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 electrical concepts and processes understanding and bring awareness to opportunities available 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 PATHWAY FOR INDUSTRIAL MAINTENANCE TECHNICIAN

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
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www.sandhills.edu/continuing-education | 910-695-3980
Get ready for your career to TAKE OFF

MAINTENANCE FUNDAMENTALS
- Math Fundamentals
- Math: Fractions and Decimals
- Units of Measurement
- Basics of Tolerance
- Blueprint Reading
- Basic Measurement
- Calibration Fundamentals
- Hole Standards and Inspection
- Thread Standards and Inspection
- Intro to OSHA
- Personal Protective Equipment
- Noise Reduction and Hearing Conservation
- Respiratory Safety
- Lockout/Tagout Procedures
- SDS and Hazard Communication
- Bloodborne Pathogens
- Walking and Working Surfaces
- Fire Safety and Prevention
- Flammable/Combustible Liquids
- Hand and Power Tool Safety
- Safety for Lifting Devices
- Powered Industrial Truck Safety
- Confined Spaces
- Introduction to Physical Properties
- Introduction to Mechanical Properties
- Introduction to Metals
- Ferrous Metals
- Lean Manufacturing Overview
- ISO 9001:2015 Review
- Approaches to Maintenance
- Total Productive Maintenance
- 5S Overview
- Electrical Units
- Safety for Electrical Work
- Introduction to Mechanical Systems
- Safety for Mechanical Work
- Forces of Machines

ELECTRICAL PRODUCTION
- Control Panel Functions for the CNC Lathe
- Control Panel Functions for the CNC Mill
- Introduction to CNC Machines
- AC Fundamentals
- Conductor Selection
- DC Circuit Components
- Electrical Instruments
- Electrical Print Reading
- Introduction to Circuits
- Introduction to Magnetism
- NEC(R) Overview
- Parallel Circuit Calculations
- Series Circuit Calculations
- Troubleshooting
- Essentials of Heat Treatment of Steel
- Lubricant Fundamentals
- Control Devices
- Distribution Systems
- Introduction to Electric Motors
- Limit Switches and Proximity Sensors
- Logic and Line Diagrams
- Relays, Contactors, and Motor Starters
- Algebra Fundamentals
- Geometry: Circles and Polygons
- Geometry: Lines and Angles
- Geometry: Triangles
- Trigonometry: Sine, Cosine, Tangent
- Trigonometry: The Pythagorean Theorem
- Essentials of Communication
- Essentials ofLeadership
- Overview of Soldering
- Battery Selection
- Introduction to Fastener Threads
- Overview of Non-Threaded Fasteners
- Overview of Threaded Fasteners
- Threaded Fastener Selection
- Tools for Threaded Fasteners
- Understanding Torque
- Fittings for Fluid Systems
- Introduction to Fluid Conductors
- Introduction to Hydraulic Components
- Introduction to Pneumatic Components
- Safety for Hydraulics and Pneumatics
- The Forces of Fluid Power
- Nonferrous Metals
- Bearing Applications
- Belt Drive Applications
- Clutch and Brake Applications
- Gear Applications
- Mechanical Power Variables
- Spring Applications
- AC Motor Applications
- DC Motor Applications
- Distribution Systems
- Reduced Voltage Starting
- Reversing Motor Circuits
- Solenoids
- Spec for Servomotors
- Symbols and Diagrams for Motors
- Intro to Machine Rigging
- Rigging Equipment
- Rigging Inspection and Safety
- Rigging Mechanics

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