INDUSTRIAL EQUIPMENT MECHANIC (462)

462-101 - Industrial Maintenance Safety
Provides instruction in safety and develops the skills necessary for entry-level employment in industrial maintenance. Students will identify work environment and personal hazards within the industry and proper protection methods.
1 Credit hours
18 Lecture hours

462-102 - Basic Blueprint/Schematic Reading
Examines electrical and hydraulic/pneumatic schematics, component symbols, and their application in the circuit. Develops skills to assemble basic electrical circuits from a schematic, assemble basic hydraulic/pneumatic circuits from a schematic, and draw electrical/hydraulic circuits.
1 Credit hours
18 Lecture hours

462-103 - Introduction to Power Transmission Systems
Explores power transmission belts, belt problems, pulleys, ears, drives, and variable seeds. Focuses on performing gear failure and bearing failure analysis, and vibration analysis related to component failures.
1 Credit hours
36 Lab hours

462-104 - Introduction to Industrial Controls
Introduces students to the basic principles of physics specific to electro-mechanical systems. Explores basic process control theory, control loop characteristics, and sensor and signal-conditioning devices. Actual industrial controls, instrumentation and sensors are used in lab applications. Students integrate applications of system interfacing of digital, servo, electric and hydraulic systems through laboratory experimentation.
1 Credit hours
18 Lecture hours

462-108 - Interpreting Engineering Drawings
Focuses on the basic principles of engineering drawings and manufacturing processes. Through interpretation and sketching, students learn to visualize the part, section or assembly views. Students study isometric and orthographic views on a drawing. The student will also use drawings pertinent to the trades with examples in GD&T, welding, facilities, piping, sheet metal, and equipment manuals.
2 Credit hours
36 Lecture hours

462-109 - Industrial Motor Controls and Troubleshooting
Provides information on the concepts associated with design and systematic troubleshooting of three-phase motor control systems. Students will use schematic diagrams in order to determine sequence of operation and function of motor controls systems. This class will include hands-on activities such as control system design, assembly, testing, and troubleshooting. (Prerequisite: 620-102 AC Circuits)
3 Credit hours
36 Lecture hours
36 Lab hours

462-110 - Industrial Fluid Distribution Systems
Provides information for the installation and repair of industrial fluid systems. Students utilize various tools for connecting fittings, thread cutting, pipe sweating, soldering, plastic cementing and equipment repairs. Additional concepts on pipe hangers, fittings, filters and valves are covered.
1 Credit hours
36 Lab hours