

+CONNECT

A MINNESOTA STATE COLLABORATIVE TRAINING PROGRAM

COURSE OUTCOMES

Safety Awareness (CMAE 1514)

- Work in a safe and effective manufacturing workplace
- Perform environmental safety inspections
- Perform emergency drills
- Identify unsafe condition and take corrective action
- Provide safety orientation for other employees
- Train personnel to use equipment safely
- Suggest processes that support safety in the workplace
- Fulfill safety and health requirements for maintenance, installation and repair
- Monitor equipment and operator performance
- Utilize effect safety enhancing workplace practices
- Identify customer needs
- Determine resources available for production process
- Set up equipment for the production process
- Set team production goals
- Make job assignments
- Coordinate work flow with team and other work groups
- Communicate production and material requirement and product specifications
- Perform and monitor the process to make the product

Manufacturing Processes & Production (CMAE 1518)

- Identify customer needs
- Determine resources available for production process
- Set up equipment for the production process
- Set team production goals
- Make job assignments
- Coordinate work flow with team and other work groups
- Communicate production and material requirement and product specifications
- Perform and monitor the process to make the product

Technical Mathematics (CMAE 1502)

- Solve practical problems in all topic areas
- Demonstrate and apply critical thinking skills to solve a variety of problems
- Utilize a systematic approach to problem solving
- Exhibit the use of a scientific calculator
- Demonstrate effective use of resources including faculty, reference materials, industry sources, and the Internet
- Demonstrate the ability to work online and be self-motivated to meet deadlines for assignments and tests

Quality Practices (CMAE 1522)

- Participate in periodic internal quality audit activities
- Check calibration of gauges and other data collection equipment
- Suggest continuous improvements
- Inspect materials and product/process at all stages to ensure they meet specifications
- Document the results of quality tests
- Communicate quality problems
- Take corrective actions to restore or maintain quality
- Record process outcomes and trends
- Identify fundamentals of blueprint reading

Maintenance Awareness (CMAE 1526)

- Understand the concepts of preventative maintenance and routine repair
- Describe the importance of monitoring indicators to ensure correct operations
- Perform all housekeeping to maintain production schedule
- Recognize potential maintenance issues with basic production systems
- Recognize the importance of documentation within a maintenance system
- Understand the system components of Total Productive Maintenance (TPM)

Introduction to Computers (CMAE 1506)

- Demonstrate knowledge of the basic components of a computer including file management, security, external devices, software, and hardware
- Gain a basic understanding of Microsoft Office programs and basic D2L features
- Ability to understand and utilize Microsoft Outlook for email, contacts, calendar, tasks, and notes
- Demonstrate knowledge of Microsoft Word document creation, spell check, grammar tools and formatting tools
- Demonstrate knowledge of the major components of Microsoft Excel and the formatting tools
- Understand the basic concepts of Microsoft PowerPoint and create presentations with various features



Career Success Skills (CMAE 1528)

- Identify appropriate and inappropriate professional behavior
- Identify areas of personal strengths and weaknesses related to career success skills and be able to improve areas of weaknesses
- Identify ways to discourage inappropriate professional behavior in coworkers
- Demonstrate the ability to be a productive, positive employee for a business
- Demonstrate the ability to work online and be self-motivated to meet deadlines for assignments and tests
- Demonstrate effective use of resources including faculty, reference materials, industry sources, and the Internet

Print Reading (CMAE 1510)

- Define basic blueprint terminology
- Differentiate between general and local notes
- Interpret common abbreviations and terminology
- Determine tolerances associated with dimensions on a drawing
- Identify types of lines within a drawing
- List essential components found in title and revision blocks
- Identify isometric views
- Identify positions of views: top, front, side, auxiliary, and section
- Visualize one or more views from a given isometric or pictorial representation of an object, or from an actual object
- Determine the scale of the view or section
- Check for revisions

Fundamentals of Auditing

- Understand how to audit a Quality Management System (QMS) based on ISO 9001:2015 guidelines
- All companies currently registered to ISO 9001:2008 will have until September 2018 to re-register to the new standard. This course can aid companies in the process
- Describe common industry standards. Identify methods used to become compliant
- Determine reasons to conduct an audit
- Prepare for an audit to verify ISO 9000 compliance
- Conduct an opening meeting, prepare an agenda and schedule
- Perform an audit interview by utilizing approaches that get the most from the auditee
- Document audit findings and evidence
- Identify minor and major non-conformance
- Communicate audit reports and conduct an exit meeting
- Provide recommendations for audit follow-up and closure

Geometric Dimensioning & Tolerancing (CMAE 1542)

- Understanding of ANSI Y14.5 standards that affect geometric dimensioning and tolerancing applications.
- Proficiency in using geometric dimensioning and tolerancing symbols and controls
- Decipher how piece-parts must be inspected if the features have GD&T controls and symbols
- Interpret a sketch or print with pertinent feature control frame and its contents based on written geometric requirements
- Decipher the correct precision tool(s) to inspect geometric requirements on a piece-part
- Determine the Total tolerance of a feature using bonus and non-bonus tolerances

Interpreting Symbols (CMAE 1560)

- Interpret basic elements of a drawing or sketch
- Interpret welding symbol information and placement guidelines
- Nondestructive Examination (NDE) methods and symbol use
- Calculate weight and cost of welding consumables and materials
- Prepare an applicable bill of materials

Basic & Intermediate Microsoft Excel

- Identify the elements of the Excel program
- Create and identify elements of a worksheet
- Enter data into worksheets
- Format worksheets
- Perform basic & intermediate calculations
- Work with functions
- Create charts and graphics
- Create and use pivot tables

Microsoft Access

- Understand the value of database applications
- Explain how and when a business might use a database application
- Create tables, forms, queries, and reports
- Input data into a table and utilize that data when running forms, queries, and reports
- Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others
- Complete a business simulation where the database is created, data is entered, and data is analyzed to generate useful reports, forms, and/or queries

Leadership Skills for New Supervisors

- Identify leader/supervisor best practices to effectively interact with others
- Demonstrate an understanding of four behavioral (communication) styles and how one's style may enhance or hinder effective communication
- Recognize the power of maintaining and/or enhancing others' self-esteem using empathy and asking others for help
- Identify a set of four steps which can be adapted to supervisor responsibilities such as assigning new tasks, introducing change, addressing conflicts, setting performance expectations, reviewing and providing poor performance/poor work habit feedback, providing positive feedback, and/or delegating tasks
- Employ ways to quantify, measure and track performance
- Utilize interview techniques and procedures that create meaningful and rewarding interviews
- Create an action plan to apply these best supervisory practices

Employee Life Skills for Industry Success

- Learn how to maintain a work-life balance to achieve total wellness
- Understand the value and benefits of physical health
- Identify strategies to create healthy habits
- Learn how to get along with any personality type
- Improve interpersonal communication and soft skills
- Learn how to set personal boundaries for healthy relationships
- Understand how to navigate and adapt to change more easily
- Recognize the symptoms of anxiety and depression
- Identify effective strategies to combat anxiety and depression and effectively support others
- Create a strategic vision and track its progress

Delivering Your Message through Clearly Constructed Communication

- Utilize organizational framework that is evident in making the message understood and the presentation/writing cohesive
- Make language choices that are compelling and enhance the effectiveness and appropriateness of the presentation
- Employ delivery techniques that make the presentation compelling as the speaker appears confident
- Use a variety of compelling supporting materials to make the message meaningful to the audience
- Deliver strong central message making the content memorable so the audience can act
- Consider diversity opportunities in preparation of the speech to better engage the audience

Developing the Team on which Everyone Wants to Play

- Foster a constructive and inclusive environment which is receptive to the contribution of team members through appropriate oral and written communication and actions
- Engage team members in ways that facilitate their work, constructively building upon the contributions of others
- Develop a work project pathway so team members successfully complete all assigned tasks by deadline in a thorough, comprehensive manner
- Support creative and innovating thinking to expand opportunities for growth
- Provide professional development for team members to fill gaps and increase strengths
- Respond to team conflict directly in a manner that is supportive and cohesive increasing the team's effectiveness and growth

MSSC-CPT Bootcamp

- Review and understand information provided in Manufacturing Processes & Production, Quality Practices, Safety Awareness, and Maintenance Awareness courses
- Become prepared to take the MSSC-CPT assessments

Basic Electricity/Electronics

- Identify different forms of energy sources and how they are produced
- Understand how to calculate for voltage, current and resistance using Ohms Law and to verify their simple calculations by correctly measuring for the value
- Understand electrical power and how to calculate it
- Understand what Solid State Electrical Devices are and where they are used
- Effectively implement basic electrical troubleshooting

Active Shooter Safety Training

- Learn little-known facts from recent active shooter cases
- Understand the Run, Hide, Fight, Prevention methodology
- Conduct pre-planned escape route drills
- Conduct a building safety risk assessment
- Understand how distance can impact survival chances
- Learn the psychology of an active shooter
- Evaluate your own psychological preparedness
- Develop the ability to think quickly during an encounter
- Identify objects that can be used as a shield or weapon
- Determine items that should be carried in purse/pocket
- Identify strategies to barricade doors or cover windows
- Understand the element of surprise to gain control
- Employ various physical and verbal defense methods
- Know what to do when law enforcement arrives
- Learn about safety weapons and resources
- Understand what should be in a first aid kit

Key Lean Manufacturing Principles

- Understand why business and industry are using Lean and learn some successful examples
- Possess basic understanding of Six Lean Principles
- Ability to define and understand Basic Lean Vocabulary
- Identify and describe the use of Five (5) different Lean Manufacturing Tools
- Understand the benefits and challenges associated with Lean