SYLLABUS
PART I
EDISON COMMUNITY COLLEGE
ELT 131S INDUSTRIAL CONTROLS
3 CREDIT HOURS

COURSE DESCRIPTION

Examines electrical and electronic devices used in industrial applications. A thorough treatment of sensors and their applications is presented. Relays, contactors, solenoids, and thyristor-based power interface devices are studied in detail. Standard wiring practices and troubleshooting skills are developed. Lab fee.

COURSE GOALS

The student will:

1.	Identify power supplies, circuit protection devices, sensors and actuators.
2.	Determine the proper size power supply, circuit protection, and wire for specific applications.
3.	Select appropriate switches, relays, and lights for basic control circuits.
4.	Construct and troubleshoot basic control circuits safely.
5.	Design and construct timing relay circuits.
6.	Create timing diagrams for timing relay circuits.
7.	Select appropriate sensors for a specified application.
8.	Analyze and compare manufacturers' sensor data.
9.	Design and construct circuits with solenoids, motor starters, temperature controllers, and other output devices.
10.	Wire and program a simple Programmable Logic Controller circuit.

CORE VALUES

The Core Values are a set of principles which guide in creating educational programs and environment 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. Transformers and Power Supplies
2. Fuses, Disconnects, and Circuit Breakers
3. Switches and Indicators
4. Relays
5. Solenoids
6. Motion Control Devices
7. Temperature Control
8. Motors
9. Programmable Logic Controllers
10. Safety
11. Trouble Shooting