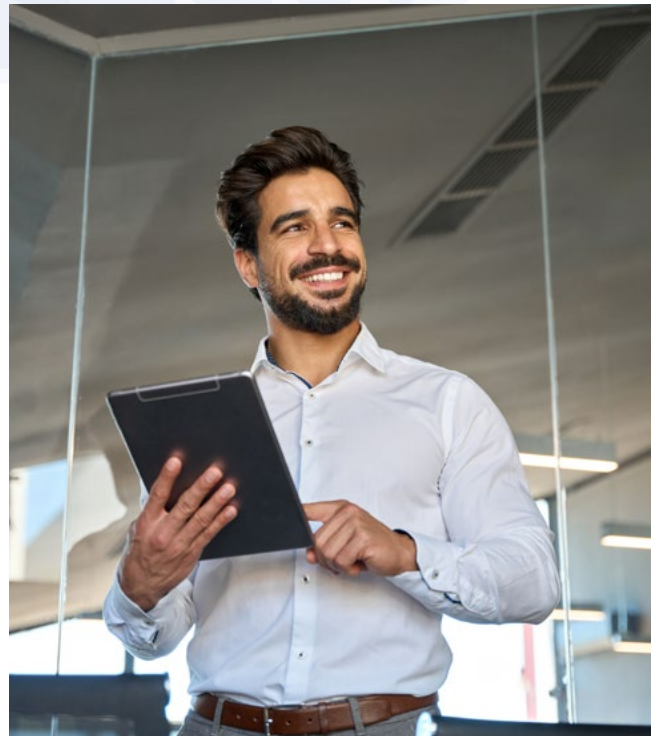
- Determining Customer Needs
- Customer Relationship Enhancement
- Information and Analysis
- Process Control with Control Charts
- Analysis of Data
- Process Management
- Strategic Planning

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Identify quality improvement challenges and develop strategies to overcome them
- ▶ Document business processes to reduce costs and increase productivity

Please Note: Course content and time investment can be customized to an individual company's needs.



ROOT CAUSE AND CORRECTIVE ACTION

Time Investment

This class is **32** hours of instruction in 4-hour sessions over the course of **8** weeks.

Course Description

This course provides the participant with the skills and knowledge to effectively and efficiently apply Root Cause Analysis (RCA) tools needed to provide valuable solutions for business. The course follows a structured approach used in program/project management, engineering, business and IT administration, diagnostic medicine, telecommunications, and training development to identify and eliminate possible causes with appropriate corrective actions and preventive actions.

Audience

The target audience for this course include business process managers, business process users, product managers, and team members involved in quality improvement activities.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- The Root Cause Analysis Process
- Defining the Problem
- Logical Cause Analysis – What, When, Where, Who
- Verifying Root Causes
- Developing Process Maps
- Measure the Problem
- Defining Data Collection Requirements
- Processing Reviews and Mapping
- Analyze the Data And Determine Root Cause
- Brainstorming Potential Solutions
- Evaluating Cost, Complexity, Impact, Benefits, and Risks
- Communicating and Implementing Solutions
- Verifying the Improvement
- Control and Standardize Improvements
- Determining the Controls Needed to Sustain the Gains
- Reaping the Benefits of Improvement

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Apply a structured approach for defining and analyzing the root cause of problems
- ▶ Use a range of analysis tools to understand the problem and identify a root cause
- ▶ Sort through numerous probable causes to find true root cause

Please Note: Course content and time investment can be customized to an individual company's needs.



STATISTICAL PROCESS CONTROL (SPC)

Time Investment

This class is **32** hours of instruction in 4-hour sessions over the course of **8** weeks.

Course Description

SPC or Statistical Process Control is a statistically based family of tools used to monitor, control, and improve processes. SPC can be used to track and hold the gains from quality improvement activities. This course has a practical hands-on approach in understanding control charts for quality improvement. Participants will learn to recognize the importance and role of implementing, interpreting, and using statistical process control charts.

Audience

This course is intended for those in quality, production, and other positions measuring key process indicators to control variation in the output.

Prerequisites

Knowledge of basic algebra is helpful but not required.



Topics and Course Content

This course will cover topics such as:

- **Introduction to SPC**
 - What is SPC
 - SPC History
- **SPC Tools**
 - What are the SPC tools
 - Check Sheets
 - Pareto Charts
 - Cause and Effect Diagram
 - Histograms
 - ◆ Measures of Central Tendency
 - ◆ Standard Deviation
 - ◆ What Does the Distribution Indicate
 - Control Charts
 - Data and Data Types
 - ◆ Attribute Data
 - ◆ Continuous Data
 - Sample Sizes and Subgroups
 - Common and Assignable Causes
 - Variable Charts– Xbar-R, Xbar-D, IX-MR
 - Attribute – p, np, u, c
 - Runs, Trends, and Cycles
 - Gage R and R Studies
 - Process Capability Studies
 - ◆ How to Calculate Cp, Cpk, Pp, Ppk
 - ◆ What Do the Indices Tell about Process Capability

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand variation in processes including patterns and measures of variation
- ▶ Monitor and control variation with variable and attribute control charts
- ▶ Perform a process capability study
- ▶ Describe basic process capability concepts

Please Note: Course content and time investment can be customized to an individual company's needs.

TEAM BUILDING

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

This course is designed to improve performance, raise morale and create highly motivated team members. The ability to successfully manage a cohesive, happy, and high-performing team will consistently help achieve an organization's goals. Participants will learn how to develop strategies for leading teams using various tools for ensuring effective and productive team meetings and obtaining results.

Audience

Team leaders and members that want to improve team results

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Qualities of Effective Teams
- Establishing Team Goals
- Establishing Team Rules and Norms
- Four Stages of Team Development
- Team Development Strategies
- Communication Among Team Members
- Developing Group Cohesiveness

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

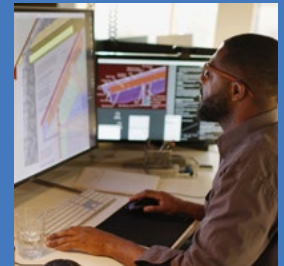
- ▶ Define team goals
- ▶ Build stronger teams
- ▶ Improve team decision making abilities
- ▶ Achieve goals using teamwork

Please Note: Course content and time investment can be customized to an individual company's needs.





Engineering and Design



AUTOCAD LEVEL 1

Time Investment

This class is **80** hours of instruction in 4-hour sessions over the course of **20** weeks.

Course Description

This entry-level CAD course assumes little-to-no previous knowledge of the software and teaches students basic operations and commands. Candidates learn to plot, create 2-D drawings, modify drawings and print drafts.

Audience

The AutoCAD Level 1 class is intended for the drafter, architect, designer, engineer, manufacturer, manager or supervisor who is directly or indirectly involved in the creation, modification and/or handling of CAD (Computer-Aided-Design) data, in either hardcopy or electronic format.

Prerequisites

A good understanding of basic drafting is preferred but not mandatory. A good working knowledge of your operating system is recommended

Topics and Course Content

This course will cover topics such as:

- Getting Started with AutoCAD
- Basic Drawing and Editing Commands
- Creating a Simple Drawing
- Drawing with Precision in AutoCAD
- Editing Existing Objects
- Hands on creating Schematic, Architectural, Machine and Mechanical Drawings
- Working with Layers and Layering Schemes
- Plotting your Drawing
- Understanding Model Tab, Layout Tab, Paper Space and Model Space
- Creating more advanced type objects
- Getting information from your Drawing
- Advanced Editing Techniques
- Creating, Inserting and Editing Blocks
- Attaching External References
- Working with External References
- Creating and Editing Text
- Creating and Editing Dimensions
- Creating Workspaces and Profiles

