Fall 2021 Industrial Technician Certificate Courses

Basic Industrial Electricity

Students will gain a basic understanding of the principles of electricity, electronic components, standards and schematics. Class and lab sessions will focus on the following: Personal and Equipment Safety, Definitions and Terminology; Basic Principles, Laws and Calculations, AC Principles, Wiring, Schematics and Codes; AC Motors, Lighting and other Equipment; Testing Instruments, Basic Troubleshooting and Repair (AC Equipment and DC/Electronic Equipment); DC Principles and Components; DC Circuits, Diagrams and Schematics; Electronics and Semiconductors.

Course Details:

➢ Day/Time: Monday/Thursday 9:00am – 12:00pm
➢ Date: August 16 – September 20 (no class September 6)
➢ Room: Skou Hall Room 134
➢ Tuition: $765.00 (books NOT included)

Pneumatic Automation

Provides an understanding of the operation and maintenance of pneumatic components and automation systems. Topics such as compressed air and vacuum systems, pneumatic logic systems, component operation, selection, maintenance and troubleshooting are emphasized in the class and lab environment.

Course Details:

➢ Day/Time: Tuesday/Thursday 3:00pm – 6:00pm
➢ Date: August 24 – September 23
➢ Room: Skou Hall Room 136
➢ Tuition: $765.00 (books NOT included)

Programmable Logic Controllers (PLC) I

Introducing the PLC - What it is and how it functions, number systems, introduction to PLC operations, input modules, output modules, putting together a modular PLC, introduction to Logic, programming a PLC, PLC processors, program and data organization, basic relay instructions, understanding relay instructions and the PLC input module, documenting your system, timer and counter instructions, introduction to comparison, data-handling, and sequencer instructions, including hands-on exercises.

Course Details:

➢ Day/Time: Tuesday 3:00pm – 6:00pm
➢ Date: August 31 – November 9 (10 WEEK CLASS)
➢ Room: Skou Hall Room 030
➢ Tuition: $765.00 (NO BOOK REQUIRED)
Industrial Motors & Motor Controls
This course is intended for the participant with some working knowledge and/or experience in industrial electricity. Designed to help prepare participants for employment in the field of industrial electrical maintenance, this course consists of lecture, lab demonstration, and hands-on and software-based lab assignments. Areas covered include: Safety, Understanding electrical drawings, Motor transformer and distribution systems, Motor control devices, Motor principles, DC motors, Three phase AC motors, Single phase AC motors, Motor selection, Motor installation, Motor maintenance and troubleshooting, Motor starters, Relays and logic, Motor control devices and AC and DC drives. (Prerequisite: Basic Industrial Electricity)

Course Details:
➢ Day/Time: Monday/Thursday 9:00am – 12:00pm
➢ Date: September 27 – October 28
➢ Room: Skou Hall Room 134
➢ Tuition: $765.00 (books NOT included)

Basic Hydraulics
Provides a basic understanding of the operation and maintenance of hydraulic components and systems. Topics to be covered in the classroom and in the lab setting: Principles of Hydraulics; Definitions and Terminology; Hydraulic Symbols and Schematics; Types of Circuits; Pumps (designs and applications); Motors (designs and applications); Cylinders (designs and application); Pressure, Direction and Flow Control Valves; Oil Filtration, Sampling and Fabrication; Fittings (use and identification).

Course Details:
➢ Day/Time: Tuesday/Thursday 3:00pm – 6:00pm
➢ Date: September 28 – October 28
➢ Room: Skou Hall Room 136
➢ Tuition: $765.00 (books NOT included)