

Course Name : *Mechatronics - Intermediate*
Course Duration : 40 Hrs.

Course overview

- **Intended audience**
 - This course is suited for engineers, manufacturing engineers, application programmers, Maintenance engineers, and system managers who need to manage and use Mechatronics.
- **Prerequisites**
 - Education: Diploma or Graduation pursuing/completed in any one of following Streams.
 - Aeronautical, Automobile, Industrial, Marine, Mechanical, Mechatronics, Electrical, Electronics, Production and Manufacturing Engineering.
 - Software: System TIA Portal/ S7 Programming/ S5 Programming/ Automation Studio.
- **Course objectives**
 - After successfully completing this course, you should be able to:
 - Understand about Mechatronics System.
 - Familiarizations to TIA portal, AMESIM software.
 - Familiarizations to the S7 1200 PLC.
 - Understanding of Modular production system with its different stations.
- **Course Contents**
 - Introduction to Modular automation systems.
 - Introduction to sensor and its types, motors.
 - Introduction to electro pneumatic actuator, compressor, FRL unit.
 - Introduction of control panel. I/O wiring of PLC S7-1200 and power SMPS supply, TIA portal Intro.
 - Input/output configuration of **Distribution station**.
 - Input/output configuration of **testing station**.
 - Input/output configuration of **processing station**.
 - Input/output configuration of **buffering station**.
 - Input/output configuration of **sorting station**.
 - Reading of Pneumatic diagram of complete station.
 - Reading of Electrical diagram of complete Station Creating STEP diagrams of complete Station.
 - Commanding, Controlling, Scheduling, Alarming, Monitoring, History Trends. Loop Control, Transmission Comparison.

