

ROBOTICS & ADVANCED AUTOMATION

Eligibility: Graduates and final year students from B.E./B.Tech (all streams) **Year of graduation:** 2019 - 2026

MODULES

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



**BUILD A CAREER IN
ROBOTICS & AUTOMATION
FOR SMART FACTORIES
IN JUST 8 WEEKS**

Admission Confirmation Fee: ₹ 5,000

COURSE FEES

₹ 23,000

DURATION

12 WEEKS

TATA IIS

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✉ **Email:** admissions@tataiis.org



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