



## **LIVE TRAININGS OFFERED BY CCAT**

**Title:** Introduction to CAM using Mastercam Mill

**Description:**

This course is designed to give student foundation skills in computer-aided machining using the CAM software Mastercam for milling. The course covers basic sketching and the creation of facing, contour, pocket, and drilling tool paths. This four-day course will give students the basic skills needed to program a milling machine in a job shop environment using Mastercam. Additionally, students will be introduced to automated CAM programming using feature and tolerance-based machining strategies and model-based definition workflows. This course is designed for people with limited or no CAD-CAM experience. No prerequisites are required. Basic computer skills are helpful.

**Dates:** Tuesday Feb 25<sup>th</sup> - Friday Feb 28<sup>th</sup>

**Time:** 9am-4pm (lunch 12-1pm)

**Location:** CCAT East Hartford, CT



## LIVE TRAININGS OFFERED BY CCAT

### Digital Thread Lab Awareness Courses

Start your digital transformation. Discover the benefits of digital thread implementation. These awareness level training courses are aimed at anyone from the shop floor to the C-suite looking to learn about digital thread applications and workflows

**Location:** CCAT Pitkin St East Hartford, CT

#### **Digital Thread Concepts & Value Proposition Next Gen Tech Data Packages & MBD**

- Workflows Model-Based Engineering
- Model-Based Definition Digital Thread and MBD practices
- Developing MBD initiative and team
- MBD industry standards Modernizing product definition
- Ensuring the quality of source MBD
- Why source validation is important Process for characteristic accountability

**Timing:** 9:00am-12:00pm (Tuesdays)

#### **Next Gen Tech Data Packages & MBD Workflows**

- Role, use, and definition of TDP
- MIL STD 31000 for TDPs
- Common file formats used for TDPs
- Role and use of derivative files
- Creating derivative files
- Process for verifying derivative files
- Ensuring quality of MBD files
- Different or variant MBD workflows
- How MBD workflows affect the development process

**Timing:** 1:00pm -4:00pm (Tuesdays)



## LIVE TRAININGS OFFERED AT CCAT

### OSHA-Authorized 10-Hour General Industry Outreach Training Program

The 10-hour course is designed for safety steering committees, new safety managers, safety committee chairs, plant managers/supervisors and employees with safety oversight or responsibilities. The credential is recognized nationwide. Each course has a mix of mandatory/optional topic hours. The following matrix details the available course topics:

Topic	Hours
Introduction to OSHA, General Duty Clause, Inspections, Citations & Penalties	1
Walking & Working Surfaces-Fall Protection	1.5
Fire Protection & Means of Egress	1
Hazardous Materials	1
Personal Protective Equipment	1
Permit-Required Confined Spaces	1
Lockout/Tagout	1
Electrical & Safety-Related Work Practices	1
Hazard Communications	1
Welding, Cutting & Brazing	1
Machine Guarding	1
Material Handling	1
Posting/Filing/Record Keeping	.5
Managing Safety and Health Programs	2

Other topics may include but are not limited to:

- ❖ Bloodborne Pathogens
- ❖ Powered Platforms, Man lifts and Vehicle Mounted Work Platforms
- ❖ Hearing Conservation
- ❖ Respiratory Protection
- ❖ Medical and First Aid
- ❖ Cranes, Hoists and Lifts
- ❖ Hand and Portable Powered Tools
- ❖ Ergonomics and Safe Lifting
- ❖ Safety and Health Program Management and Administration

Each participant receives a comprehensive course text . Upon completion, each participant receives a completion card for the Occupational Health and Administration, as well as a certificate from National Safety Services, LLC.

**When:** 3/6 and 3/7 2025 9:00am-2:00pm

**Where:** CCAT Pitkin St East Hartford, CT



## LIVE TRAININGS OFFERED BY CCAT

### Rev-up Process Innovation Awareness Training Program

#### Program Description:

- This program provides participants from all departments with an understanding of the importance of focusing on organization's processes. It provides knowledge, skills and tools that aid process improvement efforts.

#### ➤ Specific Objectives:

- Learn Basic Process Mapping Skills
- Understand the Primary Process Improvement Lessons presented in "The Goal" by E. Goldratt
  - Identifying the Bottlenecks
  - Elevating the Constraints
  - Moving QC forward in the Process
  - Sequencing and Batching
- Manage Process Improvement-oriented meetings
- Practice with "Process Improvement" examples

#### Program Timing/Length:

This program is designed with three sequential sessions lasting 3 hours each.

