PLC AND SCADA

Course outcomes:

The students will be able to:

- Apply the tools and techniques of industrial automation field.
- Program and control PLC .

Syllabus:

Unit : 1 Introduction – Various parts of a PLC: CPU and Programmer, input & output modules, memory and processor – Power Supplies – I/O specifications – advantages & Disadvantages.

Unit : 2 The Binary concept – Boolean algebra- ladder logic program for logic gates – push button – Toggle switches – Latching & Interlocking – Flipflop in PLC.

Unit : 3 Timer instructions, ON delay timer instructions, OFF- Delay timer instructions, Retentive timer – Concepts – Sequential logic function – Industrial process timing applications , Counter Instructions , UP – counter , down counter , Up-down counter , complaining counter and timer function for Industrial applications.

Unit : 4 Addition, Subtraction, Multiplication, Division, Increment, Decrement- Types of PLC analog modules- PLC analog applications with examples.

Unit : 5 Introduction to HMI – HMI real time applications for industry process evalution – SCADA architecture- MTU – RTU- Operator interface- creating interface Displays for Industrial applications.