



# CERTIFICATION PROGRAMS

## COURSE CATALOG

Version 2023



**NORTHWEST  
SKILLS INSTITUTE**

[nwskills.org](https://nwskills.org)

# SKILLS COURSE NUMBERING

The skills course numbering system has four levels

## 1000

1000 level skills courses are where students begin their journey. These include the foundational knowledge and skills required for success in a technical career.

## 2000

2000 level skills courses are intermediate-level courses that include tools, equipment, processes and knowledge required to master technical tasks.

## 3000

3000 level skills courses are advanced-level skill and knowledge-based courses.

## 4000

4000 level skills courses are project and application-based courses.

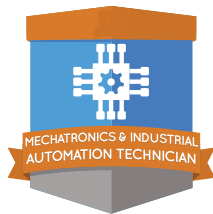
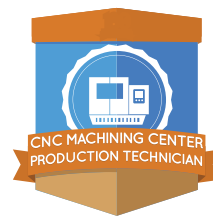
These skills courses allow the student to apply the knowledge they have acquired in the 1000 – 3000 level skills areas.

Many of these skills courses include full project-based learning that can also be performed in a hands-on, instructor-led environment.

# CERTIFICATION PROGRAMS

There are thirteen Certification Programs available and each can be completed in three months or less with 15 hours of study per week.

Those programs are used in pre-hire, academic, and workforce programs that benefit from alignment with nationally recognized certification standards.







# ADVANCED MANUFACTURING PRODUCTION TECHNICIAN

# ADVANCED MANUFACTURING PRODUCTION TECHNICIAN

## LAUNCH A CAREER AS A MAKER

Advanced manufacturing technicians perform many important tasks such as product assembly, machine operation, and quality assurance. Advanced manufacturing technicians play a key role in the manufacture of many commercial products.

Employment of advanced manufacturing technicians is projected to grow 4 percent from 2012 to 2022. Qualified applicants, including those with technical training and certification, should have the best job opportunities in the manufacturing sector, particularly in growing, high-technology industries, such as aerospace and electro-medical devices.

### Hiring Industries

- > Automotive
- > Aerospace
- > Civil infrastructure
- > Consumer products
- > Construction
- > Electrical equipment
- > Marine
- > Military
- > Materials processing
- > Medical devices

### Program Summary

**Skill Course:** 93

**Time to complete:** 1.5 months



# ADVANCED MANUFACTURING PRODUCTION TECHNICIAN

STU-1001	<b>180 Skills Orientation</b> Greatest Day Ever
STU-1002	<b>Using a Learning Management</b> How to Take a Course
STU-1003	How to Navigate the LMS
STU-1004	<b>Learning Online</b> Tips for Succeeding in Online Learning
CAR-2001	<b>Manufacturing as a Career</b> Manufacturing - A Future Worth Exploring
CAR-2002	Manufacturing - Components of Production
CAR-2003	Manufacturing - Credentials and Competencies
CAR-2004	Manufacturing - Career Planning and Resources
MFG-1001	<b>Introduction to Manufacturing</b> What is Advanced Manufacturing?
MFG-1002	Manufacturing History and Technology
MFG-1003	From Ideas to Products
MFG-1004	From Design to Manufacturing
MFG-1005	Safety, Quality and the Environment in Manufacturing
MFG-1006	Measuring Success in Manufacturing
MFG-1007	Careers in Manufacturing
MFG-1008	
LOG-1001	<b>Introduction to Logistics</b> What is Logistics?
LOG-1002	Logistics Technology
LOG-1003	Inventory
LOG-1004	Distribution and Transportation

# ADVANCED MANUFACTURING PRODUCTION TECHNICIAN

LOG-1005 Safety, Quality and the Environment in Logistics  
LOG-1006 Winning in Logistics  
LOG-1007 Careers in Logistics

## **Manufacturing & Logistics Game**

MFG-1008 The Game of Manufacturing and Logistics

## **Basic Math**

MTH-1001 Introduction to Basic Math  
MTH-1002 Arithmetic Operations

## **Fractions and Decimals**

MTH-1004 Introduction to Fractions  
MTH-1005 Working with Fractions  
MTH-1006 Decimal Numbers

## **Intermediate Math**

MTH-1003 Numbers and the Number Line  
MTH-1007 Positive and Negative Numbers  
MTH-1008 Cartesian Coordinates  
MTH-1009 The Metric System

## **Introduction to Safety**

SAF-1001 Introduction to OSHA  
SAF-1002 Making Work a Safer Place  
SAF-1003 Help! What to Do in an Emergency

## **Personal Protective Equipment Safety**

SAF-1004 Personal Protective Equipment  
SAF-1005 Eye and Face Protection

# ADVANCED MANUFACTURING PRODUCTION TECHNICIAN

SAF-1006	Head Protection
SAF-1007	Foot and Leg Protection
SAF-1008	Hand and Arm Protection
SAF-1009	Body Protection
SAF-1010	Hearing Protection
SAF-1011	Respiratory Protection
<b>Hazardous Material Safety</b>	
SAF-1012	Hazardous Materials
SAF-1013	HazCom
SAF-1014	Hazardous Waste
SAF-1015	Hazard Material Storage
<b>Workplace Safety</b>	
SAF-1016	Work Area Safety
SAF-1017	Permit-Related Safety
SAF-1018	Fall Prevention
SAF-1019	Ladder Safety
<b>Electrical and Fire Safety</b>	
SAF-1020	Electrical Safety
SAF-1021	Lockout/Tagout
<b>Engineering Processes</b>	
MFG-1009	The Engineering Process
MFG-1010	Information Sharing
<b>Quality Systems</b>	
QUA-1001	Introduction to Quality
QUA-1002	ISO 9000



# ADVANCED MANUFACTURING PRODUCTION TECHNICIAN

QUA-1003 Standards Organizations  
QUA-1004 Quality Organizations  
QUA-1005 Basic Quality Roles and Responsibilities

## **Introduction to Statistical Process Control**

QUA-1011 Introduction to SPC  
QUA-1012 Probability and Variation  
QUA-1013 The Control Chart

## **Blueprint Reading Fundamentals**

DWG-1001 Introduction to Blueprints  
DWG-1002 Engineering Drawing Terminology  
DWG-1003 Engineering Drawing Views  
DWG-1004 Engineering Drawing Lines  
DWG-1005 Dimensions and Tolerances

## **Precision Measurement I**

MEA-2001 Introduction to Precision Instruments  
MEA-2002 Rules  
MEA-2003 Calipers  
MEA-2004 Micrometers

## **Introduction to Lean Manufacturing**

LEA-1002 The History of Lean Manufacturing

## **Workplace Organization**

LEA-1003 Workplace Organization  
LEA-1004 S1: Sort  
LEA-1005 S2: Straighten  
LEA-1006 S3: Shine

# ADVANCED MANUFACTURING PRODUCTION TECHNICIAN

LEA-1007  
LEA-1008

S4: Standardize  
S5: Sustain

## **Introduction to Machining**

CNC-1001 Introduction to Machining  
CNC-1002 Machine Tools  
CNC-1003 CNC Controllers  
CNC-1004 Machining Personnel  
CNC-1005 Facility Layout

## **Introduction to Industrial Automation**

AUT-1001 Introduction to Automation  
AUT-1002 Automated Process  
AUT-1003 Automated System

## **Searching for a Job**

CAR-1001 Kicking Off Your Job Search  
CAR-1002 Finding Jobs to Apply For  
CAR-1003 Networking

## **Resumes and Job Applications**

CAR-1004 Completing an Employment Application  
CAR-1005 Creating Your Resume  
CAR-1006 Crafting a Cover Letter

## **Interviewing**

CAR-1007 Understanding the Interview Process  
CAR-1008 Making a Positive Impression  
CAR-1009 Responding to Interview Questions



ADVANCED MANUFACTURING CERTIFICATION PROGRAMS

# ADVANCED MANUFACTURING PRODUCTION TECHNICIAN

CAR-1010  
CAR-1011

Addressing Special Interview Concerns  
After the Interview

CAR-1012  
CAR-1013

**Keeping a Job**  
Surviving Your First Day on the Job  
Turning a Job into a Career





# AEROSPACE ELECTRICAL ASSEMBLY TECHNICIAN

# AEROSPACE ELECTRICAL ASSEMBLY TECHNICIAN

## ELECTRIFY THE WORLD'S AIRCRAFT

Today's aircraft are highly complex machines with hundreds of electronic components and miles of wiring. Aerospace electrical assembly technicians ensure the electronic systems on modern aircraft operate at peak performance.

They prepare wiring layouts, select and install a wide range of electrical components, perform scheduled maintenance, and complete inspections. Repairing, diagnosing and assembling the electronic components, they play a crucial role in ensuring worry-free flight.

### Hiring Industries

- > Air Transport
- > Aircraft & Parts Manufacturing
- > Guided Missiles, Space
- > Vehicles, and Parts
- > Satellite Communications
- > Search, Detection
- > Navigation Guidance
- > Space Research and Technology

### Program Summary

**Skill Course:** 161

**Time to complete:** 3.5 months

# AEROSPACE ELECTRICAL ASSEMBLY TECHNICIAN

STU-1001	<b>180 Skills Orientation</b> Greatest Day Ever
STU-1002	<b>Using a Learning Management System</b> How to Take a Course
STU-1003	How to Navigate the LMS
STU-1004	<b>Learning Online</b> Tips for Succeeding in Online Learning
AER-1001	<b>Aircraft Familiarization</b> The History of Aviation
AER-1002	Primary Assemblies of an Aircraft
AER-1003	Principles of Flight
AER-1004	Airplane Control
AER-1005	Aircraft Configuration
AER-1006	Aircraft Materials
AER-1007	Aircraft Construction
AER-1008	Aircraft Corrosion
AER-1009	Aircraft Regulations
MTH-1001	<b>Basic Math</b> Introduction to Basic Math
MTH-1002	Arithmetic Operations
MTH-1004	<b>Fractions and Decimals</b> Introduction to Fractions
MTH-1005	Working with Fractions
MTH-1006	Decimal Numbers



# AEROSPACE ELECTRICAL ASSEMBLY TECHNICIAN

MTH-1003  
MTH-1007  
MTH-1008  
MTH-1009

## Intermediate Math

Numbers and the Number Line  
Positive and Negative Numbers  
Cartesian Coordinates  
The Metric System

SAF-1001  
SAF-1002  
SAF-1003

## Introduction to Safety

Introduction to OSHA  
Making Work a Safer Place  
Help! What to Do in an Emergency

SAF-1004  
SAF-1005  
SAF-1006  
SAF-1007  
SAF-1008  
SAF-1009  
SAF-1010  
SAF-1011

## Personal Protective Equipment Safety

Personal Protective Equipment  
Eye and Face Protection  
Head Protection  
Foot and Leg Protection  
Hand and Arm Protection  
Body Protection  
Hearing Protection  
Respiratory Protection

SAF-1012  
SAF-1013  
SAF-1014  
SAF-1015

## Hazardous Material Safety

Hazardous Materials  
HazCom  
Hazardous Waste  
Hazard Material Storage

SAF-1016  
SAF-1018

## Workplace Safety

Work Area Safety  
Fall Prevention

# AEROSPACE ELECTRICAL ASSEMBLY TECHNICIAN

SAF-1020  
SAF-1021

## Electrical and Fire Safety

Electrical Safety  
Lockout/Tagout

SAF-1027  
SAF-1028

## Tool and Machine Safety

Hand Tool Safety  
Power Tool Safety

DWG-1006  
DWG-1007  
DWG-1008  
DWG-1009  
DWG-1010  
DWG-1011

## Blueprints and Picture Sheets for Aerospace

Aerospace Introduction to Blueprints  
Blueprint Terminology  
Blueprint Views  
Blueprint Lines  
Blueprint Dimensions and Tolerances  
Blueprint Symbols

MEA-2001  
MEA-2002  
MEA-2003  
MEA-2004

## Precision Measurement I

Introduction to Precision Instruments  
Rules  
Calipers  
Micrometers

MEA-2020  
MEA-2021  
MEA-2022  
MEA-2023  
MEA-2024  
MEA-2025

## Fastener Inspection Gauges

Grip Gauges  
Countersink Gauges  
Fastener Height Gauges  
Rivet Inspection Gauges  
Fastener Inspection Gauges  
Gap Inspection Gauges

# AEROSPACE ELECTRICAL ASSEMBLY TECHNICIAN

FAS-2001  
FAS-2002  
FAS-2003  
FAS-2004  
FAS-2005  
FAS-2006  
FAS-2007  
FAS-2008  
FAS-2009  
FAS-2010  
FAS-2011  
FAS-2012

## **Fasteners**

Temporary Fasteners  
Rivets  
Bolts, Screws, and Washers  
Threaded Inserts  
Hi-Loks  
Lockbolts  
Nut Plates  
Blind Rivets  
Identifying Fasteners  
Fasteners and Fits  
Securing and Lockwiring Fasteners  
Torque Tools

POW-2001  
POW-2002  
POW-2003  
POW-2004  
POW-2005

## **Hand Power Tools**

Pistol Grip Drills  
Drilling Techniques  
Winslow Drills  
Compression Riveters  
Rivet Installation Tools

POW-2006  
POW-2007  
POW-2008  
POW-2009  
POW-2010  
POW-2011

## **Stationary Power Tools**

Introduction to Stationary Power Tools  
Disc and Belt Sanders  
Drill Press  
Band Saw  
Arbor Press  
Bench Grinder