Next Program: 3/21, 3/28, 4/4 2025 9:00am -12:00pm CCAT East Hartford, CT

#### Session One:

- Process Improvement Principles and Tools
  - The IPO (Input, Process, Outputs) Model
  - Identifying the right "Goal" for your Process Improvement Effort
- Process Improvement Tools
  - Process Mapping Logic
  - Process Chart Symbols
  - Process Mapping Exercise

#### Session Two:

- Understand the Process Improvement Lessons of Goldratt's "Theory of Constraints"
  - The Goal Video
  - Review the complications associated with a series "sequential" processes
  - Identify a sequential set of processes in your workplace
  - Quality Control
  - Eliminating Waste
    - Identifying the Bottlenecks
    - Elevating the Constraints
    - Moving QC forward in the Process
    - Sequencing and Batching Implications

#### Session Three:

- Practicing Process Improvement
  - Clarifying Roles/RACI Charting
- Capstone Event -The Facility Building Exercise (an active experiential exercise where participants practice the principles of "Process Improvement.")
  - Finding and eliminating process flaws and "bottlenecks"
  - Summary



## ONLINE TRAININGS OFFERED BY CCAT

### *Online Training with Mentor Support*

#### Smart Manufacturing – Industrial Internet of Things

This program is designed for those with some manufacturing experience and an affinity for and solid experience with computers and all things digital. The program is **online based** utilizing the industry recognized Tooling University platform and requires the ability to work independently. Progress will be **monitored and supported** by CCAT.

#### **Ask the Mentor**

Students will be provided with access to a **CCAT content mentor** via email during the course. A specially provided email address will be active for this purpose during the program providing the opportunity to ask any questions that may arise about the course material and its application.

**Timing/ Program Length:** *Participants can begin immediately.*  
Overall length – Six Weeks. Designed to fit into a work schedule. Training modules are brief and self-paced.

#### **Topics** *(Each area/module is about an hour in length):*

Cybersecurity for Manufacturing Basics 101  
Cybersecurity for Manufacturing: Malware Overview 102  
Introduction to the Industrial Internet of Things 111  
Data Collection Fundamentals 121  
Automatic Identification Technology 141  
Cybersecurity for Manufacturing: Hacking Overview 201  
Cybersecurity for Manufacturing: Wireless Networks 202  
Introduction to Digital Networks 221  
Data Collection: Inventory and Maintenance 231  
Introduction to Digital Twin 241  
Introduction to Digital Thread 242  
Introduction to Machine Learning and Artificial Intelligence 301  
Machine Learning and Artificial Intelligence Applications 302

#### **Course Objectives:**

Provides a solid grounding on key topics related to the industrial internet of things & smart manufacturing for those aiding with the transition to these technologies or seeking an enhanced understanding of them.

#### **Trainee Skill Level:**

Training runs to the intermediate level. Potential candidates should have strong computer skills.

### *Self-Paced Training*

#### International Traffic in Arms Regulations – ITAR Training

##### **ITR-1001 Introduction to International Traffic in Arms Regulations (ITAR)**

The International Traffic in Arms Regulations (ITAR) is a set of U.S. laws that control the export of product and technical data pertaining to military and defense-related technology. In this training, you will gain an understanding of United States arms export control regulations and why they were passed into law. You will also learn about common compliance violations and the penalties that can be incurred when arms regulations are breached.

By the end of this course, you will be able to

- Define International Traffic in Arms Regulations (ITAR)
- Understand the purpose of ITAR compliance
- Identify common ITAR compliance violations
- Describe the penalties for ITAR violations

**Online:** Estimated completion time (hours): 1  
(Credit hour 0.1 / CEU 0.1)

##### **ITR-1003 Implementing ITAR Compliance**

It is up to each individual company to comply with the International Traffic in Arms Regulations (ITAR). The ITAR guidelines recommend that organizations adopt a series of processes and procedures to ensure they comply with export control policies and avoid violations. This training contains an overview of the steps necessary to implement an effective ITAR compliance program within your company.