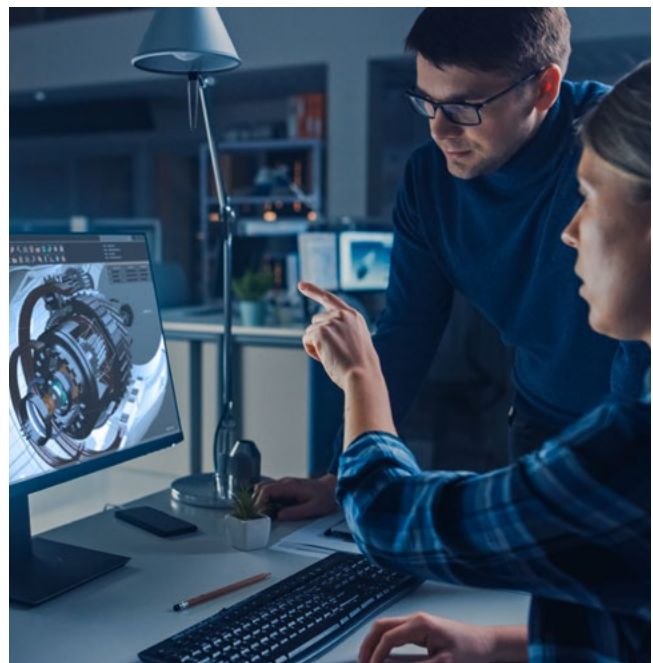
- Creating and Editing Hatching
- Using Grips, Working with Multiple Drawings
- Creating Templates
- Creating and Using Annotative Objects
Setting up AutoCAD Working Environments through Options Dialog Window

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Describe the AutoCAD workspace and user interface
- ▶ Use basic drawing, editing, and viewing tools
- ▶ Organize drawing objects on layers
- ▶ Insert reusable symbols (blocks)
- ▶ Prepare a layout to be plotted
- ▶ Add text, hatching, and dimensions with ease

Please Note: Course content and time investment can be customized to an individual company's needs.



CATIA® V5 MECHANICAL DESIGN

Time Investment

This class is **80** hours of instruction in 5-hour sessions over the course of **16** weeks.

Course Description

CATIA is recognized as a leading Project Lifecycle Management software (PLM) and high-end feature based parametric solid modeling design software. CATIA V5 uses an intuitive user interface that puts powerful design tools in the hands of users operating in the familiar Windows operating system environment. In this course, participants will be introduced to CATIA V5 with emphasis on the use of the Sketcher workbench. It also presents an overview of the Part Design, Generative Shape Design, and Assembly Design.

Audience

This training program has been tailored for manufacturing, design, and engineering professionals who need to develop skill and speed in using CATIA V5 to create and evaluate complex 3-D solid models and prepare fully dimensioned engineering drawings.

Prerequisites

Experience in manufacturing, design and engineering is recommended. This will be a challenging class that will expose the participants to real-world modeling and design problems by applying some of the more powerful tools offered in CATIA V5.

Topics and Course Content

This course will cover topics such as:

- **Fundamentals of CATIA® and Feature Based Modeling**
 - Principles of Feature Based Solid Modeling
 - Design Intent
 - Working in the Windows Environment
 - Working with and Viewing Models
 - Customizing and Managing CATIA V5
 - Sketching Theory and Technique
 - Application of Geometric and Dimensional Constraints
 - Creating Pad, Shaft, Pocket, and Groove Features

- Applying Fillet, Chamfer, Draft, and Shell Dress-Up Features
- Working with Multi-Profile Sketches and Features
- Creating Hole Features

- **Advanced Solid Modeling Techniques**

- Advanced Sketching Tools and Sketch Analysis
- Advanced Ribs, Slots, And Multi-Section Features
- Part Design Tables and Catalogs
- Extracting and Interrogation of Part/Design Information
- Creating Multiple Bodies and Boolean Operations

- **Creating Assemblies**

- Positioning and Constraining Components
- Assembly Technique and Extracting Information
- Clearance Analysis and Bill of Materials

- **Creating Engineering Drawings and Detailing**

- Setting Up the Drawing Frame and Title Block
- Creating Standard and Detail Auxiliary Views
- Dimensioning and Annotations, Inserting a Bill of Material (BOM)
- Application Project

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Create and Save various types of CATIA V5 documents
- ▶ Perform various tasks concerning 3D Navigation and geometry selection
- ▶ Create, analyze and constrain sketches
- ▶ Describe the functional capabilities and general usage of:
 - ▶ Part Design
 - ▶ Generative Shape Design
 - ▶ Assembly Design

Please Note: Course content and time investment can be customized to an individual company's needs.

CATIA® V5 PRISMATIC AND ADVANCED MACHINING

Time Investment

This class is **80** hours of instruction in 4-hour sessions over the course of **20** weeks.

Course Description

CATIA V5 Prismatic and Advanced Machining is tailored specifically for CAD/CAM programmers with CATIA experience who need to develop skills using CATIA to develop toolpaths for two-dimensional and three-dimensional machining operations.

Audience

Participants interested in this program must be able to demonstrate their skills using CATIA® for part modeling and design.

Prerequisites

Evidence of completion of a formal training course in basic modeling and surface design using CATIA® or equivalent experience is required.

Topics and Course Content

This course will cover topics such as:

- **Prismatic Machining 2-D and 3-D**
 - Basics of NC Tools and Milling Strategies
 - CNC Machine Axis and Configurations
 - The Prismatic Machining Workbench
 - Part Design Review, Preparing to Machine, Part Operation Setup
 - Replaying and Toolpath Verification in CATIA
 - Facing, Profile Contour Milling, Groove Milling, Pocketing, And Prismatic Roughing
 - Axial Machining For Drilling, Boring, Tapping, Reaming, Circular Milling, and Thread Milling
 - Pattern Toolpath Generation
 - Multiple Part Operations
 - Fixtures
 - Toolpath Transformations
 - APT Code Generation

■ Surface and Multi-Axis Machining

- Roughing Operations, Roughing Rework Operations
- Z-Level Machining, Spiral, Pencil, Isoparametric, Profile Contouring, and Surface Machining
- Multi-Axis Rotary Machining
- Multi-Axis Contour Driven
- Multi-Axis Isoparametric Machining for Radial Surfaces
- Multi-Axis Flank Contouring
- Multi-Axis Curve Machining
- Multi-Axis Helix Machining

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Apply two-dimensional contouring design and programming concepts
- ▶ Apply three-dimensional surface toolpath development

Please Note: Course content and time investment can be customized to an individual company's needs.



MASTERCAM® 5-AXIS MILLING OPERATIONS

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **15** weeks.

Course Description

Participants will set-up and run various projects on the machine in the CAD/CAM lab. They will learn simultaneous 4 & 5-axis machining operations, including flowline and swarf toolpaths, multi-surface techniques, and 5 axis drilling in addition to creating and editing complex surfaces and curves, and then machining them using a variety of efficient toolpaths. Single and multiple surface machining is discussed. Other topics include pencil tracing, gap settings, tool boundaries, and drive surfaces.

Audience

This class is designed for the experienced CNC machinists and operators, or students who have recently completed our CNC Programming and Set-Up class.

Prerequisites

For this training, it is recommended but not required that participants have successfully completed a basic CNC training program or have at least one year of full-time experience in setup and operation of CNC machining centers. Students must be able to demonstrate proficiency in blueprint reading, shop mathematics, and computer skills using Microsoft Windows.

Topics and Course Content

This course will cover topics such as:

- Introduction to 5-Axis Milling Operations
- 5-Axis Trunnion Set-Up Techniques
- 5-Axis Part Holding and Clamping
- Review 5-Axis NC Programs
- Tool Touch Off and Setting the Work Offset for 5-Axis Machining
- 5-Axis Vector Mathematics and Inverse Feed Rate Conversion
- Calculating 5-Axis Rotary Positioning from Design Drawing Data

- Planning and Writing 5-Axis Drilling and Boring Operations
- CAD/CAM for Simultaneous 5-Axis Operations
- Techniques for Running New 1st Article 5-Axis Jobs
- Two Projects
- True 5-Axis Part
- 5-Axis Positioning

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Operate and/or program a 5-Axis milling machine
- ▶ Understand the safety requirements in the operation of a 5-Axis mill
- ▶ Properly program and align the machine

Please Note: Course content and time investment can be customized to an individual company's needs.