# AEROSPACE ELECTRICAL ASSEMBLY TECHNICIAN

CUT-2001	<b>Drill Bits</b> Drill Bits
CUT-2002	<b>Drill Guides and Drill Stops</b> Drill Guides and Drill Stops
CUT-2003	<b>Countersinking Tools</b> Countersinking Tools
AER-4001	<b>Basic Drilling and Riveting</b> Marking Fastener Locations for Drilling Project
AER-4002	Setting Up the Drill Motor
AER-4003	Drilling Pilot Holes and Enlarging Holes
AER-4004	Deburring
AER-4005	Driving Protruding Head Rivets
AER-4014	<b>Countersinking and Riveting Project</b> Setting the Countersink Tool (project)
AER-2001	<b>Aerospace Sealing and Safety</b> Introduction to Sealing
AER-2002	Chemical Safety
AER-2003	Preparing the Surface
AER-2004	Selecting the Right Sealant
AER-2005	Applying the Sealant
AER-4043	<b>Sealant Applicant Processes Mechanical Project</b> Sealing Basics
AER-4044	Fay and Prepack Sealing
AER-4045	Fillet and Injection Sealing

# AEROSPACE ELECTRICAL ASSEMBLY TECHNICIAN

AER-4046

Cap Sealing

AER-2006

**Aerospace Electrical Bond and Ground**  
Electricity and the Airplane

ELE-2019

**Electrical Measurement Conversion**  
Electrical Measurement and Unit Conversion

ELE-2020

**Electrical Resistance Test Equipment**

Resistance Test Equipment

ELE-2021

The Fluke® Multimeter

ELE-2022

The Biddle® Ohmmeter

ELE-2023

The Avtron® Ohmmeter

ELE-2024

The Hewlett Packard® Milliohmmeter

ELE-2025

The BCD M1® Ohmmeter

AER-4047

**Aerospace Electrical Bond and Ground Project**

Electrical Bond and Ground Introduction

AER-4048

Pre-installed Ground Studs

AER-4049

Electrical Fay Surface Bonds

AER-4050

Direct Ground Stud

AER-4051

Fillet Sealing a Ground Stud

AER-4052

Fay Sealing a Direct Ground Stud

DWG-2004

**Aerospace Wire Installation Drawings**

Engineering Drawing Review

DWG-2005

Wire Bundle Installation Paperwork

DWG-2006

Electrical Production Illustrations

# AEROSPACE ELECTRICAL ASSEMBLY TECHNICIAN

AER-2007	<b>Aerospace Wire Bundle Basics</b>
AER-2008	Wiring in Airplanes
AER-2009	Wire and Cable Basics
AER-2010	Wire, Cable, and Wire Bundle Markings
AER-2011	Circular Connectors and Contacts
AER-2012	Installing a Connector
AER-2013	MTC Connectors
	Tying Wire Bundles

ELE-2018	<b>Electrical Hand Tools</b>
	Hand Tools for Electrical Wiring

ELE-2006	<b>Electrical Connectors</b>
	Electrical Connectors and Fasteners

ELE-4001	<b>Crimping Terminals and Splices</b>
ELE-4002	Terminals and Splices
ELE-4003	Crimping
ELE-4004	Crimping a Terminal
	Crimping a Pre-insulated Splice

ELE-4005	<b>Assembly of Coaxial Connectors</b>
ELE-4006	Coaxial Cable
ELE-4007	Coaxial Connectors
ELE-4008	Coaxial Connector Tools
	Coaxial Connector Assembly

ELE-2007	<b>Fiber Optics</b>
ELE-2008	Fiber Optics and Light
	Manufacturing Optical Fiber

# AEROSPACE ELECTRICAL ASSEMBLY TECHNICIAN

ELE-2009 Fiber Optic Cable  
ELE-2010 Handling Fiber Optic Cable  
ELE-2011 Quality and Safety

## **Aerospace Wire Bundle Installation Project**

AER-4053 Clearance and Separation  
AER-4054 Minimum Bend Radius  
AER-4055 Clamping Wire Bundles - Part One  
AER-4056 Tying Wire Bundles for the Wire Bundle Installation Project  
AER-4057 Project Installation Plan  
AER-4058 Project and Drawing Review  
AER-4059 Pre-routing Wire Bundles  
AER-4060 Clamping Wire Bundles - Part Two  
AER-4061 Torque and Inspection

## **Searching for a Job**

CAR-1001 Kicking Off Your Job Search  
CAR-1002 Finding Jobs to Apply For  
CAR-1003 Networking

## **Resumes and Job Applications**

CAR-1004 Completing an Employment Application  
CAR-1005 Creating Your Resume  
CAR-1006 Crafting a Cover Letter

## **Interviewing**

CAR-1007 Understanding the Interview Process  
CAR-1008 Making a Positive Impression  
CAR-1009 Responding to Interview Questions  
CAR-1010 Addressing Special Interview Concerns



# AEROSPACE ELECTRICAL ASSEMBLY TECHNICIAN

CAR-1011

After the Interview

## **Keeping a Job**

CAR-1012

Surviving Your First Day on the Job

CAR-1013

Turning a Job into a Career



**AEROSPACE QUALITY TECHNICIAN**

# AEROSPACE QUALITY TECHNICIAN

## MAKE THE SKIES SAFER

This program was developed with input from industry partners to ensure that aerospace quality assurance technicians have a deep knowledge and mastery of aircraft manufacturing processes.

Aerospace quality technicians reduce development costs, decrease maintenance expenses, and increase customer safety and satisfaction.

### Hiring Industries

- > Air Transport
- > Aircraft & Parts Manufacturing
- > Guided Missiles, Space
- > Satellite Communications
- > Search, Detection
- > Navigation Guidance
- > Space Research and Technology

### Program Summary

**Skill Course:** 186

**Time to complete:** 3.5 months

# AEROSPACE QUALITY TECHNICIAN

STU-1001	<b>180 Skills Orientation</b> Greatest Day Ever
STU-1002	<b>Using a Learning Management System</b> How to Take a Course
STU-1003	How to Navigate the LMS
STU-1004	<b>Learning Online</b> Tips for Succeeding in Online Learning
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AER-1002	Primary Assemblies of an Aircraft
AER-1003	Principles of Flight
AER-1004	Airplane Control
AER-1005	Aircraft Configuration
AER-1006	Aircraft Materials
AER-1007	Aircraft Construction
AER-1008	Aircraft Corrosion
AER-1009	Aircraft Regulations
MTH-1001	<b>Basic Math</b> Introduction to Basic Math
MTH-1002	Arithmetic Operations
MTH-1004	<b>Fractions and Decimals</b> Introduction to Fractions
MTH-1005	Working with Fractions
MTH-1006	Decimal Numbers



# AEROSPACE QUALITY TECHNICIAN

MTH-1003  
MTH-1007  
MTH-1008  
MTH-1009

## **Intermediate Math**

Numbers and the Number Line  
Positive and Negative Numbers  
Cartesian Coordinates  
The Metric System

SAF-1001  
SAF-1002  
SAF-1003

## **Introduction to Safety**

Introduction to OSHA  
Making Work a Safer Place  
Help! What to Do in an Emergency

SAF-1004  
SAF-1005  
SAF-1006  
SAF-1007  
SAF-1008  
SAF-1009  
SAF-1010  
SAF-1011

## **Personal Protective Equipment Safety**

Personal Protective Equipment  
Eye and Face Protection  
Head Protection  
Foot and Leg Protection  
Hand and Arm Protection  
Body Protection  
Hearing Protection  
Respiratory Protection

SAF-1012  
SAF-1013  
SAF-1014  
SAF-1015

## **Hazardous Material Safety**

Hazardous Materials  
HazCom  
Hazardous Waste  
Hazard Material Storage

SAF-1016  
SAF-1018

## **Workplace Safety**

Work Area Safety  
Fall Prevention

# AEROSPACE QUALITY TECHNICIAN

SAF-1020  
SAF-1021

## **Electrical and Fire Safety**

Electrical Safety  
Lockout/Tagout

SAF-1027  
SAF-1028

## **Tool and Machine Safety**

Hand Tool Safety  
Power Tool Safety

QUA-1001  
QUA-1002  
QUA-1003  
QUA-1004  
QUA-1005

## **Quality Systems**

Introduction to Quality  
ISO 9000  
Standards Organizations  
Quality Organizations  
Basic Quality Roles and Responsibilities

QUA-1011  
QUA-1012  
QUA-1013

## **Introduction to Statistical Process Control**

Introduction to SPC  
Probability and Variation  
The Control Chart

QUA-2001  
QUA-2002  
QUA-2003  
QUA-2004

## **Advanced Statistical Process Control**

Control Chart Analysis  
Process Capability  
Problem Solving Tools  
Problem Solving

DWG-1006  
DWG-1007  
DWG-1008

## **Blueprints and Picture Sheets for Aerospace**

Aerospace Introduction to Blueprints  
Blueprint Terminology  
Blueprint Views

# AEROSPACE QUALITY TECHNICIAN

DWG-1009	Blueprint Lines
DWG-1010	Blueprint Dimensions and Tolerances
DWG-1011	Blueprint Symbols
	<b>Geometric Dimensioning and Tolerancing</b>
DWG-3001	Introduction to GD&T
DWG-3002	GD&T Terms and Symbols
DWG-3003	Rules of GD&T
DWG-3004	Geometric Tolerances
DWG-3005	Datums
	<b>Precision Measurement I</b>
MEA-2001	Introduction to Precision Instruments
MEA-2002	Rules
MEA-2003	Calipers
MEA-2004	Micrometers
	<b>Precision Measurement II</b>
MEA-2005	Small Hole Gauges
MEA-2006	Dial Indicators
MEA-2007	Bore Gauges
MEA-2008	Height Gauges
MEA-2009	Go/NoGo Gauges
MEA-2010	Test Indicators
	<b>Fastener Inspection Gauges</b>
MEA-2020	Grip Gauges
MEA-2021	Countersink Gauges
MEA-2022	Fastener Height Gauges
MEA-2023	Rivet Inspection Gauges

# AEROSPACE QUALITY TECHNICIAN

MEA-2024  
MEA-2025

Fastener Inspection Gauges  
Gap Inspection Gauges

AER-3001  
AER-3002  
AER-3003  
AER-3004  
AER-3005  
AER-3006  
AER-3007  
AER-3008  
AER-3009  
AER-3010  
AER-3011  
AER-3012  
AER-3013

**Aircraft Systems**  
Flight Control Systems  
Mechanical Systems  
Landing Gear Systems  
Aerospace Hydraulic Systems  
Aerospace Pneumatic Systems  
Electrical Systems  
Propulsion Systems  
Fuel Systems  
Avionics Systems  
Anti-Icing and De-Icing Systems  
Environmental Systems  
Window and Door Systems  
Commercial Aircraft Structures

POW-2001  
POW-2002  
POW-2003  
POW-2004  
POW-2005

**Hand Power Tools**  
Pistol Grip Drills  
Drilling Techniques  
Winslow Drills  
Compression Riveters  
Rivet Installation Tools

CUT-2001

**Drill Bits**  
Drill Bits

CUT-2002

**Drill Guides and Drill Stops**  
Drill Guides and Drill Stops



# AEROSPACE QUALITY TECHNICIAN

CUT-2003

## Countersinking Tools

Countersinking Tools

AER-4001

## Basic Drilling and Riveting

Marking Fastener Locations for Drilling Project

AER-4002

Setting Up the Drill Motor

AER-4003

Drilling Pilot Holes and Enlarging Holes

AER-4004

Deburring

AER-4005

Driving Protruding Head Rivets

AER-4006

## Installing Advanced Fasteners Project

Assembly Preparation for Advanced Fasteners Project

AER-4007

Installing Nut Plates

AER-4008

Compression Riveting

AER-4009

Installing Bolts

AER-4010

Securing Bolts with Lockwire

AER-4011

## Countersinking and Riveting Project

Marking Fastener Locations for Countersinking and Flush Riveting Project

AER-4012

Setting Up the Assembly and Drill

AER-4013

Drilling, Enlarging, and Deburring Holes

AER-4014

Setting the Countersink Tool (project)

AER-4015

Countersinking (project)

AER-4016

Flush Riveting

AER-4017

## 90 Degree Drilling Project

Assembly Preparation for 90 Degree Drilling Project

AER-4018

Installing 5/16 Inch Hi-Loks

AER-4019

Installing 3/16 Inch Hi-Loks

# AEROSPACE QUALITY TECHNICIAN

AER-4020 Installing Protruding Head Rivets  
AER-4021 Removing Rivets in the 90 Degree Drilling Project  
AER-4022 Removing 5/16 Inch Hi-Loks

AER-2006 **Aerospace Electrical Bond and Ground**  
Electricity and the Airplane

ELE-2019 **Electrical Measurement Conversion**  
Electrical Measurement and Unit Conversion

ELE-2020 **Electrical Resistance Test Equipment**  
Resistance Test Equipment  
ELE-2021 The Fluke® Multimeter  
ELE-2022 The Biddle® Ohmmeter  
ELE-2023 The Avtron® Ohmmeter  
ELE-2024 The Hewlett Packard® Milliohmmeter  
ELE-2025 The BCD M1® Ohmmeter

AER-4047 **Aerospace Electrical Bond and Ground Project**  
Electrical Bond and Ground Introduction  
AER-4048 Pre-installed Ground Studs  
AER-4049 Electrical Fay Surface Bonds  
AER-4050 Direct Ground Stud  
AER-4051 Fillet Sealing a Ground Stud  
AER-4052 Fay Sealing a Direct Ground Stud

AER-2001 **Aerospace Sealing and Safety**  
Introduction to Sealing  
AER-2002 Chemical Safety  
AER-2003 Preparing the Surface

# AEROSPACE QUALITY TECHNICIAN

AER-2004  
AER-2005

Selecting the Right Sealant  
Applying the Sealant

## **Aerospace Wire Installation Drawings**

DWG-2004  
DWG-2005  
DWG-2006

Engineering Drawing Review  
Wire Bundle Installation Paperwork  
Electrical Production Illustrations

## **Aerospace Wire Bundle Basics**

AER-2007  
AER-2008  
AER-2009  
AER-2010  
AER-2011  
AER-2012  
AER-2013

Wiring in Airplanes  
Wire and Cable Basics  
Wire, Cable, and Wire Bundle Markings  
Circular Connectors and Contacts  
Installing a Connector  
MTC Connectors  
Tying Wire Bundles

## **Technical Writing**

COM-2004  
COM-2005

Introduction to Technical Writing  
Successful Documentation

## **Dealing With Conflict**

COM-2001  
COM-2002  
COM-2003

Understanding Conflict  
Communication Skills  
Managing Conflict

## **Searching for a Job**

CAR-1001  
CAR-1002  
CAR-1003

Kicking Off Your Job Search  
Finding Jobs to Apply For  
Networking

# AEROSPACE QUALITY TECHNICIAN

CAR-1004  
CAR-1005  
CAR-1006

## **Resumes and Job Applications**

Completing an Employment Application  
Creating Your Resume  
Crafting a Cover Letter

CAR-1007  
CAR-1008  
CAR-1009  
CAR-1010  
CAR-1011

## **Interviewing**

Understanding the Interview Process  
Making a Positive Impression  
Responding to Interview Questions  
Addressing Special Interview Concerns  
After the Interview

CAR-1012  
CAR-1013

## **Keeping a Job**

Surviving Your First Day on the Job  
Turning a Job into a Career





# AEROSPACE STRUCTURES TECHNICIAN

# AEROSPACE STRUCTURES TECHNICIAN

## MAKE THE WORLD'S AIRCRAFT

This program was developed with input from industry partners to ensure that aerospace structures technicians have a deep knowledge and mastery of aircraft structures manufacturing processes.

