

MoU



Department of Robotics and Automation has signed a MoU with Exor Robotics Pvt Ltd on 07.01.2022

Industrial Visit



Department of Robotics and Automation Students has visited Pondicherry CO-OP Spinning Mills Ltd on 03.12.2021



Electrical Machines and Drives Lab



PLC and Automation Lab



Robotics Lab



Automation System Design Lab



SPIDER BOT



4 DOF ROBOTIC ARM WITH CONTROLLER



SENSOR GUIDED ROBOT



BIPED ROBOT



SELF-BALANCING ROBOT

With Regards

Robotics and other Combinations will make the world pretty, fantastic compared with today.

- Bill Gates

Contact Details for Admission

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MANAKULA VINAYAGAR
INSTITUTE OF TECHNOLOGY



Approved by the AICTE, New Delhi and Affiliated to Pondicherry University,
Accredited by NBA, New Delhi.

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DEPARTMENT OF ROBOTICS AND AUTOMATION

About the Department

The Department of Robotics and Automation was established in 2020 under aegis of Pondicherry University and has a fine blend of young and dynamic faculty members who are experts in the major areas of Electrical Drives and Control, Instrumentation and Control, Mechatronics, Robotics and Automation. The Department is currently offering 4-years B.Tech. Robotics and Automation and it is a multi-disciplinary program, involving electrical, electronics, mechanical, computer science and AI techniques. It is one of the emerging multi-disciplinary areas transforming conventional practices in industries to digitalization which plays a crucial role in the INDUSTRY 4.0. Apart from the curriculum delivery, the department is engaging the students in many other activities such as industrial training, academic and industry-collaborated research, industry projects, organizing workshops, seminars and conferences etc., We strive hard for all round excellence by focusing on development of the students, and making them to excel in Co-curricular, Extracurricular activities and Placements.

Programme Offered : B.Tech. Robotics and Automation (4 Years)

Vision

To be a centre of excellence in the field of Robotics and Automation by providing excellent education, training, research and inculcating human values to cater the needs of the industries and society.

Mission

- Higher Order Thinking: To equip the students with higher order thinking and technical skills in Robotics and Automation through effective teaching learning methodologies.
- Competency: To educate and train the students with state of art technologies, industry institute interaction and promote research in the field of Robotics and Automation.
- Continuous learning: To provide an ambience that facilitate self learning, collaborative learning and acquire multidisciplinary knowledge.
- Entrepreneurship: To encourage the students by nurturing creativity and innovation to launch start-ups and promote entrepreneurship.

Eligibility Criteria

Regular: A pass in the Higher Secondary Examination (10+2) in aggregate of subjects – Mathematics, Physics and any one of the following optional subjects: Chemistry / Computer Science.

Lateral Entry : The following Diploma courses eligible for admission in B.Tech Lateral Entry: Diploma in Electrical and Electronics Engineering, Diploma in Electronics and Communication Engineering, Diploma in Electronics and Instrumentation Engineering, Diploma in Computer Science and Engineering, Diploma in Information Technology, Diploma in Instrumentation and Control Engineering, Diploma in Mechanical Engineering, Diploma in Automobile Engineering, Diploma in Refrigeration and Air-conditioning, Diploma in Production Engineering and Diploma in Robotics.

Key Facilities

- RPA, SCADA, HMI, and LabVIEW Software Packages
- NI DAQ Data Acquisition Systems (Analog, Digital and various Signals)
- Delta PLC with Industrial PC for Robotic system
- MITSUBISHI PLC Control Panel with Automation system
- Siemens PLC Control Unit with HMI system
- ABB- PLC with open and closed loop pneumatic system
- Automatic Conveyor Belt system using PLC
- NI Mobile Robots
- FESTO Closed Loop Pneumatic System

Unique Strengths of the Department

- Industry Training courses on PLC, SCADA, HMI and FESTO.
- Experts from Industries delivering Guest lectures, workshops, seminars and conferences
- Industry visits to reputed automation Industries
- Placement through industry internships
- MoUs with Robotics and Automation Industries and Academic Institutions
- International Certificate courses on Robotics, RPA and Solid Works

Thrust Areas of Expertise

- Robotics
- Industrial Automation
- Manufacturing Systems
- Pneumatics
- AI and Machine Vision System

Laboratories

Academic Labs

- Electrical Drives and Control Lab Laboratory
- Electronic Devices and Circuits Laboratory
- Analog and Digital Electronics Lab
- Micro controller and Embedded System Design Laboratory

Research Project Labs

- Robotics Lab
- PLC and Automation Lab
- Automation System Design Lab
- Industry Support Lab

Interdisciplinary Areas in Robotics

Mechanical Engineering

- Kinematics: Motion of robot arm without considering the forces and/or moments
- Dynamics: Study of the forces and/or moments
- Sensing: Collecting information of the environment

Computer Science and Engineering

- Motion Planning: Refers to the computational process of moving robots from one place to another in the presence of obstacles
- Artificial Intelligence: Design and develop suitable brain for the robots

Electrical and Electronics Engineering

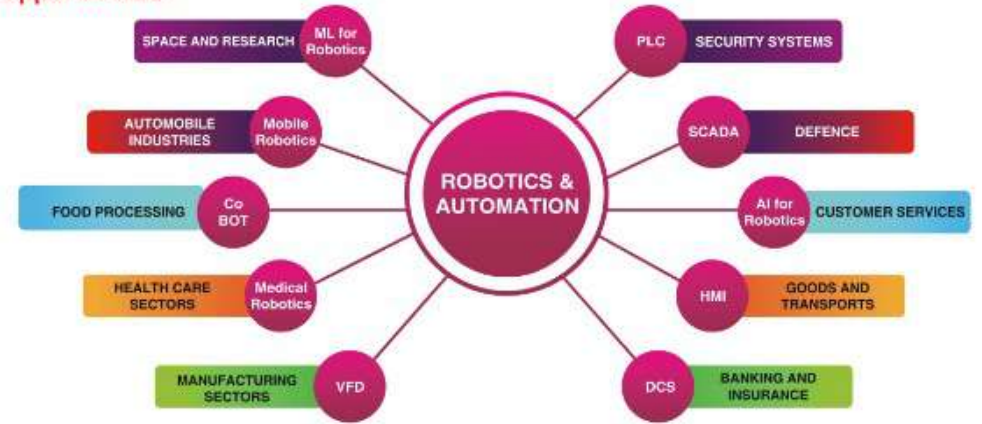
- Control schemes and hardware implementations

General Sciences

- Physics
- Mathematics



Opportunities:



Placement Opportunities:

There are ample opportunities in this field for Robotics and Automation Engineers both in India as well as abroad. A Robotics and Automation engineer can be employed in manufacturing plants, laboratories, medical fields, mining, automation sector, life sciences, aerospace engineering, agricultural engineering, gaming industry etc., They can get placed in different jobs profiles as Robotics Test, Design, System Engineer, Senior Robotic Specialist, Robotics Technicians, Robotics Programmer, Aerospace Robotic Engineer, Quality Assurance Technician etc., Highly profiled Robotics and Automation graduates can be placed with a salary package of 12-15 Lakhs per Annum. The average median placement package for Robotics Engineers is in the range of 5-7 Lakhs per Annum.

Top Recruiters

