Workforce Development Center

In collaboration with the academic divisions of the College, the Workforce Development Center at Cincinnati State offers several programs and courses that allow students to earn college credit while also gaining technical career skills.

In addition to the programs and courses described here, the Workforce Development Center offers a wide range of specialized workforce education and training programs that meet the needs of corporations, government agencies, and not-for-profit agencies.

For more information about the services provided by the Workforce Development Center, call (513) 569-1643 (toll-free 888-569-1709) or visit www.workforcecincinnati.com (http://www.workforcecincinnati.com) .

AHT Courses

AHT 100 Workflow and Information Design for Heal
15 Credits. 13 Lecture Hours. 4 Lab Hours.
A course on foundation concepts related to redesign of workflow and information management in health information technology systems. Topics include: basics of computer science, health information management systems, networking, and health information exchange; culture and terminology of healthcare; usability and human factors; and quality improvement. The course is delivered through online instruction only.
Prerequisites: Admitted to WDC Health Information Technology training program

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=100subject_code=AHT)

AHT 105 Consulting for Health Information Techno
15 Credits. 13 Lecture Hours. 4 Lab Hours.
A course on foundation concepts related to clinician and practitioner consulting in health information technology. Topics include: health information technology history and systems; public health; planning, management, leadership, and teamwork in health information technology; and quality improvement. The course is delivered through online instruction only.
Prerequisites: Admitted to WDC Health Information Technology training program

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=105subject_code=AHT)

AHT 110 Implementation Support for Health Inform
15 Credits. 13 Lecture Hours. 4 Lab Hours.
A course on foundation concepts related to implementing support for health information technology systems. Topics include: health information technology history; networking and health information exchange; installing and maintaining health information technology systems; configuring Electronic Health Records; and analyzing vendor-specific systems. The course is delivered through online instruction only.
Prerequisites: Admitted to WDC Health Information Technology training program

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=110subject_code=AHT)

AHT 115 Implementation Management for Health Inf
15 Credits. 13 Lecture Hours. 4 Lab Hours.
A course on foundation concepts related to managing the implementation of health information technology systems. Topics include: culture and terminology of healthcare; public health; customer service in healthcare; project management and teamwork in health information technology; and analyzing vendor-specific systems. The course is delivered through online instruction only.
Prerequisites: Admitted to WDC Health Information Technology training program

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=115subject_code=AHT)

AHT 120 Technical and Software Support for Healt
15 Credits. 13 Lecture Hours. 4 Lab Hours.
A course on foundation concepts related to providing technical and software support for health information technology systems. Topics include: basics of computer science and health information management systems; usability and human factors; installing and maintaining health information technology systems; configuring Electronic Health Records; and analyzing vendor-specific systems. The course is delivered through online instruction only.
Prerequisites: Admitted to WDC Health Information Technology training program

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=120subject_code=AHT)

BPI Courses

BPI 110 BPI Building Analyst Professional
2 Credits. 2 Lecture Hours. 1 Lab Hour.
A course leading to certification as a Building Performance Institute (BPI) Building Analyst Professional who is qualified to conduct whole-house energy audits. Topics include: BPI standards, analyzing building systems, building science, and measurement and verification of building performance.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=110subject_code=BPI)

BPI 115 BPI Envelope Professional
2 Credits. 2 Lecture Hours. 1 Lab Hour.
A course leading to certification as a Building Performance Institute (BPI) Building Analyst Professional who is qualified to conduct whole- house energy audits. Topics include: BPI standards, analyzing building systems, building science, and measurement and verification of building performance.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=115subject_code=BPI)

MMC Courses

MMC 100 Introduction to Mechanical Systems
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on mechanical systems found in a manufacturing facility. Topics include: mechanical power transmissions, bearings and shafts, lubrication, pumps and compressors, fluid power, and piping systems.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=100subject_code=MMC)

MMC 105 Shop Math
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course that reviews basic mathematical skills used in the maintenance trades. Topics include: decimals, fractions, percents, ratios, proportions, roots, and powers; basic algebra; and basic trigonometry.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=105subject_code=MMC)

MMC 110 Mssc Certified Production Technician Training
6 Credits. 6 Lecture Hours. 0 Lab Hour.
A course that addresses core competencies for production workers as defined by the Manufacturing Skills Standards Council. Students who complete the course successfully earn the MSSC Certified Production Technician credential.
Prerequisites: Admitted to MSSC Training Program