Aerospace structures technicians assemble, fit, fasten, and install parts of airplanes, space vehicles, or missiles, such as tails, wings, fuselages, bulkheads, stabilizers, landing gear, rigging, control equipment, and heating and ventilating systems.

### Hiring Industries

- > Air Transport
- > Aircraft & Parts Manufacturing
- > Guided Missiles, Space
- > Satellite Communications
- > Search, Detection
- > Navigation Guidance
- > Space Research and Technology

### Program Summary

**Skill Course:** 171

**Time to complete:** 3.5 months



# AEROSPACE STRUCTURES TECHNICIAN

STU-1001	<b>180 Skills Orientation</b> Greatest Day Ever
STU-1002	<b>Using a Learning Management System</b> How to Take a Course
STU-1003	How to Navigate the LMS
STU-1004	<b>Learning Online</b> Tips for Succeeding in Online Learning
AER-1001	<b>Aircraft Familiarization</b> The History of Aviation
AER-1002	Primary Assemblies of an Aircraft
AER-1003	Principles of Flight
AER-1004	Airplane Control
AER-1005	Aircraft Configuration
AER-1006	Aircraft Materials
AER-1007	Aircraft Construction
AER-1008	Aircraft Corrosion
AER-1009	Aircraft Regulations
MTH-1001	<b>Basic Math</b> Introduction to Basic Math
MTH-1002	Arithmetic Operations
MTH-1004	<b>Fractions and Decimals</b> Introduction to Fractions
MTH-1005	Working with Fractions
MTH-1006	Decimal Numbers



# AEROSPACE STRUCTURES TECHNICIAN

MTH-1003  
MTH-1007  
MTH-1008  
MTH-1009

## Intermediate Math

Numbers and the Number Line  
Positive and Negative Numbers  
Cartesian Coordinates  
The Metric System

SAF-1001  
SAF-1002  
SAF-1003

## Introduction to Safety

Introduction to OSHA  
Making Work a Safer Place  
Help! What to Do in an Emergency

SAF-1004  
SAF-1005  
SAF-1006  
SAF-1007  
SAF-1008  
SAF-1009  
SAF-1010  
SAF-1011

## Personal Protective Equipment Safety

Personal Protective Equipment  
Eye and Face Protection  
Head Protection  
Foot and Leg Protection  
Hand and Arm Protection  
Body Protection  
Hearing Protection  
Respiratory Protection

SAF-1012  
SAF-1013  
SAF-1014  
SAF-1015

## Hazardous Material Safety

Hazardous Materials  
HazCom  
Hazardous Waste  
Hazard Material Storage

SAF-1016  
SAF-1018

## Workplace Safety

Work Area Safety  
Fall Prevention



# AEROSPACE STRUCTURES TECHNICIAN

SAF-1020  
SAF-1021

## Electrical and Fire Safety

Electrical Safety  
Lockout/Tagout

SAF-1027  
SAF-1028

## Tool and Machine Safety

Hand Tool Safety  
Power Tool Safety

DWG-1006  
DWG-1007  
DWG-1008  
DWG-1009  
DWG-1010  
DWG-1011

## Blueprints and Picture Sheets for Aerospace

Aerospace Introduction to Blueprints  
Blueprint Terminology  
Blueprint Views  
Blueprint Lines  
Blueprint Dimensions and Tolerances  
Blueprint Symbols

MEA-2001  
MEA-2002  
MEA-2003  
MEA-2004

## Precision Measurement I

Introduction to Precision Instruments  
Rules  
Calipers  
Micrometers

MEA-2020  
MEA-2021  
MEA-2022  
MEA-2023  
MEA-2024  
MEA-2025

## Fastener Inspection Gauges

Grip Gauges  
Countersink Gauges  
Fastener Height Gauges  
Rivet Inspection Gauges  
Fastener Inspection Gauges  
Gap Inspection Gauges

# AEROSPACE STRUCTURES TECHNICIAN

FAS-2001

## **Fasteners**

Temporary Fasteners

FAS-2002

Rivets

FAS-2003

Bolts, Screws, and Washers

FAS-2004

Threaded Inserts

FAS-2005

Hi-Loks

FAS-2006

Lockbolts

FAS-2007

Nut Plates

FAS-2008

Blind Rivets

FAS-2009

Identifying Fasteners

FAS-2010

Fasteners and Fits

FAS-2011

Securing and Lockwiring Fasteners

FAS-2012

Torque Tools

## **Hand Power Tools**

POW-2001

Pistol Grip Drills

POW-2002

Drilling Techniques

POW-2003

Winslow Drills

POW-2004

Compression Riveters

POW-2005

Rivet Installation Tools

## **Hand Power Tools**

POW-2001

Pistol Grip Drills

POW-2002

Drilling Techniques

POW-2003

Winslow Drills

POW-2004

Compression Riveters

POW-2005

Rivet Installation Tools

## **Stationary Power Tools**

POW-2006

Introduction to Stationary Power Tools

# AEROSPACE STRUCTURES TECHNICIAN

POW-2007	Disc and Belt Sanders
POW-2008	Drill Press
POW-2009	Band Saw
POW-2010	Arbor Press
POW-2011	Bench Grinder
	<b>Drill Bits</b>
CUT-2001	Drill Bits
	<b>Drill Guides and Drill Stops</b>
CUT-2002	Drill Guides and Drill Stops
	<b>Countersinking Tools</b>
CUT-2003	Countersinking Tools
	<b>Basic Drilling and Riveting</b>
AER-4001	Marking Fastener Locations for Drilling Project
AER-4002	Setting Up the Drill Motor
AER-4003	Drilling Pilot Holes and Enlarging Holes
AER-4004	Deburring
AER-4005	Driving Protruding Head Rivets
	<b>Installing Advanced Fasteners Project</b>
AER-4006	Assembly Preparation for Advanced Fasteners Project
AER-4007	Installing Nut Plates
AER-4008	Compression Riveting
AER-4009	Installing Bolts
AER-4010	Securing Bolts with Lockwire

# AEROSPACE STRUCTURES TECHNICIAN

AER-4011	<b>Countersinking and Riveting Project</b> Marking Fastener Locations for Countersinking and Flush Riveting Project
AER-4012	Setting Up the Assembly and Drill
AER-4013	Drilling, Enlarging, and Deburring Holes
AER-4014	Setting the Countersink Tool (project)
AER-4015	Countersinking (project)
AER-4016	Flush Riveting
	<b>90 Degree Drilling Project</b>
AER-4017	Assembly Preparation for 90 Degree Drilling Project
AER-4018	Installing 5/16 Inch Hi-Loks
AER-4019	Installing 3/16 Inch Hi-Loks
AER-4020	Installing Protruding Head Rivets
AER-4021	Removing Rivets in the 90 Degree Drilling Project
AER-4022	Removing 5/16 Inch Hi-Loks
	<b>Drilling Titanium Project</b>
AER-4023	Drilling Titanium
AER-4024	Marking Hole Locations for Drilling Titanium
AER-4025	Drilling Pilot Holes in Titanium
AER-4026	Drilling and Enlarging Holes in Row JD2
AER-4027	Enlarging Row JD7
AER-4028	Enlarging Rows JD4, JD5, and JD6
AER-4029	Enlarging Rows JD1 and JD3
AER-4030	Enlarging Row JD8
AER-4031	Chamfering
AER-4032	Edge Breaking and Deburring



# AEROSPACE STRUCTURES TECHNICIAN

CMP-4004	<b>Drilling Composites Project</b>
CMP-4005	Drilling Composite Material
CMP-4006	Marking Hole Locations
CMP-4007	Drilling Pilot Holes in Titanium
CMP-4008	Drilling Row JD3
CMP-4009	Drilling Row JD7
CMP-4010	Enlarging Holes in Rows JD1 and JD5
CMP-4011	Enlarging Holes in Rows JD2 and JD6
	Enlarging Holes in Row JD4
	<b>Wing Structure Project</b>
AER-4033	Tools for Wing Structure Project
AER-4034	Preparing the Assembly for the Wing Structure Project
AER-4035	Countersinking and Fillet Relief
AER-4036	Installing Fasteners
	<b>Fuselage Skin Assembly Project</b>
AER-4037	Preparing the Assembly for the Fuselage Skin Assembly
AER-4038	Drilling the Skin Panels
AER-4039	Preparing the Doubler
AER-4040	Countersinking
AER-4041	Assembly Finish and Fastener Installation
AER-4042	Removing Rivets in the Fuselage Skin Assembly
	<b>Aerospace Sealing and Safety</b>
AER-2001	Introduction to Sealing
AER-2002	Chemical Safety
AER-2003	Preparing the Surface
AER-2004	Selecting the Right Sealant
AER-2005	Applying the Sealant

# AEROSPACE STRUCTURES TECHNICIAN

AER-4043	<b>Sealant Applicant Processes Mechanical Project</b>
AER-4044	Sealing Basics
AER-4045	Fay and Prepack Sealing
AER-4046	Fillet and Injection Sealing
	Cap Sealing
AER-2006	<b>Aerospace Electrical Bond and Ground</b>
	Electricity and the Airplane
ELE-2019	<b>Electrical Measurement Conversion</b>
	Electrical Measurement and Unit Conversion
ELE-2020	<b>Electrical Resistance Test Equipment</b>
ELE-2021	Resistance Test Equipment
ELE-2022	The Fluke® Multimeter
ELE-2023	The Biddle® Ohmmeter
ELE-2024	The Avtron® Ohmmeter
ELE-2025	The Hewlett Packard® Milliohmmeter
	The BCD M1® Ohmmeter
AER-4047	<b>Aerospace Electrical Bond and Ground Project</b>
AER-4048	Electrical Bond and Ground Introduction
AER-4049	Pre-installed Ground Studs
AER-4050	Electrical Fay Surface Bonds
AER-4051	Direct Ground Stud
AER-4052	Fillet Sealing a Ground Stud
	Fay Sealing a Direct Ground Stud
CAR-1001	<b>Searching for a Job</b>
	Kicking Off Your Job Search

# AEROSPACE STRUCTURES TECHNICIAN

CAR-1002  
CAR-1003

Finding Jobs to Apply For  
Networking

## **Resumes and Job Applications**

CAR-1004  
CAR-1005  
CAR-1006

Completing an Employment Application  
Creating Your Resume  
Crafting a Cover Letter

## **Interviewing**

CAR-1007  
CAR-1008  
CAR-1009  
CAR-1010  
CAR-1011

Understanding the Interview Process  
Making a Positive Impression  
Responding to Interview Questions  
Addressing Special Interview Concerns  
After the Interview

## **Keeping a Job**

CAR-1012  
CAR-1013

Surviving Your First Day on the Job  
Turning a Job into a Career



**APPRENTICE TOOL MAKER**



# APPRENTICE TOOL MAKER

## MAKE THE TOOLS USED BY MAKERS

This program was developed with input from industry partners to ensure that aerospace tool makers attain mastery in the art of creating aerospace tooling.

Apprentice tool makers analyze specifications, lay out metal stock, set up and operate machine tools, and fit and assemble parts to make and repair dies, cutting tools, jigs, fixtures, and gauges. Students considering this program should work with an Employer Partner to secure an apprenticeship prior to enrolling.

