Online course offering flexible studies and safe experimentation in computer-based simulated lab environment with full instructor support.

- **AC/DC Electrical** topics cover fundamentals of electrical systems used for power and control in industrial, commercial, agricultural, and residential applications. Multimedia lessons and computer-based simulators allow experimentation and measurements to build and test circuits.

- **Electric Relay Control** studies introduce the functions of relay logic control circuits used in industrial and commercial applications. Computer simulation has students safely build and test circuits to match drawings and specifications.

- **Motor Control** topics explore electric relay control operation of AC electric motors found in manufacturing, distribution and logistics facilities. Troubleshooting is introduced.

- **Mechanical Systems** learning materials present basic concepts of mechanical systems including forces and levers. Experiments are performed in the simulated lab environment.

- **Print Reading** topics explain how to interpret and effectively work with technical drawings.

- **Factory Automation and Programmable Logic Control (PLCs)** lessons give terminology, identify the parts of automated systems and explore practices in the field.

- **Principles of Advanced Manufacturing** topics introduce advanced manufacturing through study of the technologies, processes, performance objectives, and personnel employed in modern manufacturing.

- **Introduction to LEAN** presents the concepts, terms, and application of lean manufacturing principles and practices in the manufacturing process.

- **Quality Systems and International Standards** lessons explore various uses and types of quality management systems.

- **Process Control** systems are introduced with diagrams and functional descriptions.

- **Mathematics Review** covers the math operations and concepts commonly used on the job in the production environment.

- **Trigonometry Review** provides study of right triangle trigonometry and its applications to practical manufacturing calculations.