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=110subject_code=MMC)

MMC 111 MSSC Certified Logistics Associate Trai
2 Credits. 2 Lecture Hours. 0 Lab Hour.
A course that addresses core competencies for production workers whose job activities involve basic areas of logistics, as defined by the Manufacturing Skills Standards Council. Students who complete the course successfully earn the MSSC Certified Logistics Associate credential.
Prerequisites: Admitted to MSSC Training Program

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=111subject_code=MMC)

MMC 112 MSSC Certified Logistics Technician Tra
2 Credits. 2 Lecture Hours. 0 Lab Hour.
A course that addresses core competencies for production workers whose job activities involve advanced areas of logistics, as defined by the Manufacturing Skills Standards Council. Students who complete the course successfully earn the MSSC Certified Logistics Technician credential.
Prerequisites: MMC 111

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=112subject_code=MMC)

MMC 115 Print Reading and Measurement Tools
1.5 Credit. 1 Lecture Hour. 0.5 Lab Hour.
A course on reading and understanding mechanical prints and using precision mechanical measuring tools.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=115subject_code=MMC)

MMC 117 Tools, Machines, and Fabrication
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on the application and operation of hand tools, power tools, machine tools and other tools used in fabrication.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=117subject_code=MMC)

MMC 118 Industrial Piping Systems
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on types and applications of industrial pipe systems. Topics include: sizing, identifying, and installing piping, fittings, and valves; and using systems including iron pipe, steel tubing, hydraulic hose, plastic pipe, and copper tubing.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=118subject_code=MMC)

MMC 120 Pneumatic Systems 1
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on fundamental principles and techniques of pneumatics. Topics include: maintenance, field repairs, and troubleshooting of pneumatic systems.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=120subject_code=MMC)

MMC 125 Pneumatic Systems 2
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A continuation of MMC 120 that provides additional understanding and practice in maintenance, field repairs, and troubleshooting of pneumatic systems.
Prerequisites: MMC 120

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=125subject_code=MMC)

MMC 127 Rigging and Lifting
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on fundamental skills and applications for rigging, stressing inspection and safety. Topics include: industrial knots, rigging calculations, hand signals, gear selection, overhead crane operation, and lift operation.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=127subject_code=MMC)

MMC 130 Hydraulic Systems 1
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on fundamental principles and techniques of industrial hydraulics. Topics include: fluid conductors, seals, basic hydraulic symbols, construction, and operation and use of hydraulic pumps.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=130subject_code=MMC)

MMC 135 Hydraulic Systems 2
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A continuation of MMC 130. Topics include: construction, operation, pressure controls, directional controls, flow controls, actuators, cartridge valves, stack valves, accumulators, heat exchangers, flow meters, and gauges.
Prerequisites: MMC 130

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=135subject_code=MMC)

MMC 140 Mechanical Drive Systems
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on fundamentals of mechanical transmission systems used in industrial applications. Topics include: operation, installation, performance analysis, and design of basic mechanical transmission systems; and using chains, v-belts, spur gears, bearings, and couplings.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=140subject_code=MMC)

MMC 145 Preventive Maintenance for Mechanical Systems
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on concepts and methods for preventive maintenance, emphasizing vibration measurement and monitoring. Topics include: vibration analysis; tests, measurements, and adjustments; and parts replacement performed to prevent faults from occurring.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=145subject_code=MMC)

MMC 147 Machine Leveling and Alignment
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on industrial equipment leveling and alignment procedures. Topics include: alignment instruments and tools, shaft runout, softfoot, piping strain, foundations, and anchor systems.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=147subject_code=MMC)

MMC 150 Bearings, Seals, and Lubrication
1.5 Credit. 1 Lecture Hour. 1 Lab Hour.
A course on how to operate, install, analyze, troubleshoot, and select bearings, seals, and lubrication for mechanical systems.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=150subject_code=MMC)

MMC 160 Industrial Pump Maintenance
1.5 Credit. 1 Lecture Hour. 1 Lab Hour.
A course on fundamentals of selecting, installing, and troubleshooting industrial centrifugal pumps. Topics include: pump operation, pressure/flow characteristics, performance and efficiency, cavitation, seals, sizing, and maintenance.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=160subject_code=MMC)

