

ENGINEERING TECH: SPECIAL (ETSC)

ETSC 1240 Fiber Optic Technologies

Credit Hours: 3

Lab Fee: Yes

A hands-on fiber optic course focused on the fabrication of fiber optic cable assemblies, using a variety of connectorization and splicing techniques. Cable installation and system troubleshooting techniques will also be presented.

ETSC 1542 Programmable Logic Controllers (PLC)

Credit Hours: 3

Prerequisites: CETC 1123 with a grade of "C" or higher or instructor approval

Lab Fee: Yes

This course covers fundamental ladder logic, programmable controller theory, application techniques, and design and troubleshooting of PLC-based (programmable logic controller) systems in classroom presentations, lab experiments, simulation trainers, and multi-modal software learning labs. Hands-on replications of PLC functions are created in the lab.

ETSC 1603 Fundamentals of Robotics and Simulation

Credit Hours: 3

Prerequisites: CETC 1123 with a grade of C or higher

Lab Fee: Yes

This is an introductory course familiarizing students with the basic principles of robotics and simulation. It includes the history and future of robotics, basic robotics concepts, operation, classification, and applications. This course provides a framework for the discussion of artificial intelligence. This course also includes basic principles of modeling and simulation as applied in different environments and systems. Students will become familiar with robotic system uses and programming.