B.Tech
in
Robotics & Artificial Intelligence

ROBOT

DESIGN Your Own
Degree & Career
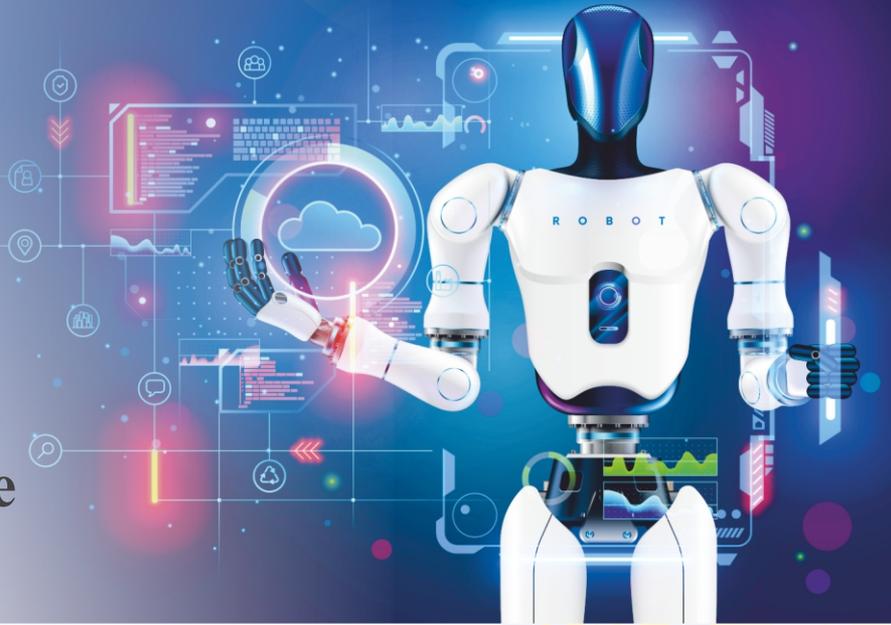
- Mechatronics Department is a synergy of expertise in mechanical, electrical, computer, and mechatronics to prepare industry-ready .
- B. Tech in Robotics & AI is an interdisciplinary program that involves integrated understanding and learning of engineering domains viz. Mechanical, Electrical, Electronics & Computing.
- The courses of Robotics & AI are designed to adapt the futuristics trends and industry demands.
- Robotics & AI domain finds applications in Robotics Systems, Industrial Automation, Cybernetics, UAV, Smart Systems, Medical Robotics, Autonomous Vehicle, Space Research and many more.
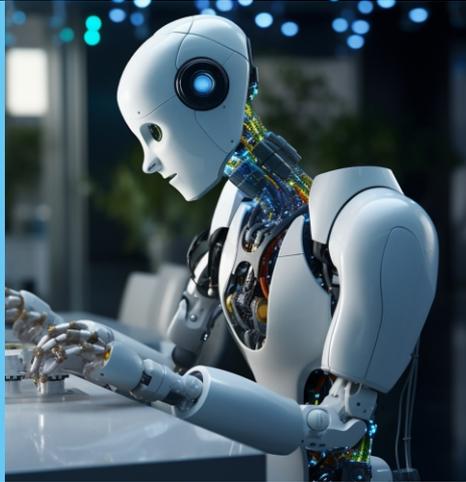
Specialization

- Industry 4.0
- Cyber Physical Systems
- Robotics in healthcare & defense
- UAV & Drone Technology
- Cyber physical systems
- IoT Systems and surveillance

Program Offered

B. Tech.
Robotics & Artificial Intelligence

Salient Feature of the Department

14 Teaching Staff	200+ Abroad Higher Studies	350+ Research Publications
650+ Alumni	2 International & National MoU	3 Student Club /Chapter

10+ Start-ups

Key Highlights of the Program

- Interdisciplinary curriculum
- Project based learning
- Industry grade laboratories- IOT Fab Lab, 3D Printing Farm Lab, Robotics Lab, Industrial Automation Lab, PLC Lab, Microcontroller Lab
- Student clubs and Technical chapters
- Opportunities for incubation and start-ups
- Financial support to participate in conferences/ workshops
- Incentives for paper publications
- Students exchange program with leading international universities
- Strong Alumni base

