Course Name : <u>**Robotic Basics**</u>

Course Duration : 40 Hrs.

Course overview

- **Course Description**

    o Robotics is a lab-based course that uses a hands-on approach to introduce the basic concepts of robotics, focusing on the construction, focuses on the design, development and application of robotics systems and automation technologies.

- **Basics Prerequisites**

    o *Education*: ITI, Diploma 3rd year or B.E & M/B.Tech 2nd year Students completed in-any one of the following Streams.

       ▪ Aeronautical, Automobile, Industrial, Marine, Mechanical, Mechatronics, Electrical, Metallurgy, Production and Manufacturing Engineering.

    o *Software: None*

Contents
- Introduction of Industrial Robots
- KUKA Robot History
- KUKA Robot Component
- Robot Safety
- Mechanical & Electrical Installation
- Application of Robotics
- Simpro Introduction
- Simpro Simulation & Test
- KUKA Smart-PAD teach pendant
- Robot Coordinate System
- Routines, Modules & Program Data
- Robot Jogging
- Robot Motion Types
- Safety function & Axis limit
- KUKA KRL Program Structure
- KUKA KRL Move Instructions
- Robot Tool & Base Data
- Robot Operation and Programming
- Robot Running in Production