### Hiring Industries

- > Automotive
- > Air transport
- > Aircraft parts manufacturing
- > Guided missiles, space vehicles, and parts
- > Satellite communications
- > Search, detection, and navigation guidance
- > Space research and technology

### Program Summary

**Skill Course:** 150

**Time to complete:** 2.5 months

# APPRENTICE TOOL MAKER

STU-1001	<b>180 Skills Orientation</b> Greatest Day Ever
STU-1002	<b>Using a Learning Management System</b> How to Take a Course
STU-1003	How to Navigate the LMS
STU-1004	<b>Learning Online</b> Tips for Succeeding in Online Learning
MTH-1001	<b>Basic Math</b> Introduction to Basic Math
MTH-1002	Arithmetic Operations
MTH-1004	<b>Fractions and Decimals</b> Introduction to Fractions
MTH-1005	Working with Fractions
MTH-1006	Decimal Numbers
MTH-1003	<b>Intermediate Math</b> Numbers and the Number Line
MTH-1007	Positive and Negative Numbers
MTH-1008	Cartesian Coordinates
MTH-1009	The Metric System
GEO-1001	<b>Geometry</b> Introduction to Geometry
GEO-1002	Basic Building Blocks of Geometry
GEO-1003	Angles
GEO-1004	Lines

# APPRENTICE TOOL MAKER

GEO-1005  
GEO-1006

Polygons  
Triangles

GEO-1007  
GEO-1008  
GEO-1009  
GEO-1010  
GEO-1011

**Intermediate Geometry**  
Quadrilaterals  
Circles  
Three-dimensional Shapes  
Coordinate Geometry  
Transformation Geometry

SAF-1001  
SAF-1002  
SAF-1003

**Introduction to Safety**  
Introduction to OSHA  
Making Work a Safer Place  
Help! What to Do in an Emergency

SAF-1004  
SAF-1005  
SAF-1006  
SAF-1007  
SAF-1008  
SAF-1009  
SAF-1010  
SAF-1011

**Personal Protective Equipment Safety**  
Personal Protective Equipment  
Eye and Face Protection  
Head Protection  
Foot and Leg Protection  
Hand and Arm Protection  
Body Protection  
Hearing Protection  
Respiratory Protection

SAF-1012  
SAF-1013  
SAF-1014  
SAF-1015

**Hazardous Material Safety**  
Hazardous Materials  
HazCom  
Hazardous Waste  
Hazard Material Storage

# APPRENTICE TOOL MAKER

SAF-1016

SAF-1017

SAF-1018

SAF-1019

## **Workplace Safety**

Work Area Safety

Permit-Related Safety

Fall Prevention

Ladder Safety

SAF-1020

SAF-1021

SAF-1022

SAF-1023

## **Electrical and Fire Safety**

Electrical Safety

Lockout/Tagout

Fire Safety

Fire Extinguishers

SAF-1024

SAF-1025

SAF-1026

## **Material Handling Safety**

Material Handling Basics

Powered Industrial Trucks

Crane and Rigging Safety

SAF-1027

SAF-1028

SAF-1029

SAF-1030

SAF-1031

## **Tool and Machine Safety**

Hand Tool Safety

Power Tool Safety

Sheet Metal and Compressed Gas Safety

Machine Safety

Safety Devices

DWG-1001

DWG-1002

DWG-1003

DWG-1004

DWG-1005

## **Blueprint Reading Fundamentals**

Introduction to Blueprints

Engineering Drawing Terminology

Engineering Drawing Views

Engineering Drawing Lines

Dimensions and Tolerances



# APPRENTICE TOOL MAKER

DWG-2001  
DWG-2002  
DWG-2003

## Advanced Blueprint Reading

Geometric Dimensions and Tolerances  
Assemblies and Fits  
Threads and Fasteners

DWG-3001  
DWG-3002  
DWG-3003  
DWG-3004  
DWG-3005  
DWG-3006  
DWG-3007  
DWG-3008  
DWG-3009  
DWG-3010

## Geometric Dimensioning and Tolerancing

Introduction to GD&T  
GD&T Terms and Symbols  
Rules of GD&T  
Geometric Tolerances  
Datums  
Form Tolerances  
Profile Tolerances  
Orientation Tolerances  
Runout Tolerances  
Location Tolerances

MEA-2001  
MEA-2002  
MEA-2003  
MEA-2004

## Precision Measurement I

Introduction to Precision Instruments  
Rules  
Calipers  
Micrometers

MEA-2005  
MEA-2006  
MEA-2007  
MEA-2008  
MEA-2009  
MEA-2010

## Precision Measurement II

Small Hole Gauges  
Dial Indicators  
Bore Gauges  
Height Gauges  
Go/NoGo Gauges  
Test Indicators

# APPRENTICE TOOL MAKER

MEA-2011  
MEA-2012  
MEA-2013  
MEA-2014  
MEA-2015

## Attribute Gauges

Go/NoGo Thread Gauges  
Attribute Gauges  
Thickness and Radius Gauges  
Squares and Protractors  
Surface Roughness Comparators

MEA-2016  
MEA-2017  
MEA-2018  
MEA-2019

## Precision Measurement III

Adjustable Parallels  
Surface Plates  
Optical Comparators  
Optical Center Finders

FAS-2003  
FAS-2004

## Fasteners

Bolts, Screws, and Washers  
Threaded Inserts

POW-2001  
POW-2002  
POW-2003  
POW-2004  
POW-2005

## Hand Power Tools

Pistol Grip Drills  
Drilling Techniques  
Winslow Drills  
Compression Riveters  
Rivet Installation Tools

POW-2006  
POW-2007  
POW-2008  
POW-2009  
POW-2010

## Stationary Power Tools

Introduction to Stationary Power Tools  
Disc and Belt Sanders  
Drill Press  
Band Saw  
Arbor Press

# APPRENTICE TOOL MAKER

POW-2011  
POW-2012  
POW-2013

Bench Grinder  
Table Saw  
Operating a Table Saw

HAN-2001  
HAN-2002  
HAN-2003  
HAN-2004

## Hand Tools

Files, Hand Reamers, and Lapping Tools  
Hammers, Punches, and Chisels  
Pliers and Ratchets  
Scribes, Optical Center Finders, and Drill Blocks

CUT-2001

**Drill Bits**  
Drill Bits

CUT-2002

**Drill Guides and Drill Stops**  
Drill Guides and Drill Stops

CUT-2003

**Countersinking Tools**  
Countersinking Tools

CUT-2004  
CUT-2005  
CUT-2006  
CUT-2007

**Threads, Taps and Dies**  
Threads  
Taps  
Hand Tapping  
Threading Dies

AER-4001  
AER-4002  
AER-4003  
AER-4004

**Basic Drilling and Riveting**  
Marking Fastener Locations for Drilling Project  
Setting Up the Drill Motor  
Drilling Pilot Holes and Enlarging Holes  
Deburring

# APPRENTICE TOOL MAKER

AER-4014 **Countersinking and Riveting Project**  
Setting the Countersink Tool (project)

TOL-3001 **Tooling Capstone Project**  
TOL-3002 Need for Tools  
TOL-3003 The Process  
TOL-3004 Permanent Assemblies  
TOL-3005 Critical Features  
Final Details

COM-1001 **Communicating with Others**  
COM-1002 Introduction to Communication  
COM-1003 Effective Communication  
COM-1004 Verbal Communication  
COM-1005 Written Communication  
COM-1006 Nonverbal Communication  
COM-1007 Listening Skills  
Workplace Communication

COM-2004 **Technical Writing**  
COM-2005 Introduction to Technical Writing  
Successful Documentation

CAR-1001 **Searching for a Job**  
CAR-1002 Kicking Off Your Job Search  
CAR-1003 Finding Jobs to Apply For  
Networking

CAR-1004 **Resumes and Job Applications**  
Completing an Employment Application



# APPRENTICE TOOL MAKER

CAR-1005

Creating Your Resume

CAR-1006

Crafting a Cover Letter

## **Interviewing**

CAR-1007

Understanding the Interview Process

CAR-1008

Making a Positive Impression

CAR-1009

Responding to Interview Questions

CAR-1010

Addressing Special Interview Concerns

CAR-1011

After the Interview

## **Keeping a Job**

CAR-1012

Surviving Your First Day on the Job

CAR-1013

Turning a Job into a Career



# CNC LATHE PRODUCTION TECHNICIAN

# CNC LATHE PRODUCTION TECHNICIAN

## MAKE THE WORLD TURN

Computer numerical control (CNC) lathe production technicians transform raw materials into finished products used in commercial, automotive, medical, and aerospace products. CNC lathe production technicians produce parts that range from simple bolts of steel to titanium bone screws for orthopedic implants.

CNC lathe production technicians work from blueprints, or computer-aided design (CAD), and computer-aided manufacturing (CAM) files. They set up and operate CNC machine tools, monitor the feed rate and speed of machines, and measure, examine, and test completed products for defects.

### Hiring Industries

- > Automotive
- > Aerospace
- > Consumer products
- > Electrical equipment
- > Marine
- > Military
- > Medical devices

### Program Summary

**Skill Course:** 122

**Time to complete:** 2.5 month



# CNC LATHE PRODUCTION TECHNICIAN

STU-1001

## 180 Skills Orientation

Greatest Day Ever

STU-1002

## Using a Learning Management System

STU-1003

How to Take a Course

How to Navigate the LMS

STU-1004

## Learning Online

Tips for Succeeding in Online Learning

CNC-1001

## Introduction to Machining

Introduction to Machining

CNC-1002

Machine Tools

CNC-1003

CNC Controllers

CNC-1004

Machining Personnel

CNC-1005

Facility Layout

MTH-1001

## Basic Math

Introduction to Basic Math

MTH-1002

Arithmetic Operations

MTH-1004

## Fractions and Decimals

Introduction to Fractions

MTH-1005

Working with Fractions

MTH-1006

Decimal Numbers

MTH-1003

## Intermediate Math

Numbers and the Number Line

MTH-1007

Positive and Negative Numbers

MTH-1008

Cartesian Coordinates

MTH-1009

The Metric System



# CNC LATHE PRODUCTION TECHNICIAN

GEO-1001	Introduction to Geometry
GEO-1002	Basic Building Blocks of Geometry
GEO-1003	Angles
GEO-1004	Lines
GEO-1005	Polygons
GEO-1006	Triangles

## Geometry

GEO-1007	Quadrilaterals
GEO-1008	Circles
GEO-1009	Three-dimensional Shapes
GEO-1010	Coordinate Geometry
GEO-1011	Transformation Geometry

## Intermediate Geometry

SAF-1001	Introduction to OSHA
SAF-1002	Making Work a Safer Place
SAF-1003	Help! What to Do in an Emergency

## Introduction to Safety

SAF-1004	Personal Protective Equipment
SAF-1005	Eye and Face Protection
SAF-1006	Head Protection
SAF-1007	Foot and Leg Protection
SAF-1008	Hand and Arm Protection
SAF-1009	Body Protection
SAF-1010	Hearing Protection
SAF-1011	Respiratory Protection

## Personal Protective Equipment Safety

SAF-1012	Hazardous Materials
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## Hazardous Material Safety

# CNC LATHE PRODUCTION TECHNICIAN

SAF-1013 HazCom  
SAF-1014 Hazardous Waste  
SAF-1015 Hazard Material Storage

## **Workplace Safety**

SAF-1016 Work Area Safety  
SAF-1018 Fall Prevention

## **Electrical and Fire Safety**

SAF-1020 Electrical Safety  
SAF-1021 Lockout/Tagout

## **Tool and Machine Safety**

SAF-1027 Hand Tool Safety  
SAF-1028 Power Tool Safety  
SAF-1030 Machine Safety

## **Blueprint Reading Fundamentals**

DWG-1001 Introduction to Blueprints  
DWG-1002 Engineering Drawing Terminology  
DWG-1003 Engineering Drawing Views  
DWG-1004 Engineering Drawing Lines  
DWG-1005 Dimensions and Tolerances

## **Advanced Blueprint Reading**

DWG-2001 Geometric Dimensions and Tolerances  
DWG-2002 Assemblies and Fits  
DWG-2003 Threads and Fasteners

## **Precision Measurement I**

MEA-2001 Introduction to Precision Instruments  
MEA-2002 Rules

# CNC LATHE PRODUCTION TECHNICIAN

MEA-2003  
MEA-2004

Calipers  
Micrometers

## Precision Measurement II

MEA-2005  
MEA-2006  
MEA-2007  
MEA-2008  
MEA-2009  
MEA-2010

Small Hole Gauges  
Dial Indicators  
Bore Gauges  
Height Gauges  
Go/NoGo Gauges  
Test Indicators

## Attribute Gauges

MEA-2011  
MEA-2012  
MEA-2013  
MEA-2014  
MEA-2015

Go/NoGo Thread Gauges  
Attribute Gauges  
Thickness and Radius Gauges  
Squares and Protractors  
Surface Roughness Comparators

## Precision Measurement III

MEA-2016  
MEA-2017  
MEA-2018

Adjustable Parallels  
Surface Plates  
Optical Comparators

## Metals and Materials

MAT-2001  
MAT-2002  
MAT-2003  
MAT-2004

Introduction to Metals  
Ferrous Metals  
Nonferrous Metals  
Heat Treatment of Metals

## CNC Horizontal Lathe

CNC-2001  
CNC-2002

Components of a CNC Lathe  
Movements of a CNC Lathe



# CNC LATHE PRODUCTION TECHNICIAN

CNC-2003 Workholding Devices and Tooling for a CNC Lathe  
CNC-2004 The CNC Controller for a CNC Lathe  
CNC-2005 Auxiliary Systems for a CNC Lathe

## **CNC Horizontal Lathe Applications**

CNC-4001 Maintenance Tasks for a CNC Lathe  
CNC-4002 Power on the CNC Lathe  
CNC-4003 Move the Axes by Rotating the Jog Handle on a CNC Lathe  
CNC-4004 Home the Axes on a CNC Lathe  
CNC-4006 Select a Part Program from Memory on a CNC Lathe  
CNC-4007 Start the Part Program Safely on a CNC Lathe  
CNC-4008 Interrupt Automatic Operation on a CNC Lathe  
CNC-4009 Adjust a Tool Wear Offset on a CNC Lathe  
Power Off the CNC Lathe

## **Lubricants and Cutting Fluids**

CUT-2008 Cutting Fluids

## **Cutting Tools for Metalworking**

CUT-2009 Cutting Tool Materials  
CUT-2010 Indexable Tool Holders  
CUT-2011 Inserts  
CUT-2012 Solid Cutting Tools

## **Threads, Taps and Dies**

CUT-2004 Threads  
CUT-2005 Taps  
CUT-2006 Hand Tapping

## **CNC Lathe Programs**

CNC-4010 CNC Programming Procedure for a CNC Lathe



# CNC LATHE PRODUCTION TECHNICIAN

CNC-4011	CNC Program Structure for a CNC Lathe
CNC-4012	CNC Addresses for a CNC Lathe
CNC-4013	CNC Lathe Commands
CNC-4014	Organizing a CNC Program for a CNC Lathe

## **CNC Machine Lubricants**

CNC-2011	CNC Machine Lubricants
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## **Searching for a Job**

CAR-1001	Kicking Off Your Job Search
CAR-1002	Finding Jobs to Apply For
CAR-1003	Networking

## **Resumes and Job Applications**

CAR-1004	Completing an Employment Application
CAR-1005	Creating Your Resume
CAR-1006	Crafting a Cover Letter

## **Interviewing**

CAR-1007	Understanding the Interview Process
CAR-1008	Making a Positive Impression
CAR-1009	Responding to Interview Questions
CAR-1010	Addressing Special Interview Concerns
CAR-1011	After the Interview

## **Keeping a Job**

CAR-1012	Surviving Your First Day on the Job
CAR-1013	Turning a Job into a Career



# CNC MACHINING CENTER PRODUCTION TECHNICIAN

# CNC MACHINING CENTER PRODUCTION TECHNICIAN

## MACHINE THE WORLD

Computer numerical control (CNC) machining center production technicians transform raw materials into finished parts used in commercial, automotive, medical, and aerospace products. CNC machining center production technicians produce parts that range from simple bolts of steel to titanium bone screws for orthopedic implants.