MASTERCAM® ADVANCED MULTI-AXIS PROGRAMMING AND SET-UP

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **15** weeks.

Course Description

This course provides students with a strong foundation in Multi-Axis CNC programming. The class starts out with an extensive overview of axis combinations, rotary points, and zero positions as they relate to MasterCAM. It then builds on how to control tool axis vectors using different geometric entities. The examples explain the many ways to control how the tool approaches and machines with a controlled 5-axis toolpath. This course also covers 5-axis positioning, drilling, trimming, circle milling, and machine simulation.

Audience

This course has been created for CNC machinists, CNC programmers and manufacturing engineers.

Prerequisites

Participants must have good multiple-view print reading skills. Participants should also have basic 2 and 3-axis programming and set up skills. Basic to Intermediate MasterCAM skills are strongly recommended.

Topics and Course Content

This course will cover topics such as:

- Planning a 5-Axis Milling Job
- Application of 5-Axis Milling
- Planning s Lathe With s Live Tooling Job
- Programming and Setup Using Mastercam® on Both 5-Axis Milling and a Lathe with Live Tooling
- Establishing Work Shifts And Geometric Locations for Tools on Each Machine

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Create toolpaths for fourth axis rotary machining
- ▶ Create a five-axis toolpath
- ▶ Create Geometry for tool axis control, including:
 - Points
 - Vectors
 - Chains
 - Planes
 - Surfaces

Please Note: Course content and time investment can be customized to an individual company's needs.



MASTERCAM® FOR MILLING AND TURNING CENTER APPLICATION

Time Investment

This class is **80** hours of instruction in 4-hour sessions over the course of **20** weeks.

Course Description

This training program has been created to advance experienced CNC machinists and operators in the use of NC programming and CAD/CAM technology to develop NC code for milling and turning centers. Our training program has been tailored using MasterCAM, one of the most popular CAD/CAM software packages for creating toolpaths for turning and milling centers. Participants will develop skills in job planning, NC programming, CAD drawing, and preparing toolpaths from 2-D and 3-D CAD models for both mill and lathe applications.

Audience

This class is designed for the experienced CNC machinists and operators, or students who have recently completed our CNC Programming and Set-Up class.

Prerequisites

This is not an entry-level course for beginners. Participants must be able to demonstrate proficiency in blueprint reading, shop mathematics and computer skills using Microsoft Windows. Participants must have at least 1 year of full-time experience in setup and operation of CNC machining centers.

Topics and Course Content

This course will cover topics such as:

- **CNC milling and Turning Application**
 - CNC Milling and Turning Processes and Functions
 - Cutting Tool Materials and Selection
 - CNC Machine Tool Systems and Design
 - Machine Axis Designation and Direction Conventions
 - Holding Fixture Theory and Design
 - CNC Positioning Systems
 - Selecting and Using Cutter Inserts and Holders

- Understanding and Calculating Speeds and Feeds
- Developing a CNC Machining Operations Plan from Engineering Drawings and Specifications
- NC Code and Programming Functions
- NC Programming at the Machine Using MDI
- CNC Milling and Turning Machine Controller Operations and Program Loading
- On Machine Application Project for Mill and Lathe

■ CAD/CAM Programming Using MasterCAM

- Strategy for Using CAD/CAM On-the-Job
- Working in the CAD/CAM Software Environment
- Toolpath and Operations Planning in the CAD/CAM Environment
- Developing 2-D and 3-D CAD Geometry
- Preparing Contouring, Drilling, and Pocketing Toolpaths for CNC Milling Applications
- Strategy and Technique for Entry And Exit Leads and Advanced Pocketing
- Preparing OD, ID, and Threading Toolpaths for Turning Applications
- 3-D Toolpath Development and Editing
- Toolpath Posting Theory and Application to Specific CNC Milling and Turning Centers
- Running the 1st Article and Toolpath Editing Techniques
- Application Project

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Develop and enhance their CAD skills
- ▶ Develop and enhance their ability to use operate the equipment
- ▶ Draw, Assign, and create parts using G-Code numerical control programming

Please Note: Course content and time investment can be customized to an individual company's needs.

MASTERCAM® ADVANCED SURFACE AND MULTI-AXIS PROGRAMMING

Time Investment

This class is **80** hours of instruction in 4-hour sessions over the course of **20** weeks.

Course Description

This is an advanced training program for CNC machinists, programmers, and manufacturing engineers with MasterCAM experience and training who need to develop more advanced skills in 3-D surface and solid modeling techniques, and multi-axis toolpath programming for complex machined parts.

Audience

This class is designed for the experienced CNC machinists and operators, or students who have completed our CNC Programming and Set-Up class.

Prerequisites

For this advanced training participants must have successfully completed a basic MasterCAM training program or have prior experience in creating toolpaths using MasterCAM. This training assumes each participant already has the skills using MasterCAM X2 or above to create geometry and toolpaths for contouring, drilling, tapping, threading, and pocketing operations.

Topics and Course Content

This course will cover topics such as:

- **Developing Complex CAD Geometry For 3-D Surface and Solid Models**
 - Using Multiple Construction Planes and Advanced Editing Techniques
 - Surface Modeling Complex Shapes
 - Using Levels and Colors to Manage Geometry and Surfaces
 - Solid Modeling Design
- **3-D Surface Machining Toolpaths**
 - Advanced Stock Planning and Setup for Complex Parts
 - Tool Design Modeling Technique
 - Surface Roughing and Finishing Toolpaths
 - Wireframe Toolpaths
 - High Speed Surface Roughing and Finishing Toolpath Strategies

■ 4-Axis Rotary Toolpaths

- Machine Types and Selection
- Preparing A 4-Axis Rotary Setup
- Applying 2D and 3D Toolpath Strategies Using Axis Substitution
- Toolpath Planar Positioning Around Rotary Axis
- Using Multi-Axis Toolpaths for Single Rotary Axis
- Using MasterCAM® Advanced Multi-Axis Surface Toolpath Strategies

■ 5-Axis Toolpaths

- Machine Types and Selection
- The World Coordinate and Work Coordinate Systems
- Advanced Setup Techniques for 5-Axis Toolpaths
- Toolpath Planar Positioning for 5-Axis
- Simultaneous 5-Axis Toolpath Strategies
- Advanced Multi-Axis Simultaneous Surface Machining Toolpaths

■ 4 and 5-Axis Projects

- Complex Surface Model
- 4-Axis Helical Slot
- 4-Axis Simultaneous Pocketing
- 5-Axis Surface Machining
- 5-Axis Curve with Surface Compensation Control
- 5-Axis Impeller

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Apply multi-axis toolpath programming for complex machined parts
- ▶ Accomplish pre-determined learning goals from customized curriculum
- ▶ Develop a learning matrix and analyze accomplishments
- ▶ Develop a learning path and plan at the end of the class

Please Note: Course content and time investment can be customized to an individual company's needs.

SOLIDWORKS® ADVANCED DESIGN

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

This training program has been developed for SolidWorks users who have mastered the basics of parametric solid model design but need to continue building skills for working with imported models, surface modeling, FEA using CosmoWorks, model analysis with FlowWorks and MotionWorks, design presentation and publishing using animation, PhotoWorks, and creating e-Drawings.

SolidWorks has become a worldwide industry leader in affordable 3-D feature based parametric solid modeling software for mechanical design and engineering. SolidWorks utilizes an intuitive user interface, one of the best in the industry, and is based on the powerful Parasolid kernel. Users of Pro-E, Unigraphics, CATIA, and other high-end CAD software are discovering the portability, shorter learning curve, and expanded power and capability of SolidWorks.

Audience

This course is for the engineer or designer who has a good understanding of SolidWorks and wants to improve their skills with Advanced SolidWorks concepts.

