| Course Name | : | _Mechatronics - Basic_ |
| 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 anyone of following Streams.
        - Aeronautical, Automobile, Industrial, Marine, Mechanical, Mechatronics, Electrical, Electronics, Production and Manufacturing Engineering.
    - _Software:_ **None.**
- **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.
    - Development Of PLC ladder Programming and Implementation of real time system.
    - 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.
    - Case Studies & Trouble shooting of MAPS System.