CNC machining center production technicians work from blueprints, or computer-aided design (CAD), and computer-aided manufacturing (CAM) files. They set up and operate CNC machine tools, monitor the feed rate and speed of machines, and measure, examine, and test completed products for defects.

### Hiring Industries

- > Automotive
- > Aerospace
- > Consumer products
- > Electrical equipment
- > Marine
- > Military
- > Medical devices

### Program Summary

**Skill Course:** 122

**Time to complete:** 2.5 month



# CNC MACHINING CENTER PRODUCTION TECHNICIAN

STU-1001

## 180 Skills Orientation

Greatest Day Ever

STU-1002

## Using a Learning Management System

How to Take a Course

STU-1003

How to Navigate the LMS

STU-1004

## Learning Online

Tips for Succeeding in Online Learning

CNC-1001

## Introduction to Machining

Introduction to Machining

CNC-1002

Machine Tools

CNC-1003

CNC Controllers

CNC-1004

Machining Personnel

CNC-1005

Facility Layout

MTH-1001

## Basic Math

Introduction to Basic Math

MTH-1002

Arithmetic Operations

MTH-1004

## Fractions and Decimals

Introduction to Fractions

MTH-1005

Working with Fractions

MTH-1006

Decimal Numbers

MTH-1003

## Intermediate Math

Numbers and the Number Line

MTH-1007

Positive and Negative Numbers

MTH-1008

Cartesian Coordinates

MTH-1009

The Metric System



# CNC MACHINING CENTER PRODUCTION TECHNICIAN

GEO-1001	Introduction to Geometry
GEO-1002	Basic Building Blocks of Geometry
GEO-1003	Angles
GEO-1004	Lines
GEO-1005	Polygons
GEO-1006	Triangles

## **Geometry**

Introduction to Geometry
Basic Building Blocks of Geometry
Angles
Lines
Polygons
Triangles

GEO-1007	Quadrilaterals
GEO-1008	Circles
GEO-1009	Three-dimensional Shapes
GEO-1010	Coordinate Geometry
GEO-1011	Transformation Geometry

## **Intermediate Geometry**

Quadrilaterals
Circles
Three-dimensional Shapes
Coordinate Geometry
Transformation Geometry

SAF-1001	Introduction to OSHA
SAF-1002	Making Work a Safer Place
SAF-1003	Help! What to Do in an Emergency

## **Introduction to Safety**

Introduction to OSHA
Making Work a Safer Place
Help! What to Do in an Emergency

SAF-1004	Personal Protective Equipment
SAF-1005	Eye and Face Protection
SAF-1006	Head Protection
SAF-1007	Foot and Leg Protection
SAF-1008	Hand and Arm Protection
SAF-1009	Body Protection
SAF-1010	Hearing Protection
SAF-1011	Respiratory Protection

## **Personal Protective Equipment Safety**

Personal Protective Equipment
Eye and Face Protection
Head Protection
Foot and Leg Protection
Hand and Arm Protection
Body Protection
Hearing Protection
Respiratory Protection

SAF-1012	Hazardous Materials
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## **Hazardous Material Safety**

Hazardous Materials
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# CNC MACHINING CENTER PRODUCTION TECHNICIAN

SAF-1013 HazCom  
SAF-1014 Hazardous Waste  
SAF-1015 Hazard Material Storage

## **Workplace Safety**

SAF-1016 Work Area Safety  
SAF-1018 Fall Prevention

## **Electrical and Fire Safety**

SAF-1020 Electrical Safety  
SAF-1021 Lockout/Tagout

## **Tool and Machine Safety**

SAF-1027 Hand Tool Safety  
SAF-1028 Power Tool Safety  
SAF-1030 Machine Safety

## **Blueprint Reading Fundamentals**

DWG-1001 Introduction to Blueprints  
DWG-1002 Engineering Drawing Terminology  
DWG-1003 Engineering Drawing Views  
DWG-1004 Engineering Drawing Lines  
DWG-1005 Dimensions and Tolerances

## **Advanced Blueprint Reading**

DWG-2001 Geometric Dimensions and Tolerances  
DWG-2002 Assemblies and Fits  
DWG-2003 Threads and Fasteners

## **Precision Measurement I**

MEA-2001 Introduction to Precision Instruments  
MEA-2002 Rules

# CNC MACHINING CENTER PRODUCTION TECHNICIAN

MEA-2003  
MEA-2004

Calipers  
Micrometers

## **Precision Measurement II**

MEA-2005  
MEA-2006  
MEA-2007  
MEA-2008  
MEA-2009  
MEA-2010

Small Hole Gauges  
Dial Indicators  
Bore Gauges  
Height Gauges  
Go/NoGo Gauges  
Test Indicators

## **Attribute Gauges**

MEA-2011  
MEA-2012  
MEA-2013  
MEA-2014  
MEA-2015  
MEA-2016  
MEA-2017  
MEA-2018

Go/NoGo Thread Gauges  
Attribute Gauges  
Thickness and Radius Gauges  
Squares and Protractors  
Surface Roughness Comparators  
Adjustable Parallels  
Surface Plates  
Optical Comparators

## **Metals and Materials**

MAT-2001  
MAT-2002  
MAT-2003  
MAT-2004

Introduction to Metals  
Ferrous Metals  
Nonferrous Metals  
Heat Treatment of Metals

## **CNC Vertical Machining Center**

CNC-2006  
CNC-2007  
CNC-2008  
CNC-2009

Components of a CNC Machining Center  
CNC Machining Center Movements  
Workpiece and Tool Holding Devices for a CNC Machining Center  
The CNC Controller for a CNC Machining Center

# CNC MACHINING CENTER PRODUCTION TECHNICIAN

CNC-2010	Auxiliary Systems for a CNC Machining Center
	<b>CNC Vertical Machining Center Applications</b>
CNC-4015	Maintenance Tasks for a CNC Machining Center
CNC-4016	Power on the CNC Machining Center
CNC-4017	Move the Axes by Rotating the Jog Handle on a CNC Machining Center
CNC-4018	Home the Axes on a CNC Machining Center
CNC-4019	Select a Part Program from Memory on a CNC Machining Center
CNC-4020	Start the Part Program Safely on a CNC Machining Center
CNC-4021	Interrupt Automatic Operation on a CNC Machining Center
CNC-4022	Adjust a Tool Wear Offset on a CNC Machining Center
CNC-4023	Power Off the CNC Machining Center
	<b>Lubricants and Cutting Fluids</b>
CUT-2008	Cutting Fluids
	<b>Cutting Tools for Metalworking</b>
CUT-2009	Cutting Tool Materials
CUT-2010	Indexable Tool Holders
CUT-2011	Inserts
CUT-2012	Solid Cutting Tools
	<b>Threads, Taps and Dies</b>
CUT-2004	Threads
CUT-2005	Taps
CUT-2006	Hand Tapping
	<b>CNC Machining Center Programs</b>
CNC-4024	CNC Programming Procedure for a CNC Machining Center
CNC-4025	CNC Program Structure for a CNC Machining Center
CNC-4026	CNC Addresses for a CNC Machining Center



# CNC MACHINING CENTER PRODUCTION TECHNICIAN

CNC-4027 CNC Machining Center Commands  
CNC-4028 Organizing a CNC Program for a CNC Machining Center

CNC-2011 **CNC Machine Lubricants**  
CNC Machine Lubricants

CAR-1001 **Searching for a Job**  
Kicking Off Your Job Search  
CAR-1002 Finding Jobs to Apply For  
CAR-1003 Networking

CAR-1004 **Resumes and Job Applications**  
Completing an Employment Application  
CAR-1005 Creating Your Resume  
CAR-1006 Crafting a Cover Letter

CAR-1007 **Interviewing**  
Understanding the Interview Process  
CAR-1008 Making a Positive Impression  
CAR-1009 Responding to Interview Questions  
CAR-1010 Addressing Special Interview Concerns  
CAR-1011 After the Interview

CAR-1012 **Keeping a Job**  
Surviving Your First Day on the Job  
CAR-1013 Turning a Job into a Career



**COMPOSITES MANUFACTURING &  
REPAIR TECHNICIAN**



# COMPOSITES MANUFACTURING AND REPAIR TECHNICIAN

## MAKE THE WORLD LIGHTER AND STRONGER

The use of composite materials in manufacturing is expanding quickly. Composites are now used in automotive, aerospace, medical devices and sports equipment. The benefits of light weight and strength make the applications of composite materials endless.

Composite manufacturing and repair technicians manufacture products using layers of carbon fiber, fiberglass, or other composite fabrics. Composite manufacturing requires attention to detail and good manual dexterity.

### Hiring Industries

- > Automotive
- > Aerospace
- > Consumer products
- > Electrical equipment
- > Marine
- > Military
- > Medical devices

### Program Summary

**Skill Course:** 112

**Time to complete:** 2.5 month

# COMPOSITES MANUFACTURING AND REPAIR TECHNICIAN

STU-1001	<b>180 Skills Orientation</b> Greatest Day Ever
STU-1002	<b>Using a Learning Management System</b> How to Take a Course
STU-1003	How to Navigate the LMS
STU-1004	<b>Learning Online</b> Tips for Succeeding in Online Learning
MTH-1001	<b>Basic Math</b> Introduction to Basic Math
MTH-1002	Arithmetic Operations
MTH-1004	<b>Fractions and Decimals</b> Introduction to Fractions
MTH-1005	Working with Fractions
MTH-1006	Decimal Numbers
MTH-1003	<b>Intermediate Math</b> Numbers and the Number Line
MTH-1007	Positive and Negative Numbers
MTH-1008	Cartesian Coordinates
MTH-1009	The Metric System
SAF-1001	<b>Introduction to Safety</b> Introduction to OSHA
SAF-1002	Making Work a Safer Place
SAF-1003	Help! What to Do in an Emergency
SAF-1004	<b>Personal Protective Equipment Safety</b> Personal Protective Equipment



# COMPOSITES MANUFACTURING AND REPAIR TECHNICIAN

SAF-1005	Eye and Face Protection
SAF-1006	Head Protection
SAF-1007	Foot and Leg Protection
SAF-1008	Hand and Arm Protection
SAF-1009	Body Protection
SAF-1010	Hearing Protection
SAF-1011	Respiratory Protection

## **Hazardous Material Safety**

SAF-1012	Hazardous Materials
SAF-1013	HazCom
SAF-1014	Hazardous Waste
SAF-1015	Hazard Material Storage

## **Workplace Safety**

SAF-1016	Work Area Safety
SAF-1018	Fall Prevention

## **Electrical and Fire Safety**

SAF-1020	Electrical Safety
SAF-1021	Lockout/Tagout

## **Tool and Machine Safety**

SAF-1027	Hand Tool Safety
SAF-1028	Power Tool Safety
SAF-1030	Machine Safety

## **Blueprint Reading Fundamentals**

DWG-1001	Introduction to Blueprints
DWG-1002	Engineering Drawing Terminology
DWG-1003	Engineering Drawing Views
DWG-1004	Engineering Drawing Lines

# COMPOSITES MANUFACTURING AND REPAIR TECHNICIAN

DWG-1005	Dimensions and Tolerances
	<b>Precision Measurement I</b>
MEA-2001	Introduction to Precision Instruments
MEA-2002	Rules
MEA-2003	Calipers
MEA-2004	Micrometers
	<b>Stationary Power Tools</b>
POW-2006	Introduction to Stationary Power Tools
POW-2007	Disc and Belt Sanders
POW-2008	Drill Press
POW-2009	Band Saw
POW-2010	Arbor Press
POW-2011	Bench Grinder
POW-2012	Table Saw
POW-2013	Operating a Table Saw
	<b>Introduction to Composites</b>
CMP-1001	Background and History of Composites
CMP-1002	Composite Industries and Products
CMP-1003	Advantages and Disadvantages of Composites
CMP-1004	Safety and Hazards of Composites
	<b>Composites Manufacturing Facilities</b>
CMP-1005	Facility Layout
CMP-1006	Non-controlled Contamination Areas
CMP-1007	Lay-up Area
CMP-1008	Curing Area
	<b>Materials Used in Composites Manufacturing</b>
CMP-2001	Fiber Based Composites