MMC 170 Jet Engine Teardown
1.5 Credit. 1 Lecture Hour. 1 Lab Hour.
Jet Engine Teardown School (JETS) covers commercial jet design, components, and operating principles. Students tear down a commercial jet engine and fire up a working commercial jet engine.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=170subject_code=MMC)

MMC 180 Machining Processes
1.5 Credit. 1 Lecture Hour. 1 Lab Hour.
A course on interpreting engineering part drawings, determining the sequence of machining operations, selecting tooling, and preparing plans for machining and inspection to confirm that parts meet the requirements of the drawings.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=180subject_code=MMC)

MMC 198 Special Topics in Mechanical Maintenance
0.5-7 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Mechanical Maintenance that gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.
Prerequisites: Vary by section

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=198subject_code=MMC)

MMC 199 Special Projects in Mechanical Maintenan
0.5-7 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Mechanical Maintenance that gives students opportunities to study information not currently covered in other courses. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: Vary by section

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=199subject_code=MMC)

TBE Courses

TBE 101 Introduction to Incident Management Operations
1 Credit. 1 Lecture Hour. 0 Lab Hour.
This course based on NFPA Standards 1026 & 1670. This is an introductory course on Incident Management Operations Topics include: Hazard Identification and Risk Assessment, Incident Response Planning, roles and responsibilties of Incident Command System staff officers, FEMA NIMS, rescue operations strategy & tactics, and responder safety
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=101subject_code=TBE)

TBE 102 Rope Rescue Operations
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course based on NFPA Standards 1006 and 1670. Topics include: rope design, rescue knots, anchoring systems, mechanical advantage, load calculations, rappelling, and vertical rescue techniques.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=102subject_code=TBE)

TBE 103 Water Search and Rescue Operations
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course based on NFPA standards 1006 and 1670 for Swift Water Rescue operations to rescue victims from a hazardous water environment. Topics include: using rescue lines, tactics of rescue swimming operations, water-rope operations, and rescue boat operations.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=103subject_code=TBE)

TBE 104 Permit-Required Confined Space Entry and Rescue
2 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on entry and rescue operations pertaining to permit-required confined spaces. Topics include: confined space entry techniques, air monitoring, rescue equipment, and rescue techniques.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=104subject_code=TBE)

TBE 105 Search and Rescue Operations
1 Credit. 1 Lecture Hour. 1 Lab Hour.
A course based on NFPA Standards 1006 and 1670 for Search and Rescue Operations to search for lost individuals in a rural or wilderness environment. Topics include: search operations tactics, map reading, land navigation, use of GPS, helicopter search operations, and search dogs.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=105subject_code=TBE)

TBE 106 Trench Rescue Operations
2 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on trench rescue operations as outlined in the 1006 & 1670 NFPA standards. Topics include: soil typing, trench safety, trench shoring, rescue equipment,air monitoring, victim packaging and extrication and rescue strategy techniques.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=106subject_code=TBE)

TBE 107 Structure Collapse Rescue
2 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on FEMA and NFPA structural collapse rescue standard. Topics include: building design, civil engineering principles, structural shoring, structural concrete, and rescue techniques.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=107subject_code=TBE)

TBE 108 Vehicle Extrication Operations
1 Credit. 1 Lecture Hour. 1 Lab Hour.
A course, based on NFPA Stanrads 1006 & 1670, on vehicle design and entraped victim rescue techniques. Topics include: truck, car and bus design; pneumatic and hydraulic equipment; structural shoring; and victim stabilization and extraction.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=108subject_code=TBE)

TBE 109 Machinery Rescue Operations
1 Credit. 1 Lecture Hour. 1 Lab Hour.
A course based on NFPA Standards 1006 & 1670. Machinery rescue techniques involving victims trapped in machinery. Topics include: design and operations, crushed and amputations, victim extractions, pneumatic and hydraulic tools, and use of pneumatics and hydraulic rescue equipment.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=109subject_code=TBE)

TBE 198 Special Topics in Rescue and Safety
0.5-7 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Rescue and Safety that gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.
Prerequisites: Vary by section

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=198subject_code=TBE)

TBE 199 Special Projects in Rescue and Safety
0.5-7 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Rescue and Safety that gives students opportunities to study information not currently covered in other courses. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: Vary by section

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=199subject_code=TBE)

TBE 298 Year 2 Special Topics in Technical Rescue & Incident Command
1-4 Credits.
An advanced course on selected topics related to Technical Rescue & Incident Command that gives students opportunities to study information not currently covered in other courses.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=298subject_code=TBE)

