



Lab 101

Automation

Capacity: 20 Students

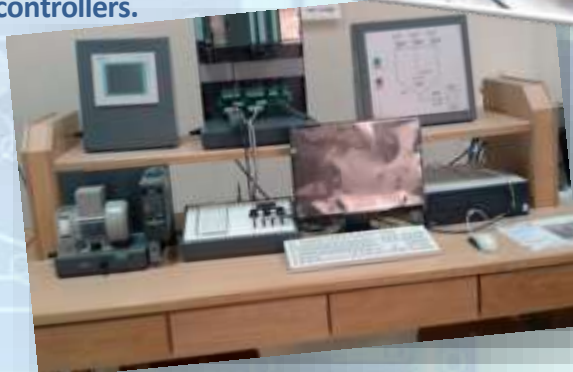


The automation laboratory offers great opportunity to understand the industrial automation systems using high-tech programmable logic controller kits of Siemens available in the market. The laboratory contains most of the equipment required in industrial applications such as pressure, temperature sensors, motors and controllers.



LABORATORY EQUIPMENTS

- 10 PLC (Programmable Logic Controllers) Siemens S7 300 family: Basic Demo Units.
- 10 PLC Simulation Demo Units.
- Motor Demo Units/ Micromaster Drive Units.
- 5 Process instrumentation demo units.
- 5 MIMIC demo units.
- 10 HMI (Human machine interface) demo units with TP177 package.
- 1 PCMCIA CP Profibus.
- 5 Compressors.
- Cable and accessories package.
- Software/ Documentation packages.
- 10 computers.
- 10 LCD screen.
- 1 Laptop.



MAJOR EXPERIMENTS

- ✓ Operation of Digital input/output Modules.
- ✓ Operation of Analog input/output Modules.
- ✓ Timer/ Counter application included in a simulated process control.
- ✓ Process Automation Systems (PLC + Drive + Compressors + Valves ...).
- ✓ * Human Machine Interface Experiments:
- ✓ MIMIC based.
- ✓ HMI based.
- ✓ SCADA based.
- ✓ * Communication Experiments:
- ✓ PLC-PLC.
- ✓ PLC-HMI.
- ✓ PLC-SCADA.
- ✓ PLC-Motor.
- ✓ PLC-Sensor.



The Laboratory Serves the Following Courses

Course No.	Course Title	Semester
EE512	Automated Industrial System 1	9
EE518	Automated Industrial System 2	10