# COMPOSITES MANUFACTURING AND REPAIR TECHNICIAN

CMP-2002	Fibers, Tapes and Fabrics
CMP-2003	Glass and Carbon Fibers
CMP-2004	Matrix Types and Properties
CMP-2005	Curing Process
CMP-2006	Honeycomb Core Materials
CMP-2007	Material Compatibility
CMP-2008	Galvanic Reactivity
CMP-2009	Core Potting Compounds

## **Composite Material Storage**

CMP-2010	Fiber Material Storage
CMP-2011	Controlled Contamination Areas

## **Tools Used In Composite Manufacturing**

CMP-2012	Local Exhaust Ventilation
CMP-2013	Forming Tools
CMP-2014	Coefficient of Thermal Expansion
CMP-2015	Forming Tool Inspection
CMP-2016	Forming Tool Cleaning
CMP-2017	Forming Tool Storage
CMP-2018	Rollers and Sweeps
CMP-2019	Overhead Laser System

## **Composite Material Kitting**

CMP-3001	Kitting with a sheeter
CMP-3002	Kitting by Hand
CMP-3003	Kitting with Automated Machines

## **Composite Part Layup and Bagging**

CMP-3004	Ply Balancing
CMP-3005	Material splicing
CMP-3006	Wrinkles and Gaps



# COMPOSITES MANUFACTURING AND REPAIR TECHNICIAN

CMP-3007	Pockets and Voids
CMP-3008	Radius Filler Fabrication by Hand
CMP-3009	Advanced Bagging
CMP-3010	Bagging and Lay-up Equipment
CMP-3011	Preparation for the Lay-up Process
CMP-3012	Cure Cycle Controllers -Temperature Controls
CMP-3013	Thermocouple Science

## **Composite Layup Projects**

CMP-4001	Unidirectional 4 Ply Lay-up
CMP-4002	Carbon 8 Ply Lay-up with Core
CMP-4003	Fiberglass 6 Ply Wet Lay-up

## **Inspecting Composite Parts**

CMP-3014	Introduction to Inspection of Composites
CMP-3015	Visual Inspection for Composites
CMP-3016	Ultrasonic Inspection for Composites
CMP-3017	Tap Inspection for Composites

## **Searching for a Job**

CAR-1001	Kicking Off Your Job Search
CAR-1002	Finding Jobs to Apply For
CAR-1003	Networking

## **Resumes and Job Applications**

CAR-1004	Completing an Employment Application
CAR-1005	Creating Your Resume
CAR-1006	Crafting a Cover Letter

## **Interviewing**

CAR-1007	Understanding the Interview Process
CAR-1008	Making a Positive Impression



# COMPOSITES MANUFACTURING AND REPAIR TECHNICIAN

CAR-1009

Responding to Interview Questions

CAR-1010

Addressing Special Interview Concerns

CAR-1011

After the Interview

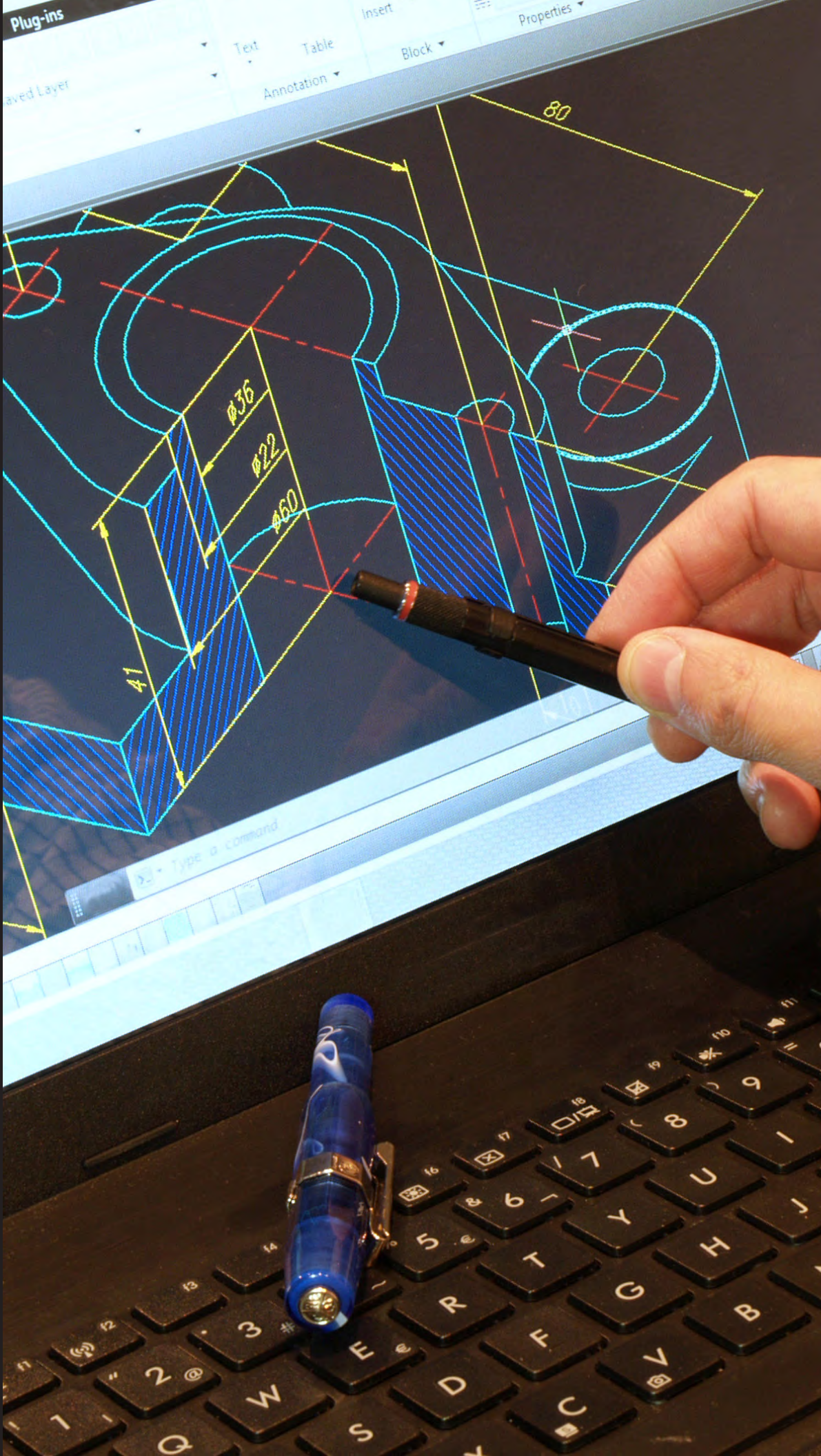
## **Keeping a Job**

CAR-1012

Surviving Your First Day on the Job

CAR-1013

Turning a Job into a Career



# DRAFTING & CAD TECHNICIAN



# DRAFTING & CAD TECHNICIAN

## DRAW THE WORLD

Drafting and CAD technicians use software to convert the designs of engineers and architects into technical drawings and plans. Workers specialize in architectural, civil, electrical, or mechanical drafting and use technical drawings to help design everything from microchips to skyscrapers.

As a drafting and CAD technician, you can launch a rewarding career in several industries, where job demand is high. This program requires additional external training in CAD software.

### Hiring Industries

- > Architecture
- > Automotive
- > Aerospace
- > Civil infrastructure
- > Consumer products
- > Construction
- > Electrical equipment
- > Marine
- > Military

### Program Summary

**Skill Course:** 98

**Time to complete:** 2 month

# DRAFTING & CAD TECHNICIAN

STU-1001	<b>180 Skills Orientation</b> Greatest Day Ever
STU-1002	<b>Using a Learning Management System</b> How to Take a Course
STU-1003	How to Navigate the LMS
STU-1004	<b>Learning Online</b> Tips for Succeeding in Online Learning
DWG-1001	<b>Blueprint Reading Fundamentals</b> Introduction to Blueprints
DWG-1002	Engineering Drawing Terminology
DWG-1003	Engineering Drawing Views
DWG-1004	Engineering Drawing Lines
DWG-1005	Dimensions and Tolerances
MTH-1001	<b>Basic Math</b> Introduction to Basic Math
MTH-1002	Arithmetic Operations
MTH-1004	<b>Fractions and Decimals</b> Introduction to Fractions
MTH-1005	Working with Fractions
MTH-1006	Decimal Numbers
MTH-1003	<b>Intermediate Math</b> Numbers and the Number Line
MTH-1007	Positive and Negative Numbers
MTH-1008	Cartesian Coordinates



# DRAFTING & CAD TECHNICIAN

MTH-1009 The Metric System

## **Geometry**

GEO-1001 Introduction to Geometry  
GEO-1002 Basic Building Blocks of Geometry  
GEO-1003 Angles  
GEO-1004 Lines  
GEO-1005 Polygons  
GEO-1006 Triangles

## **Intermediate Geometry**

GEO-1007 Quadrilaterals  
GEO-1008 Circles  
GEO-1009 Three-dimensional Shapes  
GEO-1010 Coordinate Geometry  
GEO-1011 Transformation Geometry

## **Introduction to Safety**

SAF-1001 Introduction to OSHA  
SAF-1002 Making Work a Safer Place  
SAF-1003 Help! What to Do in an Emergency

## **Personal Protective Equipment Safety**

SAF-1004 Personal Protective Equipment  
SAF-1005 Eye and Face Protection  
SAF-1006 Head Protection  
SAF-1007 Foot and Leg Protection  
SAF-1008 Hand and Arm Protection  
SAF-1009 Body Protection  
SAF-1010 Hearing Protection

# DRAFTING & CAD TECHNICIAN

SAF-1011

Respiratory Protection

## **Hazardous Material Safety**

SAF-1012

Hazardous Materials

SAF-1013

HazCom

SAF-1014

Hazardous Waste

SAF-1015

Hazard Material Storage

## **Workplace Safety**

SAF-1016

Work Area Safety

SAF-1018

Fall Prevention

## **Process Control**

QUA-1001

Introduction to Quality

QUA-1002

ISO 9000

QUA-1003

Standards Organizations

QUA-1004

Quality Organizations

QUA-1005

Basic Quality Roles and Responsibilities

## **Quality Management**

QUA-1006

Quality Concepts

QUA-1007

The Cost of Quality

QUA-1008

Managing Quality

QUA-1009

Quality Documents

QUA-1010

Corrective and Preventive Action

## **Introduction to Statistical Process Control**

QUA-1011

Introduction to SPC

QUA-1012

Probability and Variation

QUA-1013

The Control Chart

# DRAFTING & CAD TECHNICIAN

QUA-2001  
QUA-2002  
QUA-2003  
QUA-2004

## Advanced Statistical Quality Systems

Control Chart Analysis  
Process Capability  
Problem Solving Tools  
Problem Solving

DWG-2001  
DWG-2002  
DWG-2003

## Advanced Blueprint Reading

Geometric Dimensions and Tolerances  
Assemblies and Fits  
Threads and Fasteners

DWG-3001  
DWG-3002  
DWG-3003  
DWG-3004  
DWG-3005  
DWG-3006  
DWG-3007  
DWG-3008  
DWG-3009  
DWG-3010

## Geometric Dimensioning and Tolerancing

Introduction to GD&T  
GD&T Terms and Symbols  
Rules of GD&T  
Geometric Tolerances  
Datums  
Form Tolerances  
Profile Tolerances  
Orientation Tolerances  
Runout Tolerances  
Location Tolerances

LEA-1002

## Introduction to Lean Manufacturing

The History of Lean Manufacturing

LEA-1003  
LEA-1004  
LEA-1005

## Workplace Organization

Workplace Organization  
S1: Sort  
S2: Straighten

# DRAFTING & CAD TECHNICIAN

LEA-1006  
LEA-1007  
LEA-1008

S3: Shine  
S4: Standardize  
S5: Sustain

COM-2004  
COM-2005

**Technical Writing**  
Introduction to Technical Writing  
Successful Documentation

CAR-1001  
CAR-1002  
CAR-1003

**Searching for a Job**  
Kicking Off Your Job Search  
Finding Jobs to Apply For  
Networking

CAR-1004  
CAR-1005  
CAR-1006

**Resumes and Job Applications**  
Completing an Employment Application  
Creating Your Resume  
Crafting a Cover Letter

CAR-1007  
CAR-1008  
CAR-1009  
CAR-1010  
CAR-1011

**Interviewing**  
Understanding the Interview Process  
Making a Positive Impression  
Responding to Interview Questions  
Addressing Special Interview Concerns  
After the Interview

CAR-1012  
CAR-1013

**Keeping a Job**  
Surviving Your First Day on the Job  
Turning a Job into a Career





# MECHATRONICS & INDUSTRIAL AUTOMATION TECHNICIAN

# MECHATRONICS & INDUSTRIAL AUTOMATION TECHNICIAN

## MAINTAIN THE WORLD

Mechatronics is the convergence of mechanical, electronic, control, and software engineering. Also known as electro-mechanical maintenance technicians, mechatronics and industrial automation technicians combine knowledge of mechanical technology with knowledge of electrical circuits. They install, troubleshoot, repair, and upgrade electronic and computer controlled mechanical systems, such as robotic assembly machines.

Mechatronics and industrial automation technicians work closely with electrical and mechanical engineers. They work primarily in manufacturing, engineering services, and research and development.

