Course Name : *PLC Programming with HMI*

Course Duration : 40 Hrs.

Course Overview
- o **Intended audience**
  - This course is suited for Automation, Instrumentation and Mechatronics Engineers.

- o **Prerequisites**
  - *Education*: Diploma or B.E/B.Tech 2nd year completed in any one of following Streams.
    - Electrical, Electronics, Instrumentation, Mechanical, Mechatronics Engineering.
  - *Software*: There are no prerequisites for this class.

- o **Course objectives**
  - After successfully completing this course, you should be able to:
    - Understand Automation & System Overview, Engineering Software TIA Portal.
    - Understand Different Logic Gates, Timers,Counters, FC's, OB's, DB's and PLC Tags.
    - Write Ladder program for various applications
    - Communicate between PLC and HMI

- o **Course Contents**
  - Automation Overview
  - System Overview
  - STEP 7 Range of Products
  - Digital Fundamentals
  - Engineering Software TIA Portal
  - Hands on practice on TIA Portal
  - Devices & Networks
  - PLC Tags
  - Program Blocks and Program Editor
  - Binary & Digital Operations
  - Timers & Counters
  - Ladder program for various applications
  - Data Blocks, Functions and Function Blocks
  - Organization Blocks
  - Troubleshooting
  - Introduction to HMI
  - Communicate between PLC and HMI