By the end of this course, you will be able to

- Understand the steps necessary to implement and maintain an ITAR compliance program
- Recognize the importance of management commitment
- Determine ITAR jurisdiction and classification
- Learn the requirements for record-keeping
- Understand the process for detecting, reporting, and disclosing violations
- Learn the value of employee training
- Develop risk assessments and audits to monitor compliance

**Online:** Estimated completion time (hours): 1  
(Credit hour 0.1 / CEU 0.1)



## ONLINE TRAININGS OFFERED BY CCAT

### New Course on Materials Through ASM International

*The International Professional Society for Materials*



### Mechanical Properties and Their Measurement

Almost every modern convenience relies, in some way, on the ability of metals and alloys to take on function and form and predictably maintain it over long periods of time under extreme operating conditions. The extent to which metals can be pushed, the limits of endurance under static and dynamic force loads, high-energy impacts, twisting, bending, and other applied stresses, is usually established by conducting standard mechanical tests that are described in detail in this course.

Students will learn – with the help of rich visuals, narrated animations, demonstration videos, and interactive quizzes – how to measure properties such as tensile strength, hardness, and impact resistance and what the tests reveal about material behavior and failure mechanisms, including fracture, creep, and fatigue. The course also includes information on ASTM test procedures and how they avoid measurement-induced errors stemming from metallurgical and microstructural changes.

#### ATTENDEES GAIN/DEEPEN UNDERSTANDING OF:

- Stress, strain and stress-strain curves
- Tensile Testing
- Hardness Testing
- Impact Tests
- Creep Testing
- Fatigue Testing
- Grain Size

#### WHO SHOULD ENROLL:

- Design Engineers
- Operators
- Technicians
- Process Engineers
- QA Managers
- Product Development Specialists
- Sales and Purchasing Professionals

Duration: 1.5-2 Hrs Online

# REV-UP!

## ONLINE TRAININGS OFFERED BY CCAT



### Cybersecurity for Manufacturing

This excellent curriculum developed by the highly regarded Cybersecurity Manufacturing Innovation Institute can provide your employees with a convenient, self-paced introduction to the threats, vulnerabilities, and available preventative measures for securing your organization.

Cyberattacks are growing more complex and sophisticated & organizations and their employees need to understand how to raise awareness across their company and take preventative measures.

Preventing cyber- attacks on our supply chain only works when everyone is a part of the solution.

Concise online, self-paced **e-learning** modules designed using CyManII's subject matter expertise and know-how on cybersecurity each module takes about 30 minutes. **Available for immediate start**

### Program Modules & Objectives

#### Cybersecurity for Manufacturing Basics **101**

*This course will help manufacturers and manufacturing personnel understand and identify basic cyber threats.*

#### Cybersecurity for Manufacturing: Malware Overview **102**

*After taking this course, users will be able to recognize malware threats and ways to defend against them.*

#### Cybersecurity for Manufacturing: Hacking Overview **201**

*After taking this class, users will better understand the cyber threats posed by hackers as well as the tools and strategies to guard against these threats.*

#### Cybersecurity for Manufacturing: Wireless Networks **202**

*After taking this course, users will understand a variety of wireless networking options and their general applications, the risks associated with these networks, and effective ways to make these networks more secure.*

#### Cybersecurity: Tools and Methods **205**

*After taking this course, learners should understand common cybersecurity tools and standards for cybersecurity best practices. These resources allow organizations to safely participate in and benefit from advanced manufacturing technologies. In addition, they can minimize damage and aid in data recovery after a breach.*



## ONLINE TRAININGS OFFERED BY CCAT

### Introduction to the Smart Supply Chain

This Tooling University based program introduces the different smart technologies that can be applied to and integrated with supply chains for more efficient supply chain management. The Industrial Internet of Things (IIoT) allows for the detailed collection, transmission, and analysis of data that can be used at nearly every stage of the supply chain to prevent errors, waste, and delays, as well as maintain high-quality materials handling and fleet management.

Automatic identification technologies, environmental sensors, robots, and artificial intelligence can be used to plan preventive maintenance, warehouse organization, and even retailers' orders. After taking this class, users will be able to identify key smart technologies and their use in and benefits for supply chains.