TEC Courses

TEC 110 Nurse Aide Train-the-Trainer
2 Credits. 2 Lecture Hours. 0 Lab Hour.
A state-approved course for nurses teaching either the classroom or clinical supervision portions of an approved Training and Competency Evaluation program for long-term care Nurse Aides.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=110subject_code=TEC)

TEC 198 Special Topics in Health Business
0.5-7 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Health Business that gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.
Prerequisites: Vary by section

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=198subject_code=TEC)

TEC 199 Special Projects in Health Business
0.5-7 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Health Business that gives students opportunities to study information not currently covered in other courses. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: Vary by section

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=199subject_code=TEC)

TEM Courses

TEM 105 Installation of Solar Thermal Systems
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course for individuals seeking to become installers of solar thermal systems. Topics include: fundamental concepts of solar thermal systems; and design, installation, troubleshooting, and commissioning of systems.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=105subject_code=TEM)

TEM 107 Install Photovoltaic Sys
3 Credits. 3 Lecture Hours. 0 Lab Hour.
A course on fundamental concepts and techniques for installing solar photovoltaic (PV) systems. Topics include: designing PV systems and safely installing solar-electric systems. This course prepares students for the NABCEP PV Entry Level Certificate of Knowledge exam.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=107subject_code=TEM)

TEM 110 Electrical Systems
1 Credit. 1 Lecture Hour. 0 Lab Hour.
An course on electrical systems found in a manufacturing facility. Topics include: motors and motor control, meters and testing devices, power distribution, and electrical systems.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=110subject_code=TEM)

TEM 115 Electrical Safety
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on electrical safety issues based on NFPA 70E. Topics include: electrical hazards, comparison of qualified and non-qualfied workers, lockout/tagout, safe electrical work practices, and PPE.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=115subject_code=TEM)

TEM 120 Industrial Electricity for AC and DC Circuits
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on fundamental concepts and safe maintenance techniques used when working with electrical devices and applications.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=120subject_code=TEM)

TEM 125 Industrial Electronic Devices
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on theory, operation, application, and troubleshooting of solid-state devices used in industrial equipment and controls. Topics include: semi-conductors; transistors as switches; and amplifiers, SCRs, LEDs, and integrated circuits.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=125subject_code=TEM)

TEM 130 Electrical Control System Devices
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on the devices typically found in an industrial control panel, including relays, timers, contactors, terminal blocks, and control transformers.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=130subject_code=TEM)

TEM 140 Electrical Ladder Diagrams and Print Reading
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on concepts and skills needed to interpret electrical prints and construct electrical ladder diagrams.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=140subject_code=TEM)

TEM 150 Industrial Power Systems
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on concepts and skills for working with modern power distribution systems. Topics include: transformers, circuit protection, 1-line diagrams, grounding, switch gears, and electrical safety.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=150subject_code=TEM)

TEM 160 Motors, Motor Controls, and Drives
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course for maintenance personnel involved in selection, installation, and troubleshooting of industrial 480 three-phase motors, controls and frequency drives. Topics include: control circuits, overload protection, and auxiliary control devices.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=160subject_code=TEM)

TEM 165 Motion Control Devices and Systems
1.5 Credit. 1 Lecture Hour. 1 Lab Hour.
A course for the industrial electrician or electrical maintenance technician responsible for installing or troubleshooting motion control devices. Topics include: types and applications of motion control devices used in industry.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=165subject_code=TEM)

TEM 170 Sensors for Industrial Control Systems
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course for maintenance personnel covering selection, installation, and troubleshooting of discrete and analog sensors commonly found in manufacturing operations. Topics include: limit switches, pressure switches, proximity switches, photo eye sensors, process sensors with analog outputs, and motion sensors.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=170subject_code=TEM)

TEM 175 Variable Frequency Drives
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on application, selection, installation, programming, and troubleshooting of Variable Frequency Drives (VFDs) used in industry. Topics include: test equipment and motor controls; hardware identification; and determining parameter values for load, torque, and speed.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=175subject_code=TEM)

TEM 180 Programmable Logic Controllers 1
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on operation, installation, basic programming, and troubleshooting of programmable logic controllers (PLCs) using Allen Bradley SLC-500 and CompactLogix PLCs.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=180subject_code=TEM)