Prerequisites

Previous experience with SolidWorks at the intermediate level

Topics and Course Content

This course will cover topics such as:

- **Working with Imported Models**
 - Understanding the File Types for Imported Models
 - Importing a Solid Model
 - Understanding What the Model is in SolidWorks®
 - Editing an Imported Solid
 - Building Dimensional Data from an Imported Solid Model
 - Using an Imported Solid Model in a Design Drawing
 - Using an Imported Model in an Assembly
- **Surface Modeling**
 - Working with Surfaces
 - Advanced Filleting
 - Deleting Faces
 - Dome Features
 - Offset Surfaces
 - Extend Surfaces
 - Intersection Curves and Splines
 - Filling in Gaps
 - Repairing Imported Surfaces
- **Advanced Solid Modeling**
 - Working with Multiple Bodies
 - Developing Sweep Paths Using 3-D Sketching
 - Developing Complex Shapes with Lofting
 - Creating Cuts Using Surfaces
 - Advanced Lofting Techniques
 - Core and Cavity Modeling
- **Design Publication and Analysis**
 - Creating design presentations using Photoworks and E-Drawings
 - FEA Analysis Using Cosmoworks
 - Flow Analysis Using Flowworks
 - Motion Analysis Using Motionworks

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Build better designs and find errors that they might ordinarily miss
- ▶ Use some of the more advanced manufacturing verification and simulation tools that are available in SolidWorks
- ▶ Leverage them to efficiently review the assemblies and parts for errors
- ▶ Use Interference Detection, Clearance Verification, Hole Alignment, Costing, Part Reviewer
- ▶ Evaluate part and assembly performance

Please Note: Course content and time investment can be customized to an individual company's needs.

SOLIDWORKS® MECHANICAL DESIGN

Time Investment

This class is **80** hours of instruction in 4-hour sessions over the course of **20** weeks.

Course Description

In this class students will learn how to design and model components using parametric solid modeling software. SolidWorks is an industry leader in the design of mechanical components and tooling, weldments, electrical circuitry, injection molds and plastics, understanding multi-bodies and their use in part design.

Audience

This class is suitable for those individuals that want to begin learning the skills necessary for the design of mechanical components, assemblies, and drawings. Participants will learn how to apply solid modeling skills to additive and subtractive manufacturing, and the application of mechanical design and assemblies from simple to complex projects.

Prerequisites

There are no prerequisites for this course. Student should have basic computer and print reading skills. Some manufacturing knowledge a plus but not a prerequisite.

Topics and Course Content

This course will cover topics such as:

- The SolidWorks CAD Environment/Interface
 - Modules Related to Design from Sketching and Solids Creation to Specialty Design Modules
- Menus, Toolbars, View Palettes, Graphics Area, Feature Manager, and Task Pane
- Create Design, Assembly, and Drawing Formats
 - Developing file properties for use in assemblies
- 2-D Sketch Planes and Sketch Tools, Mouse Functions, Sub-Menus, and Customizing Quick Access Sketch Tools
- Basic Creation of 3-D Solids from 2-D Sketches
 - Options in Solids Creation, End Conditions, and Size
- Relationship Between Sketch and Solid, Tracking History of Sketches and Solids Creation
 - Checking Parent/Child Relationships in Sketches
- Sketch Relations: Fully Defined and Constrained Sketches. Repairing Dangling Relations and Missing Geometry. Techniques for Repairing Solids Alarms and Sketches Using SolidWorks Tools
- Part Materials, Annotations, and Mark-Ups
- Pattern/Mirror Sketches and Pattern/Mirror Solid Features
- Multiple Part Configurations: Spreadsheets to Control Design and Develop Multiple Parts from One File
- Importing CAD Models from Third Party Vendors
 - Utilizing SolidWorks Toolbox
- Photoview 360 and 3-D Rendering for Peer Review and Presentations
- Assembly Techniques, Importing and Locating Components, Using Pattern Driven Assembly Techniques
- Handling/Organizing Links Between Part Files, Assemblies, and Drawings
- Assembly Configurations
- Bills of Material on Drawings Linking to part File Properties
 - Configuring Drawing Fonts for Title Blocks, BOM, Annotations, and Dimensions
- Detail and Assembly Drawings, Orthographic Views in Drawings, Section Views, Detail Views, and Dimensioning Techniques
- Exporting Part Files, Saving as Different File Types, Using Pack and Go
- Using Feature Recognition When Importing STEP Files
- Understanding the Difference Between Parts Designed for Manufacture vs. Parts Designed for Additive Manufacturing

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Successfully complete two assemblies and their components: The Gear Housing and Single-Cylinder Engine
- ▶ Students will learn about Top-Down and Bottom-Up design methodology
- ▶ Students will be able to reverse-engineer or design their own component assembly from scratch and print it in 3-D as validation of their design capabilities

Please Note: Course content and time investment can be customized to an individual company's needs.



SOLIDWORKS® SHEET METAL DESIGN

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

This course is designed to provide practical knowledge and tools to improve sheet metal design using SolidWorks design tools and simulation. After completing the course, the participants will be able to demonstrate their ability to design effective sheet metal parts and assemblies using the SolidWorks sheet metal tools.

Audience

The target audience includes sheet metal designers and engineering staff whose responsibilities include sheet metal design.

Prerequisites

SolidWorks® Basic training is a prerequisite to this course.

Topics and Course Content

This course will cover topics such as:

- Design SolidWorks 3D Solid Sheet Metal Parts and Assemblies
- Convert SolidWorks 3D Models or Imported CAD Models Directly to SolidWorks® Sheet Metal Models and Automatically Input Your Own Bend Radius, Thickness, And K-Factor
- Design Around a Group of Parts in an Assembly
- Automatically Estimate Sheet Metal Manufacturing Costs as You Design
- Automatically Flatten Your 3D Sheet Metal Part to Generate Flat Patterns that Include Bend Compensation for Manufacturing

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Convert SolidWorks or imported CAD models, create original parts, or design around a group of parts
- ▶ Generate Base, Edge, Miter, and Swept Flanges
- ▶ Generate bends, including Lofted Bends, Sketched Bends, and more
- ▶ Use Bend Tables for bend allowance/bend deduction
- ▶ Use Forming Tools to create features like ribs, louvers, lances, embosses, and extruded flanges
- ▶ Add weld details to sheet metal parts on models or drawings
- ▶ Automatically flatten parts to generate flat patterns for manufacturing with bend compensation
- ▶ Automatically estimate sheet metal part manufacturing cost as you design

Please Note: Course content and time investment can be customized to an individual company's needs.



VERICUT® FOR MASTERCAM®, CATIA® AND CNC USERS

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **15** weeks.

Course Description

VERICUT software has become the industry standard for simulating CNC machining to detect errors, potential collisions, or areas of inefficiency. It is used by companies of all sizes, universities/trade schools, and government agencies in more than 55 countries. VERICUT enables users to eliminate the process of manually proving-out NC programs. Following an overview of the graphical user interface and functionality, the participants will learn how to run a project. Special emphasis will be placed on how to detect and locate errors in NC programs. This course will also show you how to analyze the cut part by using many of VERICUT's built-in analysis features, including the ability to compare the cut stock to the design data. Participants will also be able to explore more deeply into other features, giving them the opportunity to work on their own projects with the instructor's help.

Audience

The course is intended for quality, programmers and machinists who wish to verify the program planned to run parts for optimization. Reduce waste by verifying your tool path settings.

Prerequisites

Fundamentals of Programming.