Prominent Recruiters

Unique Research Facilities

- UR 5-6 axis manipulator arm
- JANATICS-based electro-pneumatic system
- Bosch Rexroth-based Electro-Hydraulic System
- Bosch Rexroth based industrial sensor kit
- SIEMENS PLCs and VFD
- PLC-based trainer systems such as Lift control, Bottle filling, traffic light control etc.
- SMC-based vertical revolving handling system with internal gripper
- PIC Microcontroller and ARM Devlopment Board
- Raspberry Pi, Jetson nano and its interfacing modules
- National Instruments DAQ system (my RIO, ELVIS II+ etc.)
- Quanser based systems such as Qube-Servo and Myoelectric Board etc.
- MATLAB based 3-axis robotic trainer kit
- Interbotix Turtlebot 2i Mobile ROS Platform
- Khepera mobile robot
- Hexacopter Robot (Drones)
- Intel Real sense camera
- OCULUS RIFT, QUEST, HCT VIVE, HOLOLENS

National and International Collaborations

- University of Malaya, Malaysia
- Hochschule Bremen City University of Applied Sciences, Germany
- ETMN Technology Pvt. Ltd.

Students Club & Chapter
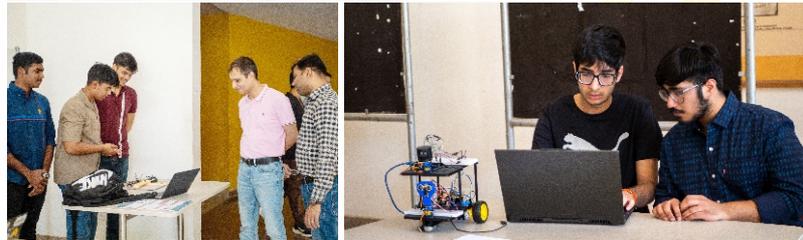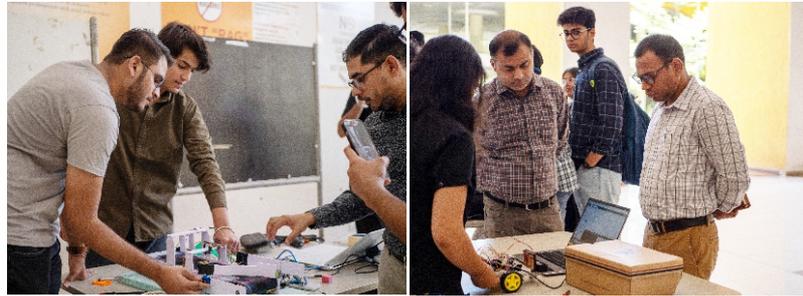
Career Opportunities/Fields in various sector

- Industry 4.0
- AI enabled designing
- IoT Systems
- Human Robot Interaction Specialist
- AI Ethicist
- Robotic Engineer
- Autonomous System Developers

The MUJ EDGE

- NAAC A+, AICTE, and UGC Accredited Institution
- Enhances Interdisciplinary Research
- Highly Qualified Faculties
- State-in-Art Laboratories
- Mentor - Mentee scheme
- Incentive policy for research publication
- Excellent Infrastructure
- Scholarship for Students
- Student Travel Grant for International Internships
- Industry and International Collaborations

Eligibility

The candidate must have passed 10+2 or A Level or IB or American 12th grade or equivalent examination with Physics, Mathematics and English as Compulsory subjects, along with any one of Chemistry or Computer Science or Biotechnology or Biology or Statistics or Engineering Drawing as optional subject for admission to B Tech, with minimum of 60% marks in Physics, Mathematics, and the optional subject, put together.

Scholarships

- TMA Pai Engineering Scholarships
- Scholarships for Lateral Entry (B. Tech.)
- TMA Pai Merit Scholarships
- Rajasthan Merit Scholarships
- Financial Assistance for Sibling(s)
- Scholarship for "Differently- abled" Students
- Scholarships for wards of Martyrs of Defence Personnel / Para Military Forces
- Scholarships for the wards of Single Mother & Orphan Child

