

# ENGINEERING TECH: SPECIAL (ETSC)

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## **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:** EETC 1025 and CETC 1123 both courses – 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:** EETC 1025 and CETC 1123 both courses - with a grade of “C” or higher, or instructor approval

**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. It provides a framework for the discussion of artificial intelligence. Students will become familiar with robotic system programming and uses. This course also includes basic principles of modeling and simulation as applied in different environments and systems.