Topics and Course Content

This course will cover topics such as:

■ Introduction to VERICUT Simulation

- Setting Units Inch and Millimeters
- Starting a Verification Session in VERICUT
- Controlling Simulation Speed
- Find and Detect Errors
- Detecting Machine Collisions
- Measuring Features of the Cut Stock
- Comparing the Cut Stock to the Part Model
- Detecting Gouging During Cutting

■ Preparing a VERICUT Simulation Setup for a Milling Application

- Initializing a New Setup
- Selecting a Machine and Loading a Control Definition
- Loading the Rough Stock and Moving into Position on the Machine Table
- Loading a Fixture and Positioning on the Machine Table
- Establish the Setup Work Offset for the NC Program
- Loading the NC Program
- Creating Cutting Tools for the Program
- Checking and Adjusting VERICUT Session Configuration Parameters
- Running the Verification Sessions and Analysis of Results

■ Prepare a VERICUT Simulation Setup for a Turning Application

- Selecting the Turning Machine and Loading a Control Definition
- Loading the Rough Stock and Positioning in the Spindle Chuck
- Adjust the Spindle Chuck Jaws for the Stock
- Establish the Setup Work Offset for the NC Program
- Loading the NC Program
- Creating Turning Tools
- Creating Turning Tools on Turrets
- Checking and Adjusting VERICUT Session Configuration Parameters
- Running the Verification Sessions and Analysis of Results

■ Advanced Simulation

- Adding a Second Operation or Setup
- Creating a New Project File
- Preparing the Cut Stock Transition Between Setups
- Multiple Operation File Management
- Define and Simulate Multiple Tool Offsets

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Run a project using the software
- ▶ Detect and locate errors
- ▶ Compare cut stock to design data
- ▶ Configure a job in VERICUT
- ▶ Apply advanced modeling and assembly techniques and define tool shapes
- ▶ Use coordinate systems, subroutines, and work offsets
- ▶ Define, position, and orient stock models
- ▶ Customize reports
- ▶ Set up and simulate their own files

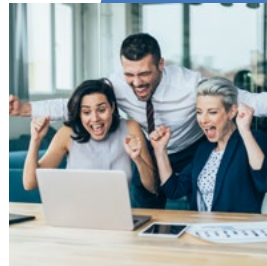
Please Note: Course content and time investment can be customized to an individual company's needs.







Management and Team Skills



LEAN PRINCIPLES FOR TEAMS

Time Investment

This class is **80** hours of instruction in 4-hour sessions over the course of **20** weeks.

Course Description

Many companies in Southern California have retained their competitive edge by reducing waste and increasing productivity through the implementation of a variety of innovative techniques and methods that fall under a general body of knowledge called Lean Operations.

With this course, you can prepare an entire team or just send one or two employees to learn how to lead the implementation of lean initiatives that could fundamentally change your company's operations with significant gains in productivity and reduced operating costs.

Audience

Participants are leaders of organizations, supervisors, and value stream workers, no matter the business type, looking to start or revitalize an autonomous team organizational structure to achieve its many benefits.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- **Getting Ready for Lean**
 - Getting People Involved and Leading Change
 - A History of Manufacturing – Understanding Why We Do Things the Way We Do
 - Developing a New Non-Blaming Culture Focused on Cooperative Problem-Solving
 - How to Keep People Motivated and Involved in Implementing Lean
 - Structured Problem-Solving and Teamwork
 - Understanding Quality Control and Its Importance in Lean Implementation

- **The Elements of Lean and a High-Performance Workplace**

- Understanding the Seven Areas of Waste
- Getting the Workplace Organized the 5S Program
- Process Analysis and the Identification of Process or Product Families
- Eliyahu Goldratt's Theory of Constraints – Focusing on the Pacer Process
- Batch Processing to Continuous Flow
- Workplace Layout – Job Shop and Flow Shop
- The Visual Workplace
- Cellular Operations

- **Implementation Strategies**

- Value Stream Analysis
- Understanding and Using TAKT Time
- Balancing and Leveling Schedule and Capacity
- Setup Reduction Techniques
- Setting Up a KANBAN System (As It Applies for Supplies and Inventory Availability)
- Planning and Conducting a KAIZEN Event
- Setting Up a TPM (Total Productive Maintenance) Program (As Needed)

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Have a clear understanding and confidence to start the implementation of the powerful lean organizational structure
- ▶ Recognize the benefits of what a team structure will bring to customers, the organization's quality, cost, and delivery measures, and its effect on employee motivation
- ▶ Lead improvement events
- ▶ Construct value stream maps to guide improvements
- ▶ Identify waste and recognize opportunities where Lean approaches can improve processes
- ▶ Select and apply the appropriate Lean methods and tools to reduce waste

Please Note: Course content and time investment can be customized to an individual company's needs.

TEAM DEVELOPMENT FOR LEADERS AND INFLUENCERS

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

We do not manage a team; we win the team over to our vision. In this course, participants can learn how to successfully involve their team by focusing on leadership development. Leadership development is needed to successfully take charge of teams. This leadership program will teach you how to stop directing and start leading so that the leader becomes a vital part to the company's future.

Audience

Whether you are part of the team, a team leader or desire to be a top influencer in your company, this class will help you define and train using techniques to identify and work with the protocol in your company, strengthen your preparedness, improve communication skills and give you leadership skills.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- Company Culture
- Impact of Roles on the Group
- Teaming When You are Not the Leader
- Facilitation Skills
- Mentoring
- Generating Ideas-Brainstorming Tools
- Time Management
- Sustaining an on-time Culture
- Creating and Reading Clear Milestones
- Communication Skills – Assuring Understanding
- Active Listening
- Focus on the Situation, the Issue or Behavior, not the Person
- Leadership Styles - Reading Others' Styles and Adapting in a Team Environment
- Setting Goals

- Prioritizing with Multiple Tasks and Multiple Departments
- Project Management – Identifying a Project
- Setting Schedules
- Managing Change
- When to Start a Team
- When and How to Disband a Team
- The Importance of Celebration and Acknowledging Work Accomplished
- Presentation Skills
- Speaking with Data
- Creating Strong Conclusions with R.O.I. and or Cost/Benefit Factor
- Risk Analysis
- Asking the Right Questions of the Right People
- Who are Your Stakeholders?
- Project Presentations

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

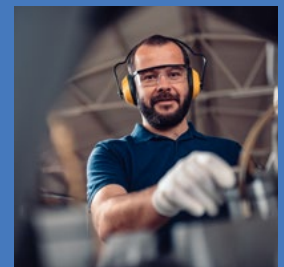
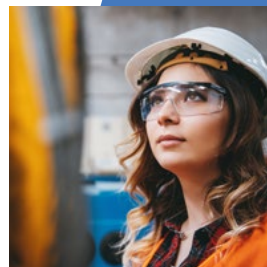
- ▶ Build effective communication and coaching techniques
- ▶ Set team priorities
- ▶ Use skillful problem analysis and decision-making
- ▶ Manage change successfully
- ▶ Reinforce listening skills
- ▶ Recognize team success with enthusiasm
- ▶ Apply a systematic delegation process
- ▶ Develop motivational presentations

Please Note: Course content and time investment can be customized to an individual company's needs.





Manufacturing Skills



3D REPLICATION USING FARO ARM

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

3D printing has gained a lot of awareness with the recent competition for bench top 3D printers. There are three ways to obtain a file that can be 3D printed; 1) Download an existing file, 2) Create a new file in a CAD system or 3) Laser scan an object and create a CAD file called 3D replication.

3D Replication is the process of accurately replicating a part using a laser scanner to gather a point cloud, then rendering that point cloud to usable files called STL and CAD files.

Audience

This course has been created for engineers, dentists, jewelers, artists, audiologists, educators, healthcare professionals, and basically anyone interested in learning the process of replicating an object for 3D printing.

Prerequisites

There are no prerequisites for this course. Students should be able to comfortably operate a computer.

Topics and Course Content

This course will cover topics such as:

- Laser scanning using a Faro Arm laser scanner
- Gathering a point cloud with Verisurf
- Rendering a point cloud to a useful CAD or STL file
- Processing an STL file using a Form Lab 3D printer
- Processing a CAD file using MasterCAM 3D surface tools

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Learn related terminology such as Point Cloud, Mesh and Surfaces
- ▶ Learn filtering and editing techniques to conform a rough point cloud to an accurate surface
- ▶ Hands-on experience using a laser scanner to gather point clouds
- ▶ How to edit and render a point cloud to a usable STL or CAD file
- ▶ How to prepare and print an STL 3D file
- ▶ How to prepare and machine a CAD 3D file

Please Note: Course content and time investment can be customized to an individual company's needs.



CAD/CAM ADVANCED SHOP APPLICATIONS – PROJECT BASED

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

In this project-based course, the participant will apply the advanced concepts in the integration of Computer-Aided-Design (CAD) and Computer-Aided-Manufacturing (CAM). Participants will be encouraged to bring their own projects or select from real-world interesting projects that will be presented by the instructor.

