

CERTIFIED PRODUCTION TECHNICIAN PART 2 (MAINTENANCE AND PROCESSES)

TAKE OFF WITH ADVANCED MANUFACTURING VIRTUAL LEARNING

Virtual Skills Academy from Sandhills Community College offers a quick-start road map that allows individuals to build knowledge in preparation for a career in manufacturing. This online academy is intended to provide basic knowledge and understanding and bring awareness to opportunities within the manufacturing industry. The CPT program focuses on the concentration disciplines of Safety; Quality Practices & Measurement; Manufacturing Processes & Production; and Maintenance Awareness. Courses are stacked to follow a job progression plan. Unlike many other training programs, the Virtual Skills Academy requires minimal preparation. It is efficient, effective training that has been developed with input from manufacturing experts.

FLEXIBLE AND CONVENIENT

Online classes are self-paced, and easy to access through smart phones, tablets, and computers. Each course provides pre- and post- assessments and the ability to review and learn through a variety of engaging activities.

CAREER PATHWAYS FOR CERTIFIED PRODUCTION TECHNICIAN – PART 2 (Maintenance and Processes)

Combine job roles for learning pathways, or offer single job roles for targeted learning. Large comprehensive programs also available.

MAINTENANCE

PROCESSES



Virtual Skills Academy Provides:

- Preset curriculum
- Engaging online classes
- Supplemental videos
- Pre- and post-training knowledge assessments
- Guidance from Sandhills Community College Staff
- Readiness for On-the-Job Training
- Preparation for entry-level jobs in manufacturing
- Demonstrated proof of aptitude
- Opportunity to showcase personal initiative

GEER Scholarships Funding Available
Contact us for more information

www.sandhills.edu/continuing-education | 910-695-3980



CERTIFIED PRODUCTION TECHNICIAN PART 2 (MAINTENANCE AND PROCESSES)

Get ready for your career to TAKE OFF

MAINTENANCE

Electrical Instruments
Electrical Units
Introduction to Circuits
Parallel Circuit Calculations
Mechanical Maintenance for Motor Drive Systems
Safety for Electrical Work
Safety for Hydraulics and Pneumatics
Safety for Mechanical Work
Safety for Metal Cutting
Welding Fumes and Gases Safety

Welding Safety Essentials
Material Tests for Welding
Overview of Weld Types
Introduction to GMAW
Introduction to Welding Processes
Lubricant Fundamentals
Contamination and Filter Selection
Preventive Maintenance for Fluid Systems
Total Productive Maintenance
AC Motor Applications

Logic and Line Diagrams
Relays, Contactors, and Motor Starters
Introduction to Electric Motors
Symbols and Diagrams for Motors
AC Power Sources
Conductor Selection
DC Circuit Components
DC Power Sources
Electrical Print Reading
Electrical Units

Introduction to Circuits
Series Circuit Calculations
Gear Applications
Bearing Applications
Belt Drive Applications
Introduction to Mechanical Systems
Power Transmission Components
Fittings for Fluid Systems
Hydraulic Power Sources
Hydraulic Schematics and Basic Circuit Design

Introduction to Fluid Conductors
Introduction to Fluid Systems
Introduction to Hydraulic Components
Introduction to Pneumatic Components
Pneumatic Control Valves
Pneumatic Power Sources
Pneumatic Schematics and Basic Circuit Design
The Forces of Fluid Power

PROCESSES

Forces of Machines
Introduction to Mechanical Systems
Mechanical Power Variables
Safety for Mechanical Work
Intro to Fastener Ergonomics
Introduction to Metals
Introduction to PLCs
Introduction to Robotics
Approaches to Maintenance
Intro to Supply Chain Management
Process Design and Development

Basics of Manufacturing Costs
Manufacturing Management
Fabrication Process
Lean Manufacturing Overview
Process Flow Charting
Total Productive Maintenance
Troubleshooting
Value Stream Mapping: The Future State
Metrics for Lean
Manufacturing Process Applications:

Part II
Quality Overview
Production System Design and Development
Chucks, Collets, and Vises
Drill Tool Geometry
Introduction to Metal Cutting Fluids
Manufacturing Management
Cutting Processes
Holemaking on the Manual Mill
Introduction to Assembly

Introduction to Additive Manufacturing
Introduction to CAD and CAM for Machining
Introduction to CNC Machines
Introduction to Welding
Introduction to Welding Processes
Press Basics
Cell Design and Pull Systems
Management Tools: Problem Solving
Management Tools: Product and Process Design

Product Design and Development
Production System Design and Development
Band Saw Operation
Basic Cutting Theory
Overview of Machine Tools
Safety for Metal Cutting
Basics of the CNC Mill
Benchwork and Layout Operations
NIMS Core Job Planning Skills



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