TEM 185 Programmable Logic Controllers 2
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A continuation of TEM 180, emphasizing techniques used by electricians or instrument technicians who install and troubleshoot advanced PLCs. Topics include: advanced and special program instruction, Human-Machine Interface (HMIs), and communication networks.
Prerequisites: TEM 180

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=185subject_code=TEM)

TEM 190 Troubleshooting Industrial Electrical Equipment
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on systematic approaches for troubleshooting electrical equipment used in industry.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=190subject_code=TEM)

TEM 198 Special Topics in Industrial Maintenance
0.5-7 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Industrial Maintenance that gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.
Prerequisites: Vary by section

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=198subject_code=TEM)

TEM 199 Special Projects in Industrial Maintenance
0.5-7 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Industrial Maintenance that gives students opportunities to study information not currently covered in other courses. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: Vary by section

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=199subject_code=TEM)

THZ Courses

THZ 101 First Responder-OSHA HAZMAT Operations Level
0.5 Credits. 0.5 Lecture Hour. 0 Lab Hour.
This course is designed to meet the basic operations level to be a hazrdaous materials (HAZMAT) First Responder. Course topics focus on basic hazard recognition/risk assessment and defensive spill containment techniques. This course is designed to meet the OSHA, USEPA, USDOT, & NFPA training requirements for individuals who handle and/or exposed to hazardous substances. A hazardous substances includes hazardous materials and hazardous wastes.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=101subject_code=THZ)

THZ 103 HAZMAT (HAZWOPER) Annual Refresher
0.5 Credits. 0.5 Lecture Hour. 0 Lab Hour.
A course that meets the annual refresher training requirements for individuals who perform environmental clean-up remediation work at sites regulated by federal and state environmental protection agencies. This course also meets the OSHA 29 CFR 1910.120 (HAZWOPER) standard and NFPA Standard 472 for Professional Qualifications for Hazardous Materials Responders.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=103subject_code=THZ)

THZ 104 OSHA 24-Hour HAZMAT (HAZWOPER) l Technician
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on defensive and offensive measures that stop and contain hazardous substance spills and releases. Topics include: USDOT HAZMAT labeling, air monitoring, DECON operations, respiratory protections, and spill control. This course meets the OSHA, EPA, NFPA and DOT training requirements for individuals who handle and/or are exposed to hazardous material and hazardous waste.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=104subject_code=THZ)

THZ 105 OSHA 40-Hour HAZMAT (HAZWOPER) Workshop
3 Credits. 2 Lecture Hours. 1 Lab Hour.
A course for individuals who will perform hazardous materials response activities at the HAZMAT Technician level, and for personnel involved with investigation and remediation of hazardous waste sites and "Brown Fields" at the General Site Worker Level. Th
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=105subject_code=THZ)

THZ 106 On-Scene Hazardous Materials and All Hazards Incident Command Workshop
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on duties and responsibilities of an On-Scene Incident Commander for all types of hazardous materials and critical incidents. Topics include: National Incident Management System (NIMS), OSHA and FEMA risk assessment, emergency response planning, and HAZMAT strategy and tactics.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=106subject_code=THZ)

THZ 110 Basic Hazardous Materials Chemistry
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A basic chemistry course specifically designed to assist emergeny services and safety professionals who manage or respond to a hazardous material (HAZMAT) event. Topics include: atomic structures, chemical elements, periodic table, chemical bonding, chemical reactions and HAZMAT chemical terminology.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=110subject_code=THZ)

THZ 120 Disaster Preparedness and Business Continuity Planning
2 Credits. 2 Lecture Hours. 0 Lab Hour.
A course that provides the private and public sector manaagement, emergency services, or safety professional an in-depth understanding of management issues involved in disaster planning and an organization's ability to restore normal business operations. Topics include: emergency response plans, risk assessment, crisis management teams, business continuity planning, and continuity of operations. The course materials are based on Department of Homeland Security (DHS) and NFPA 1600-Business Continuity Planning.
Prerequisites: THZ 110

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=120subject_code=THZ)

THZ 130 Radiological and Biological Emergency Preparedness Planning
2 Credits. 2 Lecture Hours. 0 Lab Hour.
A course for emergency services or safety professionals, US military personnel, or private sector risk managers on radiological and biological incidents and their consequences. Topics include: terminology, the National Response Framework (NRF) Plan, biological threats, damage assessment, and containment and recovery protocols.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=130subject_code=THZ)

