

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 forming, fabrication, and stamping understanding and bring awareness to opportunities within the manufacturing industry. 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 FORMING, FABRICATING AND STAMPING JOB ROLES

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



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

Get ready for your career to TAKE OFF

FORMING FABRICATING STAMPING FUNDAMENTALS

Basic Measurement
Basics of Tolerance
Blueprint Reading
Calibration Fundamentals
Hole Standards and Inspection
Thread Standards and Inspection
5S Overview

Lean Manufacturing Overview
Ferrous Metals
Introduction to Mechanical Properties
Introduction to Physical Properties
Band Saw Operation
ISO 9001 Review
Bloodborne Pathogens

Fire Safety and Prevention
Hand and Power Tool Safety
Intro to OSHA
Lockout/Tagout Procedures
Noise Reduction and Hearing Conservation
Personal Protective Equipment

Powered Industrial Truck Safety
Safety for Lifting Devices
SDS and Hazard Communication
Walking and Working Surfaces
Geometry: Circles and Polygons
Geometry: Lines and Angles
Geometry: Triangles

Manufacturing Process Applications:
Part I
Math Fundamentals
Math: Fractions and Decimals
Trigonometry: Sine, Cosine, Tangent
Units of Measurement

PRESS OPERATOR

Electrical Units
Introduction to Circuits
Introduction to Hydraulic Components
Introduction to GD&T
Major Rules of GD&T
Total Productive Maintenance

Troubleshooting
Introduction to Mechanical Systems
Bending Fundamentals
Die Bending Operations
Operating the Press Brake
Press Brake Components

Press Brake Safety
Press Brake Specifications
Approaches to Maintenance
Coil Handling Equipment
Coil Loading Procedures
Die Components

Die Cutting Variables
Die Setting Procedures
Monitoring Press Operations
Press Basics
Punch and Die Operations
Stamping Safety

Essentials of Communication
Essentials of Leadership
Introduction to Workholding
Supporting and Locating Principles

DIEMAHER

Basic Grinding Theory
Basics of the Cylindrical Grinder
Basics of the Surface Grinder
Cylindrical Grinder Operation
Dressing and Truing
Grinding Ferrous Metals

Grinding Nonferrous Materials
Grinding Processes
Grinding Safety
Grinding Variables
Grinding Wheel Geometry
Grinding Wheel Materials

Introduction to Grinding Fluids
Setup for the Cylindrical Grinder
Setup for the Surface Grinder
Surface Grinder Operation
Calculations for Programming the Mill
Canned Cycles for the Mill

Creating a CNC Milling Program
Holmaking on the Manual Mill
Basic Cutting Theory
Carbide Grade Selection
Cutting Tool Materials
Speed and Feed for the Lathe

Speed and Feed for the Mill
Material Tests for Welding



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