MANIPAL UNIVERSITY JAIPUR

Research Contribution

- Science & Engineering research board funded project, (SERB) Govt. of India
- Research papers in reputed international journal (SCI, SCOPUS) and International/ National Conferences
- Regular Patent filing grant
- Consultancy projects
- Research projects funded by govt. organization
- Books/Book Chapter- published in WoS/Scopus/Springer
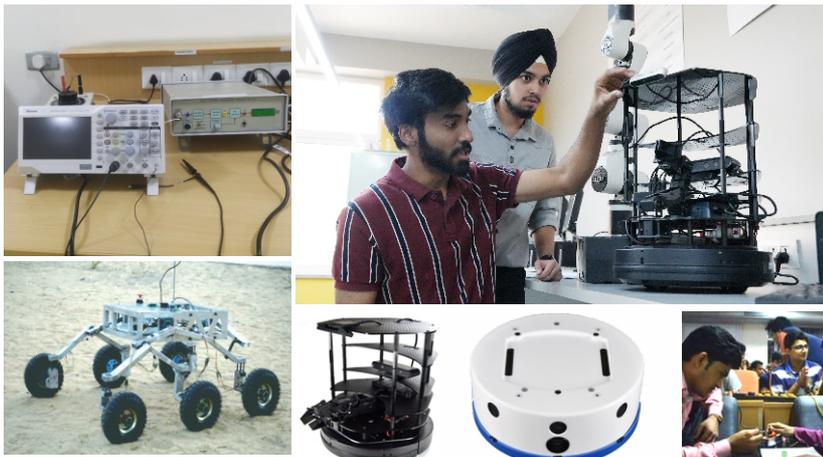
Students Abroad for Higher Studies

Major Universities associated with Alumni

Proposed Courses (2026-27)

Core Courses

MAS1001   Calculus & Matrices
ECE1002   Electronic Circuits
MEE1008   Basic Mechanical Engineering
CSCXXXX   Problem-Solving Using Computers
DOA1001   Universal Human Values
MAS1002   Computational Mathematics
CHY1002   Environmental Studies
EEE1001   Electrical Technology
CIV1002   Engineering Material and Mechanics
MBBXXX/ MEEXXXX Principles of Management/ Engineering Economics
RAI2101 Embedded Controllers
RAI2102   Basics of AI and ML
RAI2103   Strength of Materials
RAI2104 Manufacturing Technology
RAI2105   Robot Kinematics and Dynamics
MASXXXX Statistics & Probability
MBBXXX/ MEEXXXX Principles of Management/ Engineering Economics
RAI2203   Sensors and Actuators
RAI3102   Deep Learning
RAI3103   Design of Machine Elements
RAI3104   Modern Control Theory
RAI3105   Mobile Robots
RAI3201   Drives and Automation
RAI3202   Reinforcement Learning in Robotics

Program Electives

RAI2240: Digital System design
RAI2241: Robot Gripper Design
RAI3140: Signals and Systems
RAI3142: Smart Materials
RAI3150: Cyber Physical System
RAI3151: Digital Signal Processing
RAI3242: Pneumatics and Hydraulics for Robots
RAI3244: Collaborative Robots
RAI3253: Ethics and Social implications in AI
RAI3254: Intelligent Systems
RAI3263: Production and Operations Management
RAI3264: Machine vision
RAI4143: Internet of Robotic things
RAI4142: Robot Process Automation
RAI4154: Industrial IOT
RAI4155: AI in Industrial applications

Open Electives Courses

RAI0001: Fundamental of Robotics
RAI0002: Automation in Industry
RAI0003: Building Automation
RAI0004: Sensor Technologies
RAI0005: Smart Agriculture
RAI0006: Manufacturing Process
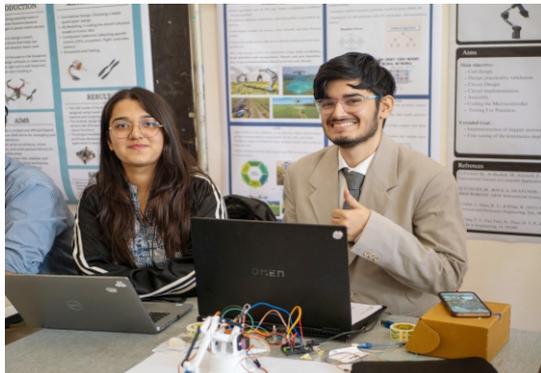
MANIPAL UNIVERSITY JAIPUR

Admission Process

Application form initiated through our website
admissions.jaipur.manipal.edu

Applicants must submit a completed application
form with relevant documents within the due date.

Our counsellors will guide candidates through the
admission process, which is as per regulatory requirements.

FAQ

Please visit the FAQ section on our website to
know more about the admission process.

More about the Department
Scan the QR Code

Follow us on

Department Social Media Connect

Hostel Details

goodhostspaces.com **08069122800**
info.jaipur@goodhostspaces.com

Counsellor Contact Details

8690987137

MANIPAL UNIVERSITY JAIPUR
(University Under Section 2(f) of the UGC Act)

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