THZ 140 Introduction to WMD Terrorism
2 Credits. 2 Lecture Hours. 0 Lab Hour.
A course for emergency services and safety professionals and private sector safety and emergency management professionals on terrorism and employment of weapons of mass destruction (WMD). Topics include: counter-terrorism and anti-terrorism techniques employed by US federal agencies and the US Department of Defense; and use of chemical, biological, radiological, nuclear, and explosives in a terrorist incident.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=140subject_code=THZ)

THZ 141 Consequences of Terrorism
2 Credits. 2 Lecture Hours. 0 Lab Hour.
A course for emergency services or safety professionals on understanding how terrorists plan and execute an attack. Topics include: history of terrorism, terrorist tactics and operations, case studies of terrorist attacks, and cultural and political awareness.
Prerequisites: TBE 101

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=141subject_code=THZ)

THZ 150 Disaster Modeling
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course for emergency services or private sector safety professionals on the computer modeling systems used to conduct "plume" analysis. Topics include: CAMEO (Computer-Aided Management of Emergency Operations), GIS (Geographic Information Systems), WISER (Wireless Information System for Emergency Responders) HAZMAT (Hazardous Material) Response Planning, Emergency Operation Centers, and integration of modeling software into the Common Operating Picture.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=150subject_code=THZ)

THZ 160 Crisis Media Relations
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course for the public and/or private sector spokesperson or public affairs officer on media relations and operations during a crisis. Topics include: types of media, public information officer duties and responsibilities, press kits, media plans, and press briefings.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=160subject_code=THZ)

THZ 198 Special Topics in Hazard Response
0.5-7 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Hazard Response that gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.
Prerequisites: Vary by section

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=198subject_code=THZ)

THZ 199 Special Projects in Hazard Response
0.5-7 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Hazard Response that gives students opportunities to study information not currently covered in other courses. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: Vary by section

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=199subject_code=THZ)

THZ 298 Second Year Special Topics in HAZMAT Response & Disaster Response Management
0.5-4 Credits. 0 Lecture Hour. 0 Lab Hour.
An advanced course on selected topics related to HAZMAT Response & Disaster Response Management that gives students opportunities to study information not currently covered in other courses.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=298subject_code=THZ)

TOS Courses

TOS 101 Work Zone Safety
1 Credit. 1 Lecture Hour. 0 Lab Hour.
This course is designed to provide an initial and basic overview of key OSHA 29 CFR Parts 1900-1910 General Industry Safety Standards. It is important to remember that this course shall provide only the basics on Occupational Safety. The course is designed for both the worker and novice safety professional."
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=101subject_code=TOS)

TOS 102 Hoisting and Material Handling Safety
2 Credits. 2 Lecture Hours. 0 Lab Hour.
This course is designed to provide the basic knowledge on how to develop an organization's safety program based on the OSHA General Industry regulations; 29 CFR Parts 1900-1910.The overall objective of this course is for the student to obtain the knowledge to develop and administer a comprehensive safety program, it is crucial for a safety professional or a member of management to know where to look and how to apply specific OSHA regulations that effect your organization."
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=102subject_code=TOS)

TOS 110 OSHA 10-Hour General Industry Safety and Health Training Course
1 Credit. 0.5 Lecture Hour. 0 Lab Hour.
A course for industrial workers and novice safety professionals on basic concepts of the OSHA General Industry Safety Standards.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=110subject_code=TOS)

TOS 111 Osha 30 Hour General Industry Safety and Health Training Course
2 Credits. 2 Lecture Hours. 0 Lab Hour.
A course on concepts and techniques needed to develop and administer a comprehensive safety program for an organization. Topics include: applying OSHA regulations that affect the organization.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=111subject_code=TOS)

TOS 115 OSHA Permit-Required Confined Space Ent
0.5 Credits. 0.5 Lecture Hour. 0 Lab Hour.
A course on hazards associated with OSHA permit-required confined space entry operations. Topics include: types of confined spaces, lockout/tagout requirements, air monitoring, and equipment for entry.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=115subject_code=TOS)

TOS 117 OSHA Confined Space Entry and Basic Rescue (Awareness Level)
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course for individuals who enter and work in an OSHA classified Permit Required Confined Space. Topics include: OSHA Permit Required Confined Space Program requirements, air monitoring, respiratory protection, lockout-tagout, and confined space entry and rescue equipment.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=117subject_code=TOS)