Audience

This course has been tailored for participants who have completed some CAD/CAM and NC programming classes and desire more in-depth training and practice in applying new skills learned.

Prerequisites

The training program will be perfect for our participants who have completed one or more of our MasterCAM programming classes or for participants who have some experience using MasterCAM to program parts but would like more time to work on machines to try out programs and make actual parts.

Topics and Course Content

This course will cover topics such as:

- **Introduction**
 - Course Introduction and Overview
 - Hands-on CNC Advanced Machining Class
- **Integrating CAD/CAM to The CNC Machine**
 - MasterCAM – Simulating Machine Setups Stock Planning and Simulation
- **Accurate Tool Information**
 - Getting the Work Offsets Correct
- **Selecting Your Part Project and Preparing To Run**
 - Preparing Selected Part for Programming
 - Machine Part Planning – Preparing a Storyboard of Plans
 - Designing Fixtures
 - Incorporating Plan and Fixtures into Each Part Setup In CAD/CAM
 - Making Fixtures and Running a 1st Article Part

- **Advanced Machine Toolpath Strategies**
 - High Speed Machine Strategies in MasterCAM
 - Applying Advanced High-Speed Material Removal Strategies
 - Advanced Axial Machining – Circle and Thread Milling
- **Advanced Multi-axis Machining**
 - Studying 5-Axis Programming Code
 - 5-Axis Positioning Strategies
 - 5-Axis Simultaneous Machining Strategies
 - 5-Axis Speeds and Feeds – Inverse Time vs. Inch Per Minute
 - 5-Axis Surface Machining
 - Planning 5-Axis Operations
 - Setup and Running a 5-Axis Part
 - Taking Advantage of Dynamic Work Offset
 - Advanced Axis Control Strategies
- **CNC Turning Operations Using Live Tooling**
 - 4-Axis Mill Turn Operations
 - The C Rotary Axis – Setting Up and Programming
 - Utilizing the Y Axis
 - Live Tool Planning
 - Live Tool Milling and Drilling Operations
 - Live Tool Setup
- **Running Projects and Experimenting with New Toolpath Strategies**
 - Setup Projects to Try New Toolpath Strategies, Area Milling and 5-Axis
 - Selecting Cutters and Machine Setup
 - Experimenting with Speeds and Feeds and Tool Engagement Strategies
 - Running Tests and Checking Results
 - Exploring Programming Methods to Extend Machine Tool Life

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Apply advanced concepts in the creation of 2D and 3D part geometry
- ▶ Apply the mill module of the MasterCAM software to convert the modeled part geometry into a cutter tool path for their projects
- ▶ Use the lathe module of the MasterCAM software to convert the modeled part geometry into a cutter tool path for their projects
- ▶ Safely operate the CNC machinery to mill a part model from metal material

Please Note: Course content and time investment can be customized to an individual company's needs.



CMM APPLICATION IN PC-DMIS® SOFTWARE LEVEL 1

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **20** weeks.

Course Description

This course will give first-time users of PC-DMIS a basic understanding of the software and measurements necessary to write and execute inspection plans. The course curriculum includes probe calibration, alignments, measurements, dimensioning, manual and DCC modes and using CAD models.

Audience

This course is for machinists, inspectors and shop employees who need to develop the skills and techniques to inspect parts using the Coordinate Measuring Machine (CMM) and to prepare inspection programs for a fully automated CNC driven CMM.

Prerequisites

Participants should have some familiarity with a computer, a CMM, Blueprint Reading, Basic Shop Math and GD&T. They should be employed in a machine shop environment where machined parts are inspected.

Students are encouraged to bring in parts, solid models or blueprints for use in lesson projects.

Topics and Course Content

This course will cover topics such as:

- **CMM Machine Basics**
 - Setting Up and Building the Probe
 - Calibrating the Probe
 - Creating a Manual Alignment
 - Creating a DCC Alignment (Dynamic Computer Control)
 - Establishing Inspection Datums
 - Going from One Work Plane to Another
 - Inspecting Dimensions, Length and Size
 - Inspecting Holes

■ Unlocking PC-DMIS

- Introduction to the PC-DMIS Interface
- Articulating the 4th And 5th Axis and Multi Axis Probe Definitions
- Creating the Manual and DCC Alignments Offline
- Programming Datums, Clearance Planes and Special Moves
- Programming Using Auto Features
- Using PC-DMIS to Analyze the Model

■ GD&T Illustrated and Explained

■ CMM Programming and Applications

- Part Programming and Inspection Project
- Importing the Solid Model, Setting Up Alignments
- Sharing Knowledge Using a Work Group Environment
- Developing the Inspection Plan
- Editing Existing Programs
- Programming the Part Offline
- Preparing the CMM Inspection Report Offline
- Running Inspection on the CMM
- Evaluating Projects and Making Changes and Adjustments
- Customizing Reports

Learning Goals and Results

This course will give first time users of PC-DMIS a basic understanding of the software and measurements necessary to write and execute inspection plans.

At the conclusion of the course, the participants will be able to:

- ▶ Set up and calibrate the probe
- ▶ Create manual and computer-controlled alignments
- ▶ Inspect simple features
- ▶ Program inspection processes off-line

Please Note: Course content and time investment can be customized to an individual company's needs.

CMM APPLICATION IN PC-DMIS® SOFTWARE LEVEL 2

Time Investment

This class is **40** hours of instruction in 4-hour sessions over the course of **10** weeks.

Course Description

This course continues the training from the Level 1 course to include advanced alignments, CAD usage, program control, and dimensioning. Participants will learn auto-calibration and how to incorporate logic commands in their PC-DMIS programs. This course also covers importing several CAD parts into PC-DMIS including the part to be measured, fixtures, and the CMM model.

Audience

This course has been created for machinists and inspectors who want to expand their CMM skill set by participating in a work group environment.

Prerequisites

Participants should have some familiarity with a computer, a CMM, Blueprint Reading, Basic Shop Math, and GD&T. They should be employed in a machine shop environment where machined parts are inspected.

Students are encouraged to bring in parts, solid models or blueprints for use in lesson projects.

Topics and Course Content

Skills learned in Level 1 will be challenged and reinforced by programming the inspection of more complicated parts.

This course will cover topics such as:

- Upgrading from PC-DMIS CAD to PC-DMIS CAD++
- Full 5-Axis Programmable Capabilities with CMM
- Operating More Complicated Parts
- Possible Alignment Strategies
- In Depth Customizing of Reports
- Full 5-Axis Programming as Opposed to 3-Axis Programming with 5-Axis Manual Articulation
- Use of Looping and Subprograms
- Reverse Engineering of Complicated Parts

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Program and run PC-DMIS CAD++
- ▶ Operate the Full 5-axis CMM
- ▶ Program the equipment for auto calibration
- ▶ Apply advanced alignment strategies
- ▶ Write looping and subprograms

Please Note: Course content and time investment can be customized to an individual company's needs.



CNC LATHE AND MILL SETUP APPLICATION LAB

Time Investment

This class is **100** hours of instruction in 5-hour sessions over the course of **20** weeks.

Course Description

This laboratory class for CNC (Computer Numerically Controlled) machining is designed for experienced machinists and machine operators, who want to update their skills in CNC operations, setups, and programming. Participants learn to program using G code, set up, and operate CNC lathes and mills. They will apply programming commands (machine commands and addresses), sequence of operations in CNC machining and programming, and data transfer from computer to CNC machine.

Audience

This lab is directed towards entry level programmers who want to build their setup skills through projects made on CNC lathes and mills.

Prerequisites

Participants should have completed either CNC Programming and Setup class, and or Basic MasterCAM class. Basic knowledge of shop mathematics and blueprint reading is highly recommended.

Topics and Course Content

Students will plan, program, set up, and inspect lathe and mill parts of increasing complexity.

