



**CENTRE OF EXCELLENCE IN MANUFACTURING
NATIONAL INSTITUTE OF TECHNOLOGY,
TIRUCHIRAPPALLI**

Robotics Lab

Industrial Robot Programming

Duration: 40 Hours

PREREQUISITES

Nil

WHO SHOULD ATTEND

Students, Engineers, Robot operators

INTRODUCTION TO INDUSTRIAL ROBOTS

8 Hours

Introduction to Robotics - Fields of application for industrial robots - Overview of the components of a robot system - Industrial Robot (KUKA) - Robot controller (KRC) – KUKA Smart Pad.

PROGRAMMING OF INDUSTRIAL ROBOT

24 Hours

Robot Configurations and Co-ordinate systems - Robot Kinematics - Joint drive systems - Moving the robot (Types of motions) - Start up - Executing robot programs - Working with program files - Creating and modifying programmed motions - Using logic functions in the robot program - Orientation control - Motion Programming - Robot Mastering and Calibration.

MIG & SPOT WELDING APPLICATION

8 Hours

Introduction - Start up - Executing robot programs - Creating and modifying programmed motions for welding - Using logic functions in the welding robot program - Technology packages (Kemp Arc & Techno Weld).