



Course Syllabus

Course Title: Programmable Logic Controller (PLC)

Course Code: ATE 321

Course Delivery: 2-periods (Lab Work) + 2-periods (Class Activities)

Course Catalogue Description:

This course introduces the fundamentals of programmable logic controllers (PLCs) and their applications. It provides the knowledge and skills needed to understand hardware, basic methods of programming, and programming techniques. The course focuses on the major components of PLC hardware structure, the types of input/output devices and their functions, logical operators, ladder diagrams, and how they work together to solve control problems. Students perform real and simulated hands-on experiments which enhance their skills in using LOGO! BASIC PLC.

Course Objectives:

Upon the successful completion of this course the student should be able to:

- Gain an overview of control systems, PLC advantages and applications.
- Familiarize with the different PLC programming techniques.
- Familiarize with the LOGO! BASIC module and the EduTrainer parts.
- Write LOGO! PLC programs and build simple PLC control applications.

Course Modules:

Module Title	# of Weeks
Module-1: Introduction to PLC	2
Module-2: Programming with Function Blocks	3
Module-3: PLC Hardware & Terminology	3
Module-4: Programming with Ladder Logic	3
Module-5: Building PLC Control Applications	3
Module-6: Project	2