EdisonState COMMUNITY COLLEGE
CENTER FOR WORKFORCE DEVELOPMENT & EDUCATION

TECH ONLINE

FALL 2019

These courses are a blend of online learning and hands-on validation. Each course is comprised of approximately ten (10) hours of online instruction, which the student is able to receive at their own pace and convenience. When the online portion is completed, students proceed to a scheduled hands-on evaluation in a lab setting from an experienced instructor, to validate and reinforce the online learning experience.

SHOP PRACTICES & MEASUREMENTS

For students with limited exposure to a manufacturing environment. Online classes include: Math Fundamentals, Fractions & Decimals, and Units of Measurement; Basics of Tolerance; Basic Measurement; Blueprint Reading; Geometry Lines & Angles and Triangles; Intro to Geometric Dimension & Tolerancing and Calibration Fundamentals.

Online | 4-Hour Lab @ Piqua
OR Greenville Campus

Fee $695

MAINTENANCE BASICS

Online classes include: Intro to OSHA; Personal Protective Equipment; Lockout/Tagout Procedures; Safety for Lifting Devices; Safety for Mechanical Work; Safety for Hydraulics & Pneumatics; Troubleshooting: Hand and Power Tool Safety; Environmental Safety Hazards; Total Productive Maintenance.

Online | 4-Hour Lab @ Piqua Campus

Fee $695

MECHANICAL SYSTEMS

For students with a limited exposure to manufacturing. Online classes include: Intro to Mechanical Systems; Forces of Machines; Power Transmission Components; Intro to Fastener Threads; Overview of Threaded Fasteners; Overview of Non-Threaded Fasteners; Lubricant Fundamentals; Mechanical Power Variables; Belt Drive Applications; Gear Applications.

Online | 4-Hour Lab @ Piqua Campus

Fee $695

HYDRAULICS & PNEUMATICS

Nineteen hours (19) of online instruction. Hydraulics and pneumatics as they relate to the operation of mechanical systems; principals, pumps, motors, valves, cylinders and actuators; pressure control, diagrams. Online classes include: Intro to Fluid Systems; Forces of Fluid Power; Intro to Hydraulic Components; Intro to Pneumatic Components; Intro to Fluid Conductors; Fittings for Fluid Systems; Preventive Maintenance for Fluid Systems; Hydraulic Power Variables; Pneumatic Power Variables; Hydraulic Power Sources; Pneumatic Power Sources; Fluid System Print Reading; Hydraulic Control Valves; Pneumatic Control Valves; Actuator Applications; Basic Hydraulic Circuit Design; Basic Pneumatic Circuit Design; Hydraulic Fluid Selection; Contamination and Filter Selections.

Online | 6-Hour Lab @ Piqua Campus

Fee $795

BASIC ELECTRICITY

Understanding electricity and Ohms law. Online courses include: Safety for Electrical Work; Electrical Units; Introduction to Circuits; Electrical Instruments; DC Power Sources; DC Circuit Components; Series Circuit Calculations; Parallel Circuit Calculations; AC Power Sources; AC Fundamentals. (Two 4-hour labs)

Online | 8-Hour Lab @ Piqua
OR Greenville Campus

Fee $895

INDUSTRIAL CONTROLS

Electrical devices used in industrial applications; basic theory, relays, contactors, solenoids, motors, electrical diagrams. Online classes include: Control Devices; Relays, Contactors and Motor Starters; Reversing Motor Circuits; Logic & Line Diagrams; Limit Switches and Proximity Sensors; Photoelectric & Ultrasonic Devices; Times & Counters; Solenoids; Symbols & Diagrams for Motors; Distribution Systems.

Online | 4-Hour Lab @ Piqua
OR Greenville Campus

Fee $695

ADVANCED INDUSTRIAL CONTROLS

Advanced study of electrical devices used in industrial applications; basic theory, relays, contactors, solenoids, motors, electrical diagrams. Online classes include: Intro to Electric Motors; DC Motor Applications; AC Motor Applications; Reduced Voltage Starting; Solid State Relays & Starters; Specs for Servo Motors; Deceleration Methods; Acceleration Methods; Electronic Semiconductor Devices; Photonic Semiconductor Devices.

Online | 4-Hour Lab
@ Piqua Campus

Fee $695

PROGRAMMABLE LOGIC CONTROLLERS (PLCS)

Principles and applications of Programmable Logic Controllers; hardware, ladder logic. Online classes include: Intro to PLCs; Hardware for PLCs; Basics of Ladder Logic; Numbering Systems & Codes; PLC Inputs & Outputs; Basic Programming; PLC Timers & Counters; Networking for PLCs; Hand-Held Programmers of PLCs; PLC Diagrams & Programs.

Online | 4-Hour Lab @ Piqua
OR Greenville Campus

Fee $695

ADVANCED PROGRAMMABLE LOGIC CONTROLLERS (PLCS)

Prerequisite: Programmable Logic Controllers. Online courses include: Overview of PLC Registers, PLC Program Control Instructions; Math for PLCs, Sequencer Instructions for PLCs; PLC Installation Practices; PID for PLCs; Data Manipulation; Shift Registers; Vision Systems; Industrial Network Integration.

Online | 4-Hour Lab
@ Piqua Campus

Fee $695

ROBOTICS

Online classes include: Intro to Robotics; Robot Safety; Robot Components; Robot Axes; Applications for Robots; Robot Installations; Robotic Control Systems; Concepts of Robot Programming; Robot Maintenance; Robot Troubleshooting.

Online | 4-Hour Lab
@ Piqua Campus

Fee $695

LEAN MANUFACTURING

Online classes include: Lean Manufacturing Overview; Intro to Supply Chain Management; 5S Overview; Cell Design & Pull Systems; Metrics for Lean; Process Flow Charting; Strategies for Setup Reduction; Conducting Kaizen Events; Value Stream Mapping: The Current State; Value Stream Mapping: The Future State.

Online
No Lab

Fee $495

For more information or to register, contact Peggy Wiggins at 937.778.7816 or pwiggins@edisonohio.edu.