### Hiring Industries

- > Automotive
- > Aerospace
- > Building maintenance
- > Civil infrastructure
- > Consumer products
- > Construction
- > Logistics and distribution
- > Manufacturing
- > Materials processing

### Program Summary

**Skill Course:** 129

**Time to complete:** 2.5 months

# MECHATRONICS & INDUSTRIAL AUTOMATION TECHNICIAN

STU-1001	<b>180 Skills Orientation</b> Greatest Day Ever
STU-1002	<b>Using a Learning Management System</b> How to Take a Course
STU-1003	How to Navigate the LMS
STU-1004	<b>Learning Online</b> Tips for Succeeding in Online Learning
AUT-1001	<b>Introduction to Industrial Automation</b> Introduction to Automation
AUT-1002	Automated Process
AUT-1003	Automated System
MTH-1001	<b>Basic Math</b> Introduction to Basic Math
MTH-1002	Arithmetic Operations
MTH-1004	<b>Fractions and Decimals</b> Introduction to Fractions
MTH-1005	Working with Fractions
MTH-1006	Decimal Numbers
MTH-1003	<b>Intermediate Math</b> Numbers and the Number Line
MTH-1007	Positive and Negative Numbers
MTH-1008	Cartesian Coordinates
MTH-1009	The Metric System



# MECHATRONICS & INDUSTRIAL AUTOMATION TECHNICIAN

SAF-1001  
SAF-1002  
SAF-1003

## **Introduction to Safety**

Introduction to OSHA  
Making Work a Safer Place  
Help! What to Do in an Emergency

SAF-1004  
SAF-1005  
SAF-1006  
SAF-1007  
SAF-1008  
SAF-1009  
SAF-1010  
SAF-1011

## **Personal Protective Equipment Safety**

Personal Protective Equipment  
Eye and Face Protection  
Head Protection  
Foot and Leg Protection  
Hand and Arm Protection  
Body Protection  
Hearing Protection  
Respiratory Protection

SAF-1012  
SAF-1013  
SAF-1014  
SAF-1015

## **Hazardous Material Safety**

Hazardous Materials  
HazCom  
Hazardous Waste  
Hazard Material Storage

SAF-1016  
SAF-1017  
SAF-1018  
SAF-1019

## **Workplace Safety**

Work Area Safety  
Permit-Related Safety  
Fall Prevention  
Ladder Safety

SAF-1020  
SAF-1021

## **Electrical and Fire Safety**

Electrical Safety  
Lockout/Tagout



# MECHATRONICS & INDUSTRIAL AUTOMATION TECHNICIAN

SAF-1022  
SAF-1023

Fire Safety  
Fire Extinguishers

## **Tool and Machine Safety**

SAF-1027 Hand Tool Safety  
SAF-1028 Power Tool Safety  
SAF-1029 Sheet Metal and Compressed Gas Safety  
SAF-1030 Machine Safety  
SAF-1031 Safety Devices

## **Introduction to Pneumatics**

PNE-1001 Introduction to Pneumatics  
PNE-1002 Pneumatic Systems  
PNE-1003 The Properties of Gases  
PNE-1004 Air Compression and Distribution - Part One  
PNE-1005 Air Compression and Distribution - Part Two

## **Components of a Pneumatic System**

PNE-2001 Compressed Air Treatment  
PNE-2002 Pneumatic Actuators  
PNE-2003 Directional Control Valves  
PNE-2004 Vacuum Technology  
PNE-2005 Measuring Pneumatic Variables

## **Pneumatic Applications**

PNE-3001 Pneumatic Applications

## **Introduction to Electricity**

ELE-1001 Production of Electricity  
ELE-1002 Transmission and Distribution of Electricity

# MECHATRONICS & INDUSTRIAL AUTOMATION TECHNICIAN

ELE-1003	Uses of Electricity
ELE-1004	Atomic Structure
ELE-1005	Electrical Circuits
ELE-1006	Electrical Current
ELE-1007	Voltage
ELE-1008	Electrical Power
ELE-1009	Resistance
ELE-1010	Ohm's Law
ELE-1011	Watt's Law

## **Electrical Measurement Conversion**

ELE-2019	Electrical Measurement and Unit Conversion
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## **DC Electricity**

ELE-1012	Direct Current
ELE-1013	Batteries
ELE-1014	Circuit Analysis

## **AC Electricity**

ELE-1015	Electromagnetism
ELE-1016	AC Waveform Generation
ELE-1017	Electromagnetic Devices
ELE-1018	Transformers
ELE-1019	Capacitors

## **Solid State Electricity**

ELE-1020	Semiconductors
ELE-1021	Solid State Devices

# MECHATRONICS & INDUSTRIAL AUTOMATION TECHNICIAN

ELE-2001	<b>Introduction to Wiring</b>
ELE-2002	Wires, Connectors, and Circuit Protection
	Connecting Transformers
	<b>Introduction to Electric Motors</b>
ELE-2003	DC Motors
ELE-2004	AC Single-Phase Motors
ELE-2005	Three-Phase AC Motors
	<b>Electrical Connectors</b>
ELE-2006	Electrical Connectors and Fasteners
	<b>Sensor Technology</b>
ELE-2012	Introduction to Sensors Technology
ELE-2013	Sensor Technology
ELE-2014	Proximity Sensors
ELE-2015	Position, Speed, and Acceleration Sensors
ELE-2016	Industrial Process Sensors
ELE-2017	Advanced Sensors
	<b>Programmable Logic Controllers</b>
PLC-1001	Introduction to Programmable Controllers
PLC-1002	Introduction to Digital Electronics
PLC-2001	Types and Functions of Programmable Controllers
PLC-2002	General Structure of PLC
PLC-2003	Physical Integration of the PLC
PLC-2004	Internal Structure of the CPU
PLC-2005	Basic Concepts of PLC Programming
PLC-2006	Common PLC Applications

# MECHATRONICS & INDUSTRIAL AUTOMATION TECHNICIAN

HYD-1001  
HYD-1002  
HYD-1003  
HYD-1004

## **Introduction to Hydraulics**

Introduction to Hydraulics  
Hydraulic Theory  
Hydraulic Fluids  
Hydraulic Systems

HYD-2001  
HYD-2002  
HYD-2003  
HYD-2004

## **Components of a Hydraulic System**

Hydraulic Actuators  
Classification of Hydraulic Valves  
Hydraulic Piping and Instrumentation  
Hydroelectric Symbology and Circuits

AUT-2001  
AUT-2002  
AUT-2003  
AUT-2004  
AUT-2005

## **Process Controls**

Introduction to Process Controls  
Process Control Systems  
Set Point/Comparator  
Controller (PID Control)  
Multivariate Processes

ROB-1001  
ROB-1002  
ROB-2001  
ROB-2002  
ROB-2003  
ROB-2004  
ROB-2005

## **Robotics**

Robotics Introduction to Robotics  
Robot Safety  
Robot Axes  
Robot Manipulator  
Controller and End Effectors  
Robot Programs  
Industrial Robot Applications

CAR-1001

## **Searching for a Job**

Kicking Off Your Job Search



# MECHATRONICS & INDUSTRIAL AUTOMATION TECHNICIAN

CAR-1002  
CAR-1003

Finding Jobs to Apply For  
Networking

CAR-1004  
CAR-1005  
CAR-1006

**Resumes and Job Applications**  
Completing an Employment Application  
Creating Your Resume  
Crafting a Cover Letter

CAR-1007  
CAR-1008  
CAR-1009  
CAR-1010  
CAR-1011

**Interviewing**  
Understanding the Interview Process  
Making a Positive Impression  
Responding to Interview Questions  
Addressing Special Interview Concerns  
After the Interview

CAR-1012  
CAR-1013

**Keeping a Job**  
Surviving Your First Day on the Job  
Turning a Job into a Career



# QUALITY ASSURANCE TECHNICIAN

# QUALITY ASSURANCE TECHNICIAN

## MAKE THE WORLD EXCELLENT

When products like cell phones, computers or automobiles leave the factory, it's the quality assurance technician who makes sure they work. Also known as inspectors or testers, quality assurance technicians work on a wide range of challenging projects across multiple industries.

Critical to the success of any product development team, they make a difference. Quality assurance technicians reduce the cost of production, decrease maintenance expenses, and increase customer safety and satisfaction.

### Hiring Industries

- > Automotive
- > Aerospace
- > Building maintenance
- > Civil infrastructure
- > Consumer products
- > Construction
- > Electrical equipment
- > Logistics and distribution
- > Manufacturing
- > Materials processing

### Program Summary

**Skill Course:** 131

**Time to complete:** 2.5 months



# QUALITY ASSURANCE TECHNICIAN

STU-1001	<b>180 Skills Orientation</b> Greatest Day Ever
STU-1002	<b>Using a Learning Management System</b> How to Take a Course
STU-1003	How to Navigate the LMS
STU-1004	<b>Learning Online</b> Tips for Succeeding in Online Learning
QUA-1001	<b>Quality Systems</b> Introduction to Quality
QUA-1002	ISO 9000
QUA-1003	Standards Organizations
QUA-1004	Quality Organizations
QUA-1005	Basic Quality Roles and Responsibilities
MTH-1001	<b>Basic Math</b> Introduction to Basic Math
MTH-1002	Arithmetic Operations
MTH-1004	<b>Fractions and Decimals</b> Introduction to Fractions
MTH-1005	Working with Fractions
MTH-1006	Decimal Numbers
MTH-1003	<b>Intermediate Math</b> Numbers and the Number Line
MTH-1007	Positive and Negative Numbers
MTH-1008	Cartesian Coordinates



# QUALITY ASSURANCE TECHNICIAN

MTH-1009 The Metric System

## **Geometry**

GEO-1001 Introduction to Geometry  
GEO-1002 Basic Building Blocks of Geometry  
GEO-1003 Angles  
GEO-1004 Lines  
GEO-1005 Polygons  
GEO-1006 Triangles

## **Intermediate Geometry**

GEO-1007 Quadrilaterals  
GEO-1008 Circles  
GEO-1009 Three-dimensional Shapes  
GEO-1010 Coordinate Geometry  
GEO-1011 Transformation Geometry

## **Introduction to Safety**

SAF-1001 Introduction to OSHA  
SAF-1002 Making Work a Safer Place  
SAF-1003 Help! What to Do in an Emergency

## **Personal Protective Equipment Safety**

SAF-1004 Personal Protective Equipment  
SAF-1005 Eye and Face Protection  
SAF-1006 Head Protection  
SAF-1007 Foot and Leg Protection  
SAF-1008 Hand and Arm Protection  
SAF-1009 Body Protection  
SAF-1010 Hearing Protection

# QUALITY ASSURANCE TECHNICIAN

SAF-1011 Respiratory Protection

## **Hazardous Material Safety**

SAF-1012 Hazardous Materials

SAF-1013 HazCom

SAF-1014 Hazardous Waste

SAF-1015 Hazard Material Storage

## **Workplace Safety**

SAF-1016 Work Area Safety

SAF-1018 Fall Prevention

## **Quality Management**

QUA-1006 Quality Concepts

QUA-1007 The Cost of Quality

QUA-1008 Managing Quality

QUA-1009 Quality Documents

QUA-1010 Corrective and Preventive Action

## **Introduction to Statistical Process Control**

QUA-1011 Introduction to SPC

QUA-1012 Probability and Variation

QUA-1013 The Control Chart

## **Advanced Statistical Process Control**

QUA-2001 Control Chart Analysis

QUA-2002 Process Capability

QUA-2003 Problem Solving Tools

QUA-2004 Problem Solving

# QUALITY ASSURANCE TECHNICIAN

DWG-1001  
DWG-1002  
DWG-1003  
DWG-1004  
DWG-1005

## **Blueprint Reading Fundamentals**

Introduction to Blueprints  
Engineering Drawing Terminology  
Engineering Drawing Views  
Engineering Drawing Lines  
Dimensions and Tolerances

DWG-2001  
DWG-2002  
DWG-2003

## **Advanced Blueprint Reading**

Geometric Dimensions and Tolerances  
Assemblies and Fits  
Threads and Fasteners

DWG-3001  
DWG-3002  
DWG-3003  
DWG-3004  
DWG-3005  
DWG-3006  
DWG-3007  
DWG-3008  
DWG-3009  
DWG-3010

## **Geometric Dimensioning and Tolerancing**

Introduction to GD&T  
GD&T Terms and Symbols  
Rules of GD&T  
Geometric Tolerances  
Datums  
Form Tolerances  
Profile Tolerances  
Orientation Tolerances  
Runout Tolerances  
Location Tolerances

MEA-2001  
MEA-2002  
MEA-2003  
MEA-2004

## **Precision Measurement I**

Introduction to Precision Instruments  
Rules  
Calipers  
Micrometers

# QUALITY ASSURANCE TECHNICIAN

MEA-2005  
MEA-2006  
MEA-2007  
MEA-2008  
MEA-2009  
MEA-2010

## **Precision Measurement II**

Small Hole Gauges  
Dial Indicators  
Bore Gauges  
Height Gauges  
Go/NoGo Gauges  
Test Indicators

MEA-2011  
MEA-2012  
MEA-2013  
MEA-2014  
MEA-2015

## **Attribute Gauges**

Go/NoGo Thread Gauges  
Attribute Gauges  
Thickness and Radius Gauges  
Squares and Protractors  
Surface Roughness Comparators

MEA-2016  
MEA-2017  
MEA-2018

## **Precision Measurement III**

Adjustable Parallels  
Surface Plates  
Optical Comparators

COM-2004  
COM-2005

## **Technical Writing**

Introduction to Technical Writing  
Successful Documentation

COM-1001  
COM-1002  
COM-1003  
COM-1004  
COM-1005

## **Communicating with Others**

Introduction to Communication  
Effective Communication  
Verbal Communication  
Written Communication  
Nonverbal Communication



# QUALITY ASSURANCE TECHNICIAN

COM-1006  
COM-1007

Listening Skills  
Workplace Communication

COM-2001  
COM-2002  
COM-2003

**Dealing With Conflict**  
Understanding Conflict  
Communication Skills  
Managing Conflict

TEA-1001  
TEA-1002  
TEA-1003  
TEA-1004  
TEA-1005

**Working on a Team**  
Working in a Group  
Group Communication  
Effective Collaboration  
Life Stages of a Team  
Meeting

TEA-1006  
TEA-1007  
TEA-1008  
TEA-1009  
TEA-1010  
TEA-1011  
TEA-1012

**Team Dynamics**  
Diversity  
Creativity  
Problem Solving  
Decision Making  
Conflict Management  
Leadership  
Virtual Groups

COM-2001  
COM-2002  
COM-2003

**Dealing With Conflict**  
Understanding Conflict  
Communication Skills  
Managing Conflict

# QUALITY ASSURANCE TECHNICIAN

CAR-1001  
CAR-1002  
CAR-1003

## **Searching for a Job**

Kicking Off Your Job Search  
Finding Jobs to Apply For  
Networking

CAR-1004  
CAR-1005  
CAR-1006

## **Resumes and Job Applications**

Completing an Employment Application  
Creating Your Resume  
Crafting a Cover Letter

CAR-1007  
CAR-1008  
CAR-1009  
CAR-1010  
CAR-1011

## **Interviewing**

Understanding the Interview Process  
Making a Positive Impression  
Responding to Interview Questions  
Addressing Special Interview Concerns  
After the Interview

CAR-1012  
CAR-1013

## **Keeping a Job**

Surviving Your First Day on the Job  
Turning a Job into a Career





**SAFETY TECHNICIAN**

# SAFETY TECHNICIAN

## HELP KEEP OTHERS HEALTHY AND SAFE

Safety technicians collect data on the safety and health conditions of the workplace. Safety technicians work with occupational health and safety specialists in conducting tests and measuring hazards to help prevent harm to workers, property, the environment, and the general public.

Safety technicians work in a variety of settings, such as offices, manufacturing facilities, and mines. Their jobs often involve considerable fieldwork and travel.

### Hiring Industries

- > Automotive
- > Aerospace
- > Building maintenance
- > Civil infrastructure
- > Consumer products
- > Construction
- > Electrical equipment
- > Marine
- > Military
- > Materials processing
- > Medical devices

### Program Summary

**Skill Course:** 110

**Time to complete:** 2.0 months





# SAFETY TECHNICIAN

STU-1001	<b>180 Skills Orientation</b> Greatest Day Ever
STU-1002	<b>Using a Learning Management System</b> How to Take a Course
STU-1003	How to Navigate the LMS
STU-1004	<b>Learning Online</b> Tips for Succeeding in Online Learning
SAF-1001	<b>Introduction to Safety</b> Introduction to OSHA
SAF-1002	Making Work a Safer Place
SAF-1003	Help! What to Do in an Emergency
MTH-1001	<b>Basic Math</b> Introduction to Basic Math
MTH-1002	Arithmetic Operations
MTH-1004	<b>Fractions and Decimals</b> Introduction to Fractions
MTH-1005	Working with Fractions
MTH-1006	Decimal Numbers
MTH-1003	<b>Intermediate Math</b> Numbers and the Number Line
MTH-1007	Positive and Negative Numbers
MTH-1008	Cartesian Coordinates
MTH-1009	The Metric System

# SAFETY TECHNICIAN



## Geometry

GEO-1001	Introduction to Geometry
GEO-1002	Basic Building Blocks of Geometry
GEO-1003	Angles
GEO-1004	Lines
GEO-1005	Polygons
GEO-1006	Triangles

## Intermediate Geometry

GEO-1007	Quadrilaterals
GEO-1008	Circles
GEO-1009	Three-dimensional Shapes
GEO-1010	Coordinate Geometry
GEO-1011	Transformation Geometry

## Personal Protective Equipment Safety

SAF-1004	Personal Protective Equipment
SAF-1005	Eye and Face Protection
SAF-1006	Head Protection
SAF-1007	Foot and Leg Protection
SAF-1008	Hand and Arm Protection
SAF-1009	Body Protection
SAF-1010	Hearing Protection
SAF-1011	Respiratory Protection

## Hazardous Material Safety

SAF-1012	Hazardous Materials
SAF-1013	HazCom
SAF-1014	Hazardous Waste
SAF-1015	Hazard Material Storage



# SAFETY TECHNICIAN

SAF-1016

## **Workplace Safety**

Work Area Safety

SAF-1017

Permit-Related Safety

SAF-1018

Fall Prevention

SAF-1019

Ladder Safety

## **Material Handling Safety**

SAF-1024

Material Handling Basics

SAF-1025

Powered Industrial Trucks

SAF-1026

Crane and Rigging Safety

## **Tool and Machine Safety**

SAF-1027

Hand Tool Safety

SAF-1028

Power Tool Safety

SAF-1029

Sheet Metal and Compressed Gas Safety

SAF-1030

Machine Safety

SAF-1031

Safety Devices

## **Manufacturing as a Career**

CAR-2001

Manufacturing - A Future Worth Exploring

CAR-2002

Manufacturing - Components of Production

CAR-2003

Manufacturing - Credentials and Competencies

CAR-2004

Manufacturing - Career Planning and Resources

## **Introduction to Manufacturing**

MFG-1001

What is Advanced Manufacturing?

MFG-1002

Manufacturing History and Technology

MFG-1003

From Ideas to Products

MFG-1004

From Design to Manufacturing

MFG-1005

Safety, Quality and the Environment in Manufacturing

# SAFETY TECHNICIAN



MFG-1006  
MFG-1007

Measuring Success in Manufacturing  
Careers in Manufacturing

LOG-1001  
LOG-1002  
LOG-1003  
LOG-1004  
LOG-1005  
LOG-1006  
LOG-1007

## **Introduction to Logistics**

What is Logistics?  
Logistics Technology  
Inventory  
Distribution and Transportation  
Safety, Quality and the Environment in Logistics  
Winning in Logistics  
Careers in Logistics

MFG-1008

**Manufacturing & Logistics Game**  
The Game of Manufacturing and Logistics

COM-1001  
COM-1002  
COM-1003  
COM-1004  
COM-1005  
COM-1006  
COM-1007

## **Communicating with Others**

Introduction to Communication  
Effective Communication  
Verbal Communication  
Written Communication  
Nonverbal Communication  
Listening Skills  
Workplace Communication

TEA-1001  
TEA-1002  
TEA-1003  
TEA-1004  
TEA-1005

## **Working on a Team**

Working in a Group  
Group Communication  
Effective Collaboration  
Life Stages of a Team  
Meeting



# SAFETY TECHNICIAN



TEA-1006  
TEA-1007  
TEA-1008  
TEA-1009  
TEA-1010  
TEA-1011  
TEA-1012

## Team Dynamics

Diversity  
Creativity  
Problem Solving  
Decision Making  
Conflict Management  
Leadership  
Virtual Groups

COM-2001  
COM-2002  
COM-2003

## Dealing With Conflict

Understanding Conflict  
Communication Skills  
Managing Conflict

CAR-1001  
CAR-1002  
CAR-1003

## Searching for a Job

Kicking Off Your Job Search  
Finding Jobs to Apply For  
Networking

CAR-1004  
CAR-1005  
CAR-1006

## Resumes and Job Applications

Completing an Employment Application  
Creating Your Resume  
Crafting a Cover Letter

CAR-1007  
CAR-1008  
CAR-1009  
CAR-1010  
CAR-1011

## Interviewing

Understanding the Interview Process  
Making a Positive Impression  
Responding to Interview Questions  
Addressing Special Interview Concerns  
After the Interview

ADVANCED MANUFACTURING CERTIFICATION PROGRAMS

# SAFETY TECHNICIAN

CAR-1012  
CAR-1013

## Keeping a Job

Surviving Your First Day on the Job

Turning a Job into a Career



**EMPLOYABILITY SKILLS**



# EMPLOYABILITY SKILLS

## SKILLS FOR EVERY CAREER IN THE WORLD

Employability skills cover a broad range of important, non-technical topics that are listed by employers as essential to job performance. In this program you will learn essential soft skills including communication skills, team building skills, customer service skills, time management skills, and basic workplace skills.

You will also learn skills to help you build and grow your career and your personal brand, Microsoft Office© skills, and powerful skills to help you manage your personal finances.

On average, one quarter of the skills required for all jobs are employability skills. Employees with strong employability skills will be invaluable members of high-performing, collaborative teams.

### Hiring Industries

- > Automotive
- > Automotive
- > Aerospace
- > Banking
- > Civil infrastructure
- > Consumer products
- > Construction
- > Electrical equipment
- > Financial
- > Marine
- > Military
- > Medical devices

### Program Summary

**Skill Course:** 97

**Time to complete:** 1.5 months



# EMPLOYABILITY SKILLS

STU-1001	<b>180 Skills Orientation</b> Greatest Day Ever
STU-1002	<b>Using a Learning Management System</b> How to Take a Course
STU-1003	How to Navigate the LMS
STU-1004	<b>Learning Online</b> Tips for Succeeding in Online Learning
COM-1001	<b>Communicating with Others</b> Introduction to Communication
COM-1002	Effective Communication
COM-1003	Verbal Communication
COM-1004	Written Communication
COM-1005	Nonverbal Communication
COM-1006	Listening Skills
COM-1007	Workplace Communication
COM-2001	<b>Dealing With Conflict</b> Understanding Conflict
COM-2002	Communication Skills
COM-2003	Managing Conflict
COM-2004	<b>Technical Writing</b> Introduction to Technical Writing
COM-2005	Successful Documentation
CUS-1001	<b>Customer Service</b> Focusing on Your Customers

# EMPLOYABILITY SKILLS

- CUS-1002 Providing Friendly, Courteous, and Efficient Service
- CUS-1003 Communicating Effectively with Customers
- CUS-1004 Identifying and Meeting Customer Needs
- CUS-1005 Building Customer Relationships

## **Advanced Customer Service**

- CUS-1006 Respecting Diversity in Your Customers
- CUS-1007 Better Serving Customers with Disabilities
- CUS-1008 Dealing with Difficult Customers
- CUS-1009 Responding to Customer Complaints
- CUS-1010 Managing Conflict with Internal Customers

## **Working on a Team**

- TEA-1001 Working in a Group
- TEA-1002 Group Communication
- TEA-1003 Effective Collaboration
- TEA-1004 Life Stages of a Team
- TEA-1005 Meeting

## **Team Dynamics**

- TEA-1006 Diversity
- TEA-1007 Creativity
- TEA-1008 Problem Solving
- TEA-1009 Decision Making
- TEA-1010 Conflict Management
- TEA-1011 Leadership
- TEA-1012 Virtual Groups

## **Teamwork & Training**

- TEA-1013 Teamwork

# EMPLOYABILITY SKILLS

TEA-1014

Team Building

## **Building Effective Teams**

TEA-1015

Team Development

TEA-1016

Team Problem Solving

TEA-1017

Training and Development

## **Time Management**

TIM-1001

Managing Your Time

TIM-1003

Making a List and Checking It Twice

TIM-1004

Planning Your Day

TIM-1005

Adopting Timesaving Strategies

TIM-1006

Getting Organized

TIM-1007

Ending Procrastination

TIM-1008

Taking Advantage of Technology

## **Stress Management**

STR-1001

Dealing with Stress

STR-1002

Coping with On-the-job Stress

## **Goal Setting**

LIF-1001

Identifying Your Life Goals

## **Workplace Skills**

WRK-1001

Handling Dangerous Workplace Situations

## **Microsoft Excel**

MSO-1001

Getting Started with Excel

MSO-1002

Entering Text and Values

MSO-1003

Formatting Data

# EMPLOYABILITY SKILLS

MSO-1004 Formulas and Functions  
MSO-1005 Working with Dates and Times

## **Intermediate Excel**

MSO-1006 Working with Data Tables  
MSO-1007 Displaying Data in Charts  
MSO-1008 Printing a Worksheet

## **Microsoft Word**

MSO-1011 Getting Started with Word  
MSO-1012 Creating a Document  
MSO-1013 Font Formatting  
MSO-1014 Paragraph Formatting  
MSO-1015 Checking the Spelling and Grammar

## **Managing Your Money**

PFI-1001 Compensation  
PFI-1004 Banking  
PFI-1011 Taxes  
PFI-1005 Credit Cards  
PFI-1006 Loans  
PFI-1007 Credit Reports and Credit Scores  
PFI-1013 Record Keeping

## **Money Budgets and Goals**

PFI-1002 Goal Setting  
PFI-1003 Budgeting

## **Retirement Planning**

PFI-1008 Retirement Planning



# EMPLOYABILITY SKILLS

PFI-1009

## **Investing**

Investing

PFI-1010

## **Insurance**

Insurance

PFI-1012

## **Estate Planning**

Estate Planning

CAR-1001

## **Searching for a Job**

Kicking Off Your Job Search

CAR-1002

Finding Jobs to Apply For

CAR-1003

Networking

CAR-1004

## **Resumes and Job Applications**

Completing an Employment Application

CAR-1005

Creating Your Resume

CAR-1006

Crafting a Cover Letter

CAR-1007

## **Interviewing**

Understanding the Interview Process

CAR-1008

Making a Positive Impression

CAR-1009

Responding to Interview Questions

CAR-1010

Addressing Special Interview Concerns

CAR-1011

After the Interview

CAR-1012

## **Keeping a Job**

Surviving Your First Day on the Job

CAR-1013

Turning a Job into a Career

# EMPLOYABILITY SKILLS

CAR-1014  
CAR-1015  
CAR-1016  
CAR-1017

## **Personal Branding**

Personal Branding What is a Personal Branding  
Define Your Brand  
Develop Your Brand Messages  
Implement Your Brand Strategy



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