



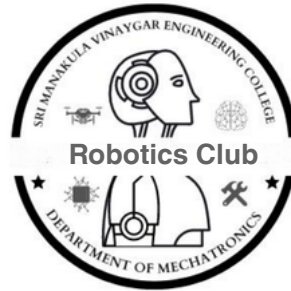
SRI MANAKULA VINAYAGAR  
ENGINEERING COLLEGE  
(AN AUTONOMOUS INSTITUTION)



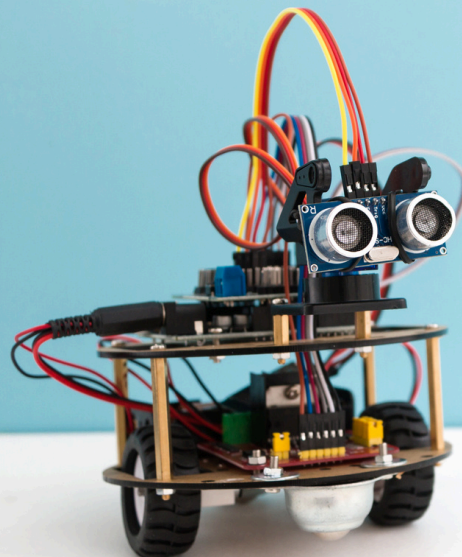
DEPARTMENT OF MECHATRONICS

## ROBO TecX CLUB ANNUAL REPORT

(Academic Year: 2022 to 2023)



Submitted by  
Mr. S. Prakash  
Assistant Professor  
Faculty Coordinator



## Preface

The Robo TecX Club of the Department of Mechatronics Engineering, Sri Manakula Vinayagar Engineering College, serves as a dynamic platform to nurture innovation, technical competence, and collaborative learