



MANUFACTURER'S
LEARNING PATHWAY
CATALOG

Connecticut



HELPING STUDENTS, JOB SEEKERS, AND
WORKERS BUILD MEANINGFUL CAREERS

BECAUSE YOU CAN'T LIVE LIFE WITHOUT SKILLS



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MADE IN AMERICA

ABOUT THE CONNECTICUT 180 SKILLS PROGRAM

In partnership with 180 Skills, the State of Connecticut is making skills training resources available to Connecticut residents, the Connecticut workforce system, Connecticut colleges, and Connecticut employers.

The goal of the Connecticut - 180 Skills initiative is to help people acquire the skills necessary for employment, grow the skills they need to advance in their current job, and to help companies and colleges grow and retain skilled workers.

Connecticut - 180 Skills is free to all Connecticut residents, colleges, and employers.

Connecticut 

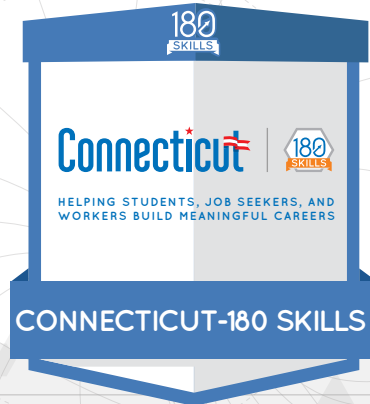


**HELPING STUDENTS, JOB SEEKERS, AND
WORKERS BUILD MEANINGFUL CAREERS**

CONNECTICUT MANUFACTURER'S LEARNING PATHWAYS

The Connecticut Manufacturer's Learning Pathways were organized by manufacturing professionals in the state to help people get the skills needed for employment, and to help incumbent workers grow in their present job.

These programs range from entry-level to advanced skills and can be completed in five to 22 hours.




BASIC MANUFACTURING SKILLS LEARNING PATHWAYS




180
COURSES

MANUFACTURING &
BASIC LIFE SKILLS



180
COURSES

BASIC MATH SKILLS



180
COURSES

BASIC BLUEPRINT
READING



180
COURSES

BASIC METROLOGY



180
COURSES

INTRODUCTION TO
SAFETY/OSHA PREP



180
COURSES

MANUFACTURING &
CAREER OPTIONS



180
COURSES

GETTING A JOB



180
COURSES

COMMUNICATING
WITH OTHERS



180
COURSES

INTRODUCTION TO
MICROSOFT OFFICE




180
COURSES

OSHA SAFETY
TRAINING



180
COURSES

PERSONAL
FINANCES



180
COURSES

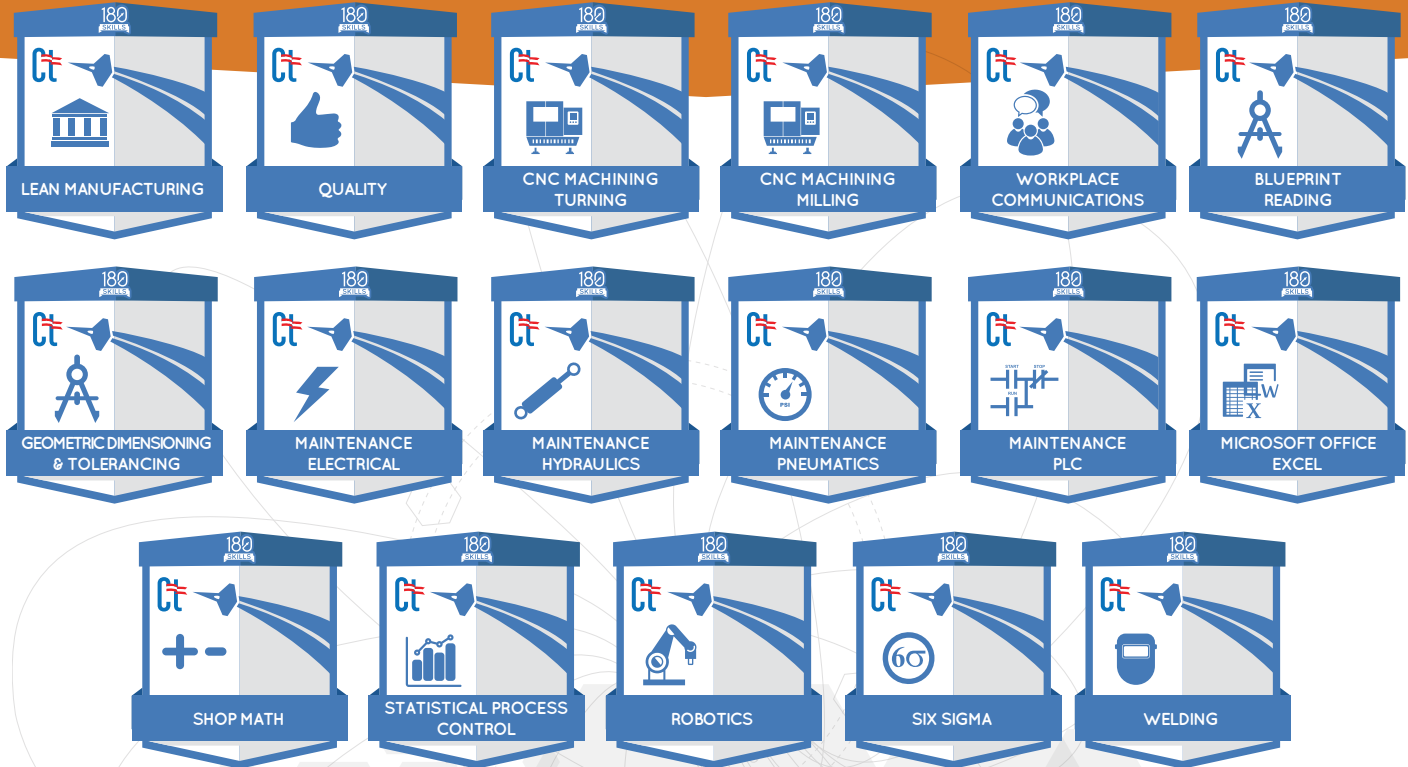
INDUSTRIAL
AUTOMATION



180
COURSES

SAFETY

AEROSPACE COMPONENT MANUFACTURERS BADGES



The image features a solid orange background with a large, dark orange, irregular shape in the upper center. Below this, the text 'BASIC MANUFACTURING LEARNING PATHWAYS' is centered in white, uppercase letters. The bottom half of the image is filled with a pattern of overlapping, semi-transparent orange hexagons of various sizes, creating a textured, crystalline effect.

BASIC MANUFACTURING LEARNING PATHWAYS

MANUFACTURING & BASIC LIFE SKILLS



Skills Course Number

Skills Course Name



STU - 1002	How to Take a Course
STU - 1003	How to Navigate the LMS
CAR - 2001	Manufacturing Careers
CAR - 2002	Component of Production
CAR - 2003	Credentials and Competencies
MFG - 1001	What is Advanced Manufacturing?
MFG - 1002	Manufacturing History and Technology
MFG - 1007	Careers in Manufacturing
PFI - 1003	Personal Budget
PFI - 1005	Credit Cards
TIM - 1001	Managing your Time

Number of skills courses: 11

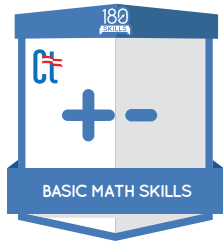
Total time to complete: 10.6 hrs.

BASIC MATH SKILLS



Skills Course Number

Skills Course Name



- MTH - 1001 : Introduction to Basic Math
- MTH - 1002 : Arithmetic Operations
- MTH - 1003 : Numbers and Number Lines
- MTH - 1004 : Introduction to Fractions
- MTH - 1005 : Working with Fractions
- MTH - 1006 : Decimal Numbers
- MTH - 1007 : Positive and Negative Numbers
- MTH - 1008 : Cartesian Coordinates

Number of skills courses: 8

Total time to complete: 8.5 hrs.

BASIC BLUEPRINT READING



Skills Course Number

Skills Course Name



- 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
- DWG - 2003 : Threads and Fasteners

Number of skills courses: 6
Total time to complete: 9.5 hrs.

BASIC METROLOGY



Skills Course Number

Skills Course Name



MEA - 2001	Introduction to Precision Instruments
MEA - 2002	Rulers
MEA - 2003	Calipers
MEA - 2004	Micrometers
MEA - 2010	Test Indicators
MEA - 2017	Surface Plate

Number of skills courses: 6
Total time to complete: 7.5 hrs.

INTRODUCTION TO OSHA / SAFETY PREP



Skills Course Number

Skills Course Name



- SAF - 1001 : Introduction of OSHA
- SAF - 1004 : Personal Protective Equipment
- SAF - 1012 : Hazardous Materials

Number of skills courses: 3
Total time to complete: 4.1 hrs.

MANUFACTURING & CAREER OPTIONS



Skills Course Number

Skills Course Name



MGF - 1003	Intro to Mfg - From Ideas to Products
MFG - 1004	Intro to Mfg - From Design to Mfg
MFG - 1005	Safety, Quality and the Environment in Mfg
MFG - 1006	Measuring Success in Manufacturing
MFG - 1008	The Game of Mfg & Logistics
MFG - 1012	Mfg Paperwork - The Production Order
CAR - 2004	Manufacturing as a Career - Mfg - Career Planning & Resources
CNC - 1004	Intro to Machining - Machining Personnel
ROB - 1001	Intro to Robotics
CMP - 1001	Intro to Composites - Background and History of Composites
CMP - 1002	Intro to Composites - Composite Industries and Products

Number of skills courses: 11

Total time to complete: 15.3 hrs.

GETTING A JOB



Skills Course Number

Skills Course Name



CAR - 1001	Searching for a Job - Kicking off your job search
CAR - 1002	Searching for a Job - Finding Jobs to Apply For
CAR - 1003	Searching for a Job - Networking
CAR - 1004	Resumes and Job Apps - Completing an Employment App
CAR - 1005	Resumes and Job Apps - Creating Your Resume
CAR - 1006	Resumes and Job Apps - Crafting a Cover Letter
CAR - 1007	Interviewing - Understanding the Interview Process
CAR - 1008	Interviewing - Making a Positive Impression
CAR - 1009	Interviewing - Responding to Interview Questions
CAR - 1010	Interviewing - Addressing Special Interview Concerns
CAR - 1011	Interviewing - After the Interview
CAR - 1012	Keeping a Job - Surviving your First Day on the Job
CAR - 1013	Keeping a Job - Turning a Job into a Career

Number of skills courses: 13

Total time to complete: 11.7 hrs.

COMMUNICATING WITH OTHERS



Skills Course Number

Skills Course Name



COM - 1001	Intro to Communication
COM - 1002	Effective Communication
COM - 1003	Verbal Communication
COM - 1004	Written Communication
COM - 1005	Nonverbal Communication
COM - 1006	Listen Skills
COM - 1007	Workplace Communication
COM - 2001	Dealing with Conflict: Understanding Conflict
COM - 2002	Communication Skills
COM - 2003	Managing Conflict

Number of skills courses: 10

Total time to complete: 12.2 hrs.

INTRODUCTION TO MICROSOFT OFFICE



Skills Course Number

Skills Course Name



MSO - 1001	Excel Basics - Getting Started with Excel
MSO - 1002	Entering Text and Values
MSO - 1003	Formatting Data
MSO - 1004	Formulas and Functions
MSO - 1005	Working with Dates and Times
MSO - 1006	Working with Data Tables
MSO - 1007	Displaying Data in Charts
MSO - 1008	Printing a Worksheet
MSO - 1012	Work Basics - Getting Started with Word
MSO - 1013	Creating a Document
MSO - 1014	Font Formatting
MSO - 1015	Paragraph Formatting
MSO - 1016	Checking the Spelling and Grammar

Number of skills courses: 13

Total time to complete: 18.9 hrs.

OSHA SAFETY TRAINING



Skills Course Number

Skills Course Name



SAF - 1002	: Making Work a Safer Place
SAF - 1003	: Help! What to Do in an Emergency
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
SAF - 1016	: Work Area Safety
SAF - 1018	: Fall Prevention
SAF - 1019	: Ladder Safety
SAF - 1021	: Lockout/Tagout
SAF - 1022	: Fire Safety
SAF - 1023	: Fire Extinguishers
SAF - 1024	: Material Handling Basics
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

Number of skills courses: 21

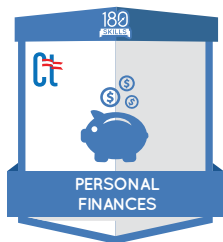
Total time to complete: 22.1 hrs.

PERSONAL FINANCES



Skills Course Number

Skills Course Name



- PFI - 1001 : Managing Your Money - Compensation
- PFI - 1002 : Goal Setting
- PFI - 1004 : Banking
- PFI - 1006 : Loans
- PFI - 1007 : Credit Reports and Credit Scores
- PFI - 1008 : Retirement Planning

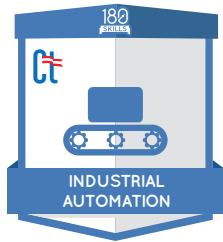
Number of skills courses: 6
Total time to complete: 6.1 hrs.

INDUSTRIAL AUTOMATION



Skills Course Number

Skills Course Name



AUT - 1001	Introduction to Automation
AUT - 1002	Automated Process
AUT - 1003	Automated System
AUT - 2001	Introduction to Process Controls
AUT - 2002	Process Control Systems
AUT - 2003	Set Point/Comparator
AUT - 2004	Controller (PID Control)
AUT - 2005	Multivariate Processes

Number of skills courses: 8

Total time to complete: 10.1 hrs.

SAFETY



Skills Course Number

Skills Course Name



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

Number of skills courses: 9
Total time to complete: 11.0 hrs.

The graphic features a large, solid orange shape at the top, resembling a stylized mountain or a wing. Below this, the text 'AEROSPACE MANUFACTURER'S LEARNING PATHWAYS' is centered in white, uppercase letters. The bottom half of the image is filled with a complex pattern of overlapping, semi-transparent orange hexagons of various sizes, creating a textured, crystalline effect. The overall color palette is monochromatic, using various shades of orange and white.

AEROSPACE MANUFACTURER'S LEARNING PATHWAYS

LEAN MANUFACTURING



Skills Course Number

Skills Course Name



LEA - 1002	The History of Lean Manufacturing
LEA - 1001	Lean Principles
LEA - 1003	Workplace Organization
LEA - 1004	S1: Sort
LEA - 1005	S2: Straighten
LEA - 1006	S3: Shine
LEA - 1007	S4: Standardize
LEA - 1008	S5: Sustain
MFG - 1005	Safety, Quality and the Environment in Manufacturing

Number of skills courses: 9

Total time to complete: 8.0 hrs.

QUALITY



Skills Course Number

Skills Course Name



QUA - 1001	Introduction to Quality
QUA - 1002	ISO 9000
QUA - 1003	Standards Organizations
QUA - 1004	Quality Organizations
QUA - 1005	Basic Quality Roles and Responsibilities
QUA - 1006	Quality Concepts
QUA - 1007	The Cost of Quality
QUA - 1008	Managing Quality
QUA - 1009	Quality Documents
QUA - 1010	Corrective and Preventive Action

Number of skills courses: 10

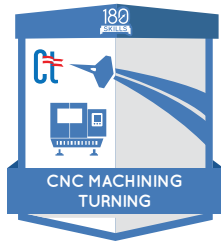
Total time to complete: 9.8 hrs.

CNC MACHINING - TURNING



Skills Course Number

Skills Course Name



Number of skills courses: 20

Total time to complete: 19.1 hrs.

CNC - 1003	CNC Controllers
CNC - 2001	Components of a CNC Lathe
CNC - 2002	Movements of a CNC Lathe
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 - 2011	CNC Machine Lubricants
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 - 4005	Select a Part Program from Memory on a CNC Lathe
CNC - 4006	Start the Part Program Safely on a CNC Lathe
CNC - 4007	Interrupt Automatic Operation on a CNC Lathe
CNC - 4008	Adjust a Tool Wear Offset on a CNC Lathe
CNC - 4009	Power Off the CNC Lathe
CNC - 4010	CNC Programming Procedure for a CNC Lathe
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 MACHINING - MILLING



Skills Course Number

Skills Course Name



Number of skills courses: 20

Total time to complete: 19.6 hrs.

CNC - 1003	CNC Controllers
CNC - 2006	Components of a CNC Machining Center
CNC - 2007	CNC Machining Center Movements
CNC - 2008	Workpiece and Tool Holding Devices for a CNC Machining Center
CNC - 2009	The CNC Controller for a CNC Machining Center
CNC - 2010	Auxiliary Systems for a CNC Machining Center
CNC - 2011	CNC Machine Lubricants
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
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 - 4027	CNC Machining Center Commands
CNC - 4028	Organizing a CNC Program for a CNC Machining Center

WORKPLACE COMMUNICATIONS



Skills Course Number

Skills Course Name



- COM - 1002 : Effective Communication
- COM - 1007 : Workplace Communication
- COM - 2001 : Understanding Conflict
- COM - 2002 : Communication Skills

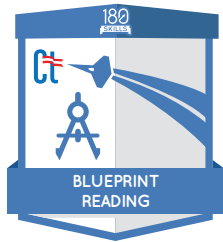
Number of skills courses: 4
Total time to complete: 5.5 hrs.

BLUEPRINT READING



Skills Course Number

Skills Course Name



DWG - 1006	: Blueprints and Picture Sheets for Aerospace
DWG - 1007	: Blueprints and Picture Sheets for Aerospace
DWG - 1008	: Blueprints and Picture Sheets for Aerospace
DWG - 1009	: Blueprints and Picture Sheets for Aerospace
DWG - 1010	: Blueprints and Picture Sheets for Aerospace
DWG - 1011	: Blueprints and Picture Sheets for Aerospace
DWG - 2002	: Assemblies and Fits
DWG - 2003	: Threads and Fasteners

Number of skills courses: 8

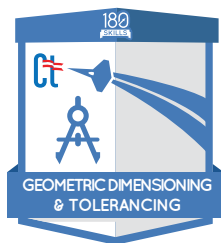
Total time to complete: 11.6 hrs.

GEOMETRIC DIMENSIONING & TOLERANCING



Skills Course Number

Skills Course Name



DWG - 2001	Geometric Dimensions and Tolerances
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
DWG - 3006	Form Tolerances
DWG - 3007	Profile Tolerances
DWG - 3008	Orientation Tolerances
DWG - 3009	Runout Tolerances
DWG - 3010	Location Tolerances

Number of skills courses: 11

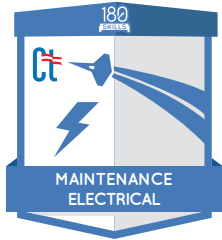
Total time to complete: 13.9 hrs.

MAINTENANCE ELECTRICAL



Skills Course Number

Skills Course Name



ELE - 2003	DC Motors
ELE - 2004	AC Single-Phase Motors
ELE - 2005	Three-Phase AC Motors
ELE - 2006	Electrical Connectors and Fasteners
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

Number of skills courses: 10

Total time to complete: 13.1 hrs.

MAINTENANCE HYDRAULIC



Skills Course Number

Skills Course Name



HYD - 1002	Hydraulic Theory
HYD - 1003	Hydraulic Fluids
HYD - 1004	Hydraulic Systems
HYD - 2001	Hydraulic Actuators
HYD - 2002	Classification of Hydraulic Valves
HYD - 2003	Hydraulic Piping and Instrumentation
HYD - 2004	Hydroelectric Symbology and Circuits

Number of skills courses: 7

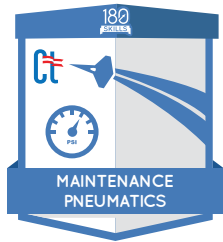
Total time to complete: 9.5 hrs.

MAINTENANCE PNEUMATICS



Skills Course Number

Skills Course Name



PNE - 1001	Introduction to Pneumatics
PNE - 1002	Pneumatic Systems
PNE - 1003	The Properties of Gases
PNE - 1004	Air Compression and Distribution - Part One
PNE - 2001	Compressed Air Treatment
PNE - 2002	Pneumatic Actuators
PNE - 2003	Directional Control Valves
PNE - 2004	Vacuum Technology
PNE - 2005	Measuring Pneumatic Variables
PNE - 3001	Pneumatic Applications

Number of skills courses: 10

Total time to complete: 17.0 hrs.

MAINTENANCE PLC



Skills Course Number

Skills Course Name



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

Number of skills courses: **8**
Total time to complete: **10.6**

MICROSOFT OFFICE EXCEL



Skills Course Number

Skills Course Name



- MSO - 1003** : Formatting Data
- MSO - 1004** : Formulas and Functions
- MSO - 1005** : Working with Dates and Times
- MSO - 1006** : Working with Data Tables
- MSO - 1007** : Displaying Data in Charts
- MSO - 1008** : Printing a Worksheet

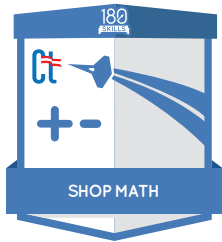
Number of skills courses: 6
Total time to complete: 9.3 hrs.

SHOP MATH



Skills Course Number

Skills Course Name



- GEO - 1002** : Basic Building Blocks of Geometry
- GEO - 1010** : Coordinate Geometry
- GEO - 1011** : Transformation Geometry
- MTH - 1008** : Cartesian Coordinates

Number of skills courses: 4
Total time to complete: 3.8

STATISTICAL PROCESS CONTROL



Skills Course Number

Skills Course Name



QUA - 1011	Introduction to SPC
QUA - 1012	Probability and Variation
QUA - 1013	The Control Chart
QUA - 2001	Control Chart Analysis
QUA - 2002	Process Capability
QUA - 2003	Problem Solving Tools
QUA - 2004	Problem Solving

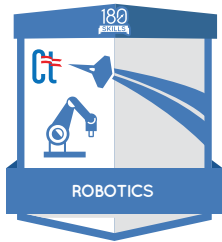
Number of skills courses: 7
Total time to complete: 7.9 hrs.

ROBOTICS



Skills Course Number

Skills Course Name



- ROB - 1001 : Introduction to Robotics
- ROB - 1002 : Robot Safety
- ROB - 2001 : Robot Axes
- ROB - 2002 : Robot Manipulator
- ROB - 2003 : Controller and End Effectors
- ROB - 2004 : Robot Programs
- ROB - 2005 : Industrial Robot Applications

Number of skills courses: 7
Total time to complete: 9.8 hrs.

STATISTICAL PROCESS CONTROL



Skills Course Number

Skills Course Name



Number of skills courses: 5
Total time to complete: 7.8 hrs.

- SIX - 3001 : Six Sigma and the Organization
- SIX - 3010 : Process Analysis and Documentation
- SIX - 3015 : Process Capability Performance
- SIX - 3019 : Design of Experiments
- SIX - 3020 : SPC

WELDING



Skills Course Number

Skills Course Name



WEL - 2004	Welding Basics
WEL - 2005	Weld Defects
WEL - 2006	Arc Welding Safety
WEL - 2009	Arc Welding Parameters
WEL - 2010	Gas Metal Arc Welding (GMAW)
WEL - 2012	Gas Tungsten Arc Welding (GTAW)

Number of skills courses: 6
Total time to complete: 5.3 hrs.

NEED MORE SKILLS?

The 180 Skills course library contains 700+ skills courses in 41 competency topics areas

If you need skills that don't see in this catalog, contact us and we can help you organize any of our 700 skills courses to align with your organizations unique needs.



THE STATE OF CONNECTICUT IS INVESTING IN THE FUTURE OF YOUR COMPANY

Launching the 180 Skills training system takes less than one day, and the cost is zero.

THROUGH THIS INITIATIVE YOU CAN

- increase the skills of every person in your organization
- give your employees skills they can use at work and at home
- increase your employee retention
- grow your business

Please consider becoming a member of the Connecticut 180 Skills initiative and helping residents and companies thrive in the coming years.

GETTING STARTED IS EASY

To get started please contact:

180 Skills

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📞 (317) 735-3368

✉️ sales@180skills.com

THE
COST
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