**Prior training needed:** None required

**Format:** Online/ Tooling University - SME Developed

**Course length:** 2 hours

#### Outline

- The Smart Supply Chain
- Smart Warehouses
- Smart Material Handling
- Smart Fleet Management
- Smart Supply Chain Customers and End-Users
- Smart Manufacturing and the IIoT
- Smart Manufacturing and Supply Chain Management
- Data on the Smart Supply Chain
- Devices for the Smart Supply Chain
- Review: Smart Supply Chain Delivery

#### Objectives

Provide information on best practices to prevent errors, waste and delays, as well as maintain high-quality material handling & logistics, efficient warehouses and effective fleet management.

#### Suggested Background

Those with roles in logistics, warehouse management and operations



# REV-UP!

## ONLINE TRAININGS OFFERED BY CCAT



Your REV-UP employees can learn essential technical and professional skills on their own schedule. Select from a library of over 700 online competency-based courses. Choose from the topics and learning pathways below, developed by Connecticut's manufacturing community. Or reach out and we'll work with you to customize your own training plan. Contact [Eileen Candels](#) for more information or to register.

### Health & Safety

Introduction to OSHA	SAF-1001
Making Work a Safer Place	SAF-1002
Help! What to Do in an Emergency	SAF-1003
Personal Protective Equipment	SAF-1004
Eye and Face Protection	SAF-1005
Work Area Safety	SAF-1016
Hazardous Materials	SAF-1012
Lockout/Tagout	SAF-1021
Fire Extinguishers	SAF-1023

### Additive Manufacturing

Introduction to 3D Metal Printing	ADM-1002
Introduction to Powder Bed Fusion	ADM -1003
Introduction to Binder Jetting	ADM -1004
Introduction to Directed Energy Deposition	ADM -1005
Introduction to Bound Powder Extrusion	ADM -1006
3D Metal Printing Safety	ADM -1007

### Non-Destructive Examination

Standard Inspection Techniques	NDE-3006
Visual Testing Equipment	NDE-3007
Visual Testing of Castings	NDE -3010
Visual Testing of Welds	NDE-3012
Materials	NDE-3039
Metals Manufacturing and Processes	NDE-3040
Testing of Material Properties	NDE-3041



Logistics for Manufacturing	Introduction to Logistics	LOG-1001
	<b>Logistics Technology</b>	LOG-1002
	Inventory	LOG-1003
	Distribution and Transportation	LOG-1004
	Safety, Quality, and the Environment in Logistics	LOG-1005
	Successful Logistics	LOG-1006
<b>Technical Documents</b>	Schematics & Prints	DWG-1001
	Engineering Drawing Terminology	DWG-1002
	Engineering Drawing Views	DWG-1003
	Engineering Drawing Lines	DWG-1004
	Dimensions and Tolerances	DWG-1005
	Threads and Fasteners	DWG-2003
<b>Customer Service For Manufacturing</b>	Focusing on Your Customers	CUS-1001
	Providing Friendly, Courteous, and Efficient Service	CUS-1002
	Communicating Effectively with Customers	CUS-1003
	Identifying and Meeting Customer Needs	CUS-1004
	Building Customer Relationships	CUS-1005
	<b>Advanced Customer Service</b>	
	Respecting Diversity in Your Customers	CUS-1006
	Better Serving Customers with Disabilities	CUS-1007
	Dealing with Difficult Customers	CUS-1008
	Responding to Customer Complaints	CUS-1009
Managing Conflict with Internal Customers	CUS-1010	

\* These learning pathways are created to help Connecticut employers create, grow, and retain their workforce.

## Additional 180 Skills Online Courses

There are hundreds of 180 Skills Online courses to choose from. Contact us to learn about the options that would work best for your REV-UP employees. Contact [Eileen Candels](#) to for more information or to register.

### A sample of other skill building courses

- Understanding Conflict
- Project Management
- Diversity Equity and Inclusion
- Communicating with Others
- Working as a Team
- Spreadsheets
- Personal Finances
- Shop Math Skills

### Some intermediate and advanced skills courses & programs

- **3D Printing**
- Quality Management
- **Composites**
- CNC Machining - Milling
- **Non-Destructive Examination**
- Maintenance Electrical
- **Advanced Manufacturing**
- Maintenance Pneumatics
- Maintenance PLC
- **Automation**
- Statistical Process Control
- **Robotics**