

ELTR 2474 : Advanced Programmable Controllers

4 credit hours (2.5 lecture/3 lab)

This course will provide students with an understanding of the operation and development of tag based industrial program controllers, HMI development, and industrial networking system design and implementation. Students will build an industrial network connecting many different industrial components. Students will program standard industrial equipment and will develop process graphics to control and monitor the equipment.

Prerequisite(s)

ELTR 2444

Course Outcomes

At the end of this course, students will be able to:

1. Convert instruction type programmable controller programs to tag based programmable controller programs.
2. Develop programs using a tag based programmable controller.
3. Program HMIs (touch screens) that will graphically represent movements and measurements in real time.
4. Program HMIs to control the real world devices.
5. Install common types of industrial programmable controller networks commonly found in industrial setting.
6. Network computers and programmable controllers together using common types of industrial networks.
7. Describe and develop a SCADA system.