



ROBOTICS & ADVANCED AUTOMATION

Eligibilty: B.E./ B.Tech. (Mechanical, Production, Electrical, EC, EEE, Automobile, Robotics & Automation, CS & IT, Mechatronics, IC or equivalent.) (Pursuing / Completed)(Year of passing: 2019-2026)



Modules:

1. Industrial Robotics

Introduction to Industrial Robot Simulations, Setting up Virtual Workcell, TCP & UserFrame/WorkObject Setup in Simulations, Various Hands-On Simulation Exercises, Introduction to Manipulator, Robot Controller & Teach Pendant, Jogging Exercises with Different Coordinate Systems, Hands-on Exercises of TCP Calibration, UserFrame/WorkObject, Robot Path Planning and Optimization with Motion Commands, Digital Input/Output programming and Control, Programming Loops and Conditional Statements, Electrical Architecture of Robot Controller, Manual and Automatic Operation Modes of Robot, Various Hands-On Exercises on Robotic Application, Robotic Welding Application with 2-Axis Positioner

2. PLC. SCADA & HMI

PLC programming, SCADA, HMI design, and sensors. Understand sensor principles, data acquisition, and real time monitoring. Proficiently troubleshoot and optimize industrial processes.

3. Collaborative Robots

Terminologies in Collaborative Robot, Risk Assessment for Cobot Installation, Importance of TCP, Payload, COG in Cobots, Offline Programming Simulator for Cobots, Robot Programming Basics, Robot Controller Architecture and Interface, Script Programming for Cobots, Hands-On Industrial Live Applications, Cobot Selection Guide for Beginners, Robotic Module Test and Practical Assessment

4. Mobile Robots

Introduction to Mobile Robots, Importance of AMR in Industries, Risk Assessment for AMR Installation, Payload Distribution and Stability in AMR, Mapping, Missions, Markers in AMR

Human skills

Interactive workshops, role-playing, and real-world simulations, fostering empathy, communication, adaptability, and leadership for holistic skill development

6. Industry Visits

Industry problems and solutions, addressing production, maintenance, and product development challenges to enhance efficiency and innovation within industrial settings





Admission Confirmation Fee: ₹ 5,000

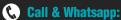
COURSE FEES ₹23,000

DURATION

12 WEEKS



Email: admissions@tataiis.org



Sachin Sawant - 76660 31618 Milind Joshi - 99090 24218 Savali Kakade - 81809 10612 Radhe Chouhan - 75979 53987



PLACEMENT ASSISTANCE AVAILABLE

SKILL LOAN In partnership with:
SBI