TOS 120 Fall Protection and Scaffolding Safety
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on the OSHA requirements for scaffold and fall protection safety at a constructional and general industry work site, as covered in OSHA 29 CFR 1926 Subparts L and M. Topics include: scaffold inspection techniques, and selecting and using fall protection equipment.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=120subject_code=TOS)

TOS 121 Excavation Safety
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on requirements governing excavation and trenching operations, as covered in OSHA 29 CFR 1926 Subpart P. Topics include: soil mechanics in relation to stability of shored and unshored slopes and walls of excavations, types of shoring (wood timbers and hydraulic), and soil testing methods.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=121subject_code=TOS)

TOS 122 Work Zone Safety
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on concepts and techniques of work zone safety. Topics include: work zone design, construction, operations, and maintenance; and the Manual on Uniform Traffic Control Devices.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=122subject_code=TOS)

TOS 123 Hoisting and Material Handling Safety
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on safety considerations in hoisting and material handling operations, as covered in OSHA 29 CFR 1926 (Cranes and Material Handling).
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=123subject_code=TOS)

TOS 124 Electrical Safety
1 Credit. 1 Lecture Hour. 0 Lab Hour.
A course on requirements governing electrical safe work practices at construction and manufacturing sites, as covered in OSHA 29 CFR Part 1926 and in National Fire Protection Standards 70 and 70 E.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=124subject_code=TOS)

TOS 130 Safety Trainer and Training Management
1.5 Credit. 1 Lecture Hour. 1 Lab Hour.
A course to train instructors in methods used to teach employees safety practices and to develop safety training programs. Topics include: the adult learning model, teaching methods for adult learners, needs assessment, course and program design, student assessment methods, and documentation and record Keeping. The course is based on criteria from American National Standards (ANSI) Z 490.1-2009.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=130subject_code=TOS)

TOS 198 Special Topics in Occupational Safety
0.5-7 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Occupational Safety that gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.
Prerequisites: Vary by section

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=198subject_code=TOS)

TOS 199 Special Projects in Occupational Safety
0.5-7 Credits. 0 Lecture Hour. 0 Lab Hour.
A course on selected topics related to Occupational Safety that gives students opportunities to study information not currently covered in other courses. Grades issued are Satisfactory or Unsatisfactory.
Prerequisites: Vary by section

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=199subject_code=TOS)

TOS 289 Year 2 Special Topics in Occupational Safety & Regulatory Compliance
0.5-4 Credits. 0 Lecture Hour. 0 Lab Hour.
An advanced course on selected topics related to Occupational Safety & Regulatory Compliance that gives students opportunities to study information not currently covered in other courses.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=289subject_code=TOS)

TPI Courses

TPI 110 Process Control and Instrumentation 1: Pressure Control
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A course on foundation concepts related to process controls and instrumentation. Topics include: controllers, transmitters, variable frequency drives (VFDs) and control valves, and automatic control techniques. Laboratory exercises include loop wiring, calibration, controller configuration, and troubleshooting.
Prerequisites: None

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=110subject_code=TPI)

TPI 120 Process Control and Instrumentation 2: Temperature Control
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A continuation of TPI 110. Topics include: control of temperature and pressure. Activities include laboratory exercises and computer simulations.
Prerequisites: TPI 110

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=120subject_code=TPI)

TPI 130 Process Control and Instrumentation 3: Level and Flow
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A continuation of TPI 120. Topics include: control of level and flow, installation, calibration, configuration, and troubleshooting. Activities include laboratory exercises.
Prerequisites: TPI 120

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=130subject_code=TPI)

TPI 140 Process Control and Instrumentation 4: Final Control
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A continuation of TPI 130. Topics include: industry use of final control units; and how to select, install, configure, and troubleshoot pneumatic control valves and variable frequency drives (VFDs). Activities include laboratory exercises.
Prerequisites: TPI 130

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=140subject_code=TPI)

TPI 150 Process Control and Instrumentation 5: Analytical Control
2.5 Credits. 2 Lecture Hours. 1 Lab Hour.
A continuation of TPI 140. Topics include: control of analytical and measurement processes such as ORP, pH, conductivity, and chromatography. Activities include laboratory exercises.
Prerequisites: TPI 140

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=150subject_code=TPI)