M.Tech. in Robotics and Artificial Intelligence

The M.Tech. in Robotics and Artificial Intelligence (AI) is an interdisciplinary program tailored to equip students with the comprehensive skills required to thrive in a rapidly advancing technological landscape. This program is uniquely structured by integrating the core principles of Mechanical Engineering, Computer Science and Engineering, Electronics and Communication Engineering. The students will explore the convergence of Robotics and AI technologies, gaining in-depth exposure to intelligent automation, smart sensing, and machine cognition etc. Through a blend of classroom-lab based learning, industry exposure, and research-focused projects, this program empowers graduates to innovate and lead in diverse sectors such as manufacturing, aerospace, healthcare, defense, and more. This M.Tech. program empowers students to contribute to the transformative technological advancements in Robotics and Artificial Intelligence and supports India's vision to be a global leader in automation and AI-driven industries.

Eligibility:
B.Tech./B.E. in Mechanical Engg., Mechanical Engg. (Robotics), CSE, CSE (AI&ML), ECE & EEE

Expected Outcomes:
The students will be able to gain knowledge and expertise in the following:
- Robot motion planning and control aspects
- Application of AI & ML techniques in robotics
- Knowledge of embedded systems, microcontrollers, and intelligent sensors
- Smart materials, modeling and simulation, and intelligent manufacturing
- Natural Language Processing and Machine Vision
- Deep Learning, Gen AI, and Reinforcement Learning for robotic systems

Program Highlights:
- Industry-aligned curriculum with extensive lab sessions
- Hands-on training through AI-ML Lab, RIoT Lab, and Robot Programming Lab etc.
- Emphasis on research, innovation, and dissertation work
- Focus on industrial training and real-world applications

Career Opportunities:
- Robotics Engineer
- AI/ML Engineer
- Research Scientist in Robotics and AI
- Automation and Control Engineer
- Industrial AI Consultant
- Academic and R&D roles in top institutes and companies

Industries/Applications:

- Robotics & Automation
- Aerospace and Defense
- Smart Manufacturing (Industry 4.0)
- Automotive and Autonomous Vehicles
- Healthcare & Assistive Robotics
- Logistics & Smart Warehousing

Some of the Facilities Available:

Industrial Robot Cell
(Mitsubishi 6-axis Articulated Arm)

Industrial Robot Cell
(Mitsubishi 4-axis, SCARA)
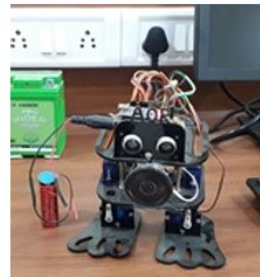

3D Printing DELTA
(Parallel Robot)

2-Axis Milling Machine
(Parallel Kinematic Machine)

3-Axis Milling Machine
(Parallel Kinematic Machine)

Wheeled Robo Servant

2-Legged Walking Robot