This course will cover topics such as:

- Lab Environment
- Planning, Compiling Tool Lists, Program, Set Up, and Inspection of Actual Parts
- Processes Used in Manufacturing Today
- From Simple Lathe and Mill Parts to Complex Parts Requiring Machines Using Multiple Set Ups
- Boring Jaws on a Lathe and Create Custom Vise Jaws on Mills
- Lathe Processes; Rough and Finish Turning and Boring, Drilling, Tapping, Axial and Radial Grooving, Internal and External Threading, Bar Feeding, and Cut Off

- Mill Processes, Flycutting, Internal and External Rough and Finish Milling Periphery, Drilling, Tapping, Internal and External Thread Hobbing, Internal and External Grooving, and Surfacing.
- Geometric and Work Shift Offsets

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Be better qualified as a set-up technician
- ▶ Describe the differences between manual lathes/mills to CNC lathes/mills
- ▶ Define the basic Cartesian coordinate system
- ▶ Start and end mill and lathe programs
- ▶ Program turn profiles
- ▶ Produce screw threads
- ▶ Build and structure a CNC program and make it clear and concise
- ▶ Add comments to programs to make them comprehensible

Please Note: Course content and time investment can be customized to an individual company's needs.



CNC PROGRAMMING FOR THE CNC MILL USING G AND M CODES

Time Investment

This class is **80** hours of instruction in 4-hour sessions over the course of **20** weeks.

Course Description

In this class students will learn how to control 3-axis mill tool paths using G and M code in conjunction with tool path verification software. This course is a completely virtual learning experience.

Audience

This class is suitable for machinists, machine operators, tool makers, and anyone who wants to learn how to use code to program 3-axis tool paths. This is an opportunity to learn about the post-processed code generated by CAM software, such as MasterCam, GibbsCam, Esprit, etc.

Prerequisites

Student should have basic computer skills, print reading skills, and some machine shop experience to enroll in this class.

Topics and Course Content

This course will cover topics such as:

- Simple Point-to-Point Engraving Introduction to G/M Code
- G-Code CNC Positioning, Modal, and Non-Modal Code
- M-Code for Machine Functions
- Understanding MDI and Code Editing Functions
- Setting and Storing Work (Origin) and Tool Height Offsets
- More Complex Programming Involving Engineered Drawings and Shop Notes
- Canned Cycles, Cutter Compensation, and Subroutines
- Extra Functions Such as Tool Path Timing, Resequencing, and Alarm Editing
- Tool Definition, Selection, Tool Holders, and Tool Library Creation
- Work Holding Applications on the CNC Mill
- Haas/ Fanuc Compatible Code Format

- Speed and Feed Calculations and Understanding Cutting Speed
- Graphic Tool Path Validation of NC file and part Inspection
- Creating Set-up Instructions for Operators
- Importing, Editing, and Exporting NC Files
- Machine and Workholding Set-up
- Importing CAD/STEP Files for Set-up, Tooling, Workholding, and Stock
- CAM Post-process Validation examples
- Inspection of the Part in graphic environment as Validation of Tool Path
- Creating a Video of Graphic tool path to Aid First Article Set-up and Run

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Successfully create, edit, and execute a NC program from engineered drawings' part specifications
- ▶ Inspect part for flaws according to engineered drawing dimensions and tolerances

Please Note: Course content and time investment can be customized to an individual company's needs.



CNC PROGRAMMING AND SETUP WITH MASTERCAM®

Time Investment

This class is **100** hours of instruction in 4-hour sessions over the course of **25** weeks.

Course Description

CNC programming, setup, and machining require diverse skill sets. This course covers best practices with MasterCAM, including multi-axis toolpaths, programming and operation of a 5-axis CNC, multi-axis machine tool configurations, simultaneous toolpaths, and machine simulations.

Audience

This training program has been tailored to help CNC milling and turning machine operators or machinists develop confidence and new programming skills they can apply at the controller to modify existing NC code for jobs they are running or create new programs from scratch. Participants will leave with a successful first article, having produced four formal set-ups, two on the lathe and two on the mill.

Prerequisites

Some machine shop experience is needed for this course.

Topics and Course Content

This course will cover topics such as:

- **CNC Milling and Turning Operations**
 - CNC Milling and Turning Processes and Functions
 - CNC Machine Tool Systems and Design
 - Machine Axis Designation and Direction Conventions
 - CNC Positioning Systems
 - Geometry and Trigonometry Application for CNC Programmers
 - Selecting and Using Cutter Inserts and Holders
 - Understanding and Calculating Speeds, Feeds, and Chip Load
 - Developing a CNC Machining Operations Plan from Engineering Drawings and Specifications
 - NC Code and Programming Functions
 - Strategy for Developing Toolpath Coordinate Moves for Contour, Pocketing, and Turning Operations
 - Advanced NC Programming Technique Using Canned Cycles, Positioning, and Sub-Programming
 - NC Programming at the Machine Using MDI
 - CNC Milling and Turning Machine Controller Operations, and Program Loading
 - Application Project



■ CNC Set-Up Techniques

- Develop Tool Lists
- Loading Tools
- Establishing Tool Offsets and Work Coordinates
- Utilizing the Controls Graphics to Test a Program
- Perform Safe Dry Runs
- Setting Up First Article Pieces

■ Advanced NC Programming Practices

- Strategy and Technique for Incorporating Entry and Exit Leads into Toolpaths for Turning and Milling Operations
- Applying Canned Cycles for Drilling, Tapping, Circle Milling and Pocketing Toolpaths
- Applying Canned Cycles for Roughing, Finishing, Threading, and Other Turning Operations
- Applying Cutter Diameter and Tool Nose Compensation in the Machine Controller
- Advanced NC Programming Technique Using Coordinate Positioning
- Strategy and Technique for Repetitive Operations Using Sub Programming
- Running the 1st Article – Program Verification and Editing Techniques
- Application Project

■ Using Mastercam® To Create New Part Programs

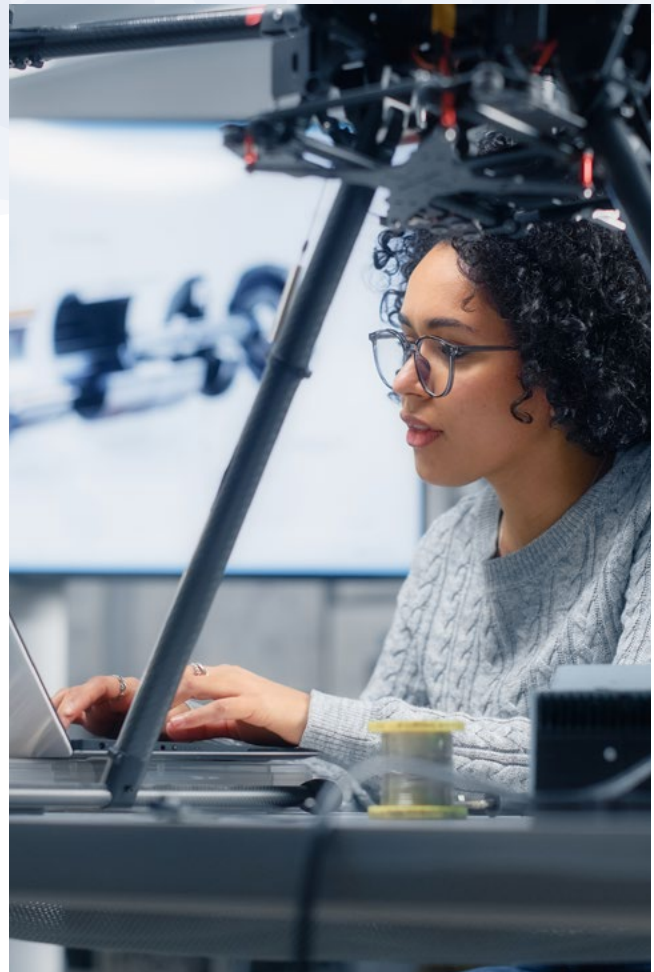
- Creating the Part Geometry in Mastercam
- Selecting the Machine In Mastercam to Be Used for The Part
- Planning the Job in Mastercam and Setting the Work Offset
- Building a Tool List for the Job in Mastercam
- Creating Toolpaths for Contouring, Pocketing, Drilling, Tapping, And Boring Operations
- Creating Lathe Toolpaths for Facing, OD Contouring, Boring, Drilling, and Threading
- Verifying and Posting Toolpaths to Create the NC Program
- Running the 1st Article – Program Verification and Editing Techniques

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Program and operate the CNC mill and lathe
- ▶ Develop a CNC machining operation from engineering drawings and specifications
- ▶ Apply advanced NC programming techniques
- ▶ Properly load tools
- ▶ Use MasterCAM to create new part programs
- ▶ Run first articles to verify and edit programs

Please Note: Course content and time investment can be customized to an individual company's needs.



