

SYLLABUS
PART I
EDISON COMMUNITY COLLEGE
ELT 251S ADVANCED PROGRAMMABLE LOGIC CONTROLLERS
3 CREDIT HOURS

COURSE DESCRIPTION

Presents advanced topics in programmable logic controllers (PLC), including indirect addressing, human machine interfaces (HMI), PLC networks, analog I/O, Device-Net, and Control-Logix. Industry standard Allen Bradley SLC500 processors are utilized. Programming of both touch screen interfaces and software interfaces is covered. Prerequisite: ELT151S. Lab fee.

COURSE GOALS

The student will:

1. Demonstrate the use of indirect addressing.
2. Program a touch screen HMI.
3. Program a software HMI such as RSView.
4. Create a PLC network and send messages between PLCs.
5. Interface analog I/O to a PLC.
6. Create a Device-Net network.
7. Program a Control-Logix PLC.

CORE VALUES

The Core Values are a set of principles which guide in creating educational programs and environments at Edison. They include communication, ethics, critical thinking, human diversity, inquiry/respect for learning, and interpersonal skills/teamwork. The goals, objectives, and activities in this course will introduce/reinforce these Core Values whenever appropriate.

TOPIC OUTLINE

1. Review of basic PLC programming
2. Indirect addressing
3. Hardware HMIs
4. Software HMIs
5. Networking PLCs
6. Analog I/O
7. Device-Net
8. Control-Logix