GEOMETRIC DIMENSIONING AND TOLERANCING (GDT)

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **15** weeks.

Course Description

Geometric Dimensioning and Tolerancing (GD&T) is used as a representational way of showing specific tolerances on drawings. GD&T is a valuable tool that effectively communicates the design intent to manufacturing and inspection. It is governed by the technical standard ASME Y14.5M-2009. This course introduces participants to the GD&T system, providing a working knowledge of the correct interpretation and application of each symbol, general rules, the datum system, bonus tolerance, and highlighting some of the changes in the updated Y14.5 standard. The material is reinforced with many practice exercises.

Audience

This course is designed for manufacturing personnel who understand the basics of blueprint interpretation and need more detailed information to fully comprehend and apply today's manufacturing drawings and standards.

Prerequisites

Understanding the basics of blueprint interpretation.

Topics and Course Content

This course will cover topics such as:

- Blueprint Basics Review
- Dimensioning and Tolerancing Standards
- GD&T Symbols and Terms
- Datums and Datum Reference Frames
- Material Condition and Material Boundary
- Form Tolerances
- Orientation Tolerances
- Location Tolerances (Part I)
- Location Tolerances (Part II)
- The Virtual Condition
- Profile Tolerances
- Runout Tolerances
- Comprehensive Exam

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Understand all the Geometric controls and their usage
- ▶ Read a feature control frame as a sentence
- ▶ Identify and understand dependency, ASME, vs. independency ISO, for measuring size
- ▶ Describe MMC and LMC

Please Note: Course content and time investment can be customized to an individual company's needs.



INSPECTION TECHNIQUES

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **15** weeks.

Course Description

This course covers instruction and practice of precision measurement with tools commonly used by the machinist to produce and measure part features. This course introduces the proper use, applications and parts of the outside, inside, and depth micrometers; the Vernier caliper; dial indicators; and the dial bore gage commonly used by the machinist to verify and manufacture part features to print specifications. In addition, the participants will learn how to use some of the basic operations of the Coordinate Measuring Machine (CMM) and Precision Comparator.

Audience

This course is designed for inspectors, quality assurance specialists, and machinists. This course offers a background in accuracy requirements and interpretation of tolerances that ensures quality parts for customers.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- How to Read and Interpret Blueprints for Measurement Verification
- Machined Part Terminology
- How to Use Basic Machine Shop Inspection Tools to Inspect Machined Parts
- How to Create a First Article Report
- How to Create a Sketch of a Machined Part
- Review of Shop Math/Trigonometry
- Hands-On Familiarization of Inspection Tools Used to Verify Blueprint Dimensions on Actual Machined Parts

■ Gaining Proficiency on Various Equipment Used Including:

- Micrometers (Vernier, Dial, Digital) to Measure Od, Id, and Depth
- 062-10" Minus Pin Set
- Comparator
- Granite Surface Plate
- Sine Plate
- Height Gage
- Jo Block Set
- Telescoping Id Gages
- V-Block
- 90 Degree Knee
- Dental Impression Material
- C-Clamps
- 6 Inch Dial Calipers
- Protractors
- 1-2-3 Blocks
- Machined Parts

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Accurately measure dimensions of test pieces using micrometers, Vernier calipers, and depth micrometers
- ▶ Accurately indicate a part on the lathe, and indicate the table and a vise on a milling machine within the appropriate level of precision and accuracy
- ▶ Use the appropriate gauges for critical measurements
- ▶ Identify Geometric controls and their usage
- ▶ Read a geometric control as a sentence
- ▶ Use simple functional gages to check parts
- ▶ Calculate and collect variable data for CMM inspections

Please Note: Course content and time investment can be customized to an individual company's needs.

MANUFACTURING OPERATIONS LOGISTICS

Time Investment

This class is **80** hours of instruction in 4-hour sessions over the course of **20** weeks.

Course Description

This course is designed to cover the entire process of quoting, executing, and delivering products that are created in a machine shop. The goal of the class is to give the participants a complete experience on what it takes to run a machine shop business from beginning to end.

Audience

This hands-on class/lab is created for job shop owners, foremen and machinists. It is basically designed for anyone involved in large company manufacturing who wants to equate time with money in an industrial environment.

Prerequisites

Participants should have completed either CNC programming and setup class, and/or basic MasterCAM class as well as currently work in a manufacturing environment.

Topics and Course Content

This course will cover topics such as:

- Working Job Shop Experience
- How To Quote CNC Lathe and CNC Mill Machining Jobs
- Completing the Set-ups in the Quoted Estimated Time
- Ensuring Cycle Times are Within Quoted Estimated Time
- Learning How to Plan, Set-up and Operate All Necessary CNC Operations
- Learning How to Maintain Quality By Being Responsible for the Inspection of Work
- Tracking Time to Ensure the Job Remains Profitable
- Genuine Commercial Industrial Jobs
- Planning, Executing, Tracking, Evaluating, and Modifying Every Aspect of a Real Commercial Production Run from Start to Finish
- Learning How to be Responsible for 100% of the Process and 100% Final Inspection

- Packaging and Preparing Parts for Delivery Per Contract P.O.
- Evaluating Performance at Conclusion of Project by Comparing Quoted Times with Actual Times

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Have a better understanding of what it takes to manage a machine shop business
- ▶ Improve their skills in production control activities
- ▶ Know how to plan and quote a job
- ▶ Execute actual production runs
- ▶ Apply time studies and other analysis tools to control costs
- ▶ Understand how to deliver the product the customer wants

Please Note: Course content and time investment can be customized to an individual company's needs.



SHOP MATH AND BLUEPRINT READING

Time Investment

This class is **60** hours of instruction in 4-hour sessions over the course of **15** weeks.

Course Description

This introductory course to shop math and blueprint reading builds skills for shop employees, purchasing department personnel, and beginning inspectors to identify the symbology and measurements of quality parts.

Audience

This course is geared toward inspectors, machinists, technicians, assemblers, purchasing agents, and others involved in product quality and inspection to improve their understanding of blueprints and communications with customers and coworkers.

Prerequisites

None

Topics and Course Content

This course will cover topics such as:

- **Blueprint Reading**
 - Terms, Standard Abbreviations and the Alphabet of Lines
 - Dimensioning Systems
 - Orthographic Projections
 - Reading Multi-view Drawings
 - Blueprint Details – Reference, Basic, Chamfers, Counter-bores and Countersinks, Finish Symbols and Allowances, Fillets and Rounds, Bosses, Slotted Holes, Tapers, Necks, Heat-treatment and Finishes
 - Sectional Views
 - Thread Specifications
 - Metric Drawings
 - Welding Symbols (optional)
- **Shop Math**
 - Arithmetic – Fractions, Decimals, Tolerances, Signed Numbers, Powers and Roots
 - Metrics
 - Algebra – Formulas, Statistics
 - Geometry – Angles and Lines
 - Trigonometry – Right Triangle Applications

Learning Goals and Results

At the conclusion of the course, the participants will be able to:

- ▶ Identify and demonstrate correct interpretation of blueprints
- ▶ Identify conventional line symbols
- ▶ Correctly demonstrate the ANSI concepts of contour dimensioning and geometric breakdown for giving size and location of various features\
- ▶ Identify the features and parts of dimension information
- ▶ Distinguish between size and location dimensions
- ▶ Read technical drawings at any specified scale
- ▶ Interpret and read any or all of the six standard orthographic views using conventional practices
- ▶ Correctly transfer height, width, and depth distances between views
- ▶ Identify and correctly display hidden, center, and visible lines in all views

Please Note: Course content and time investment can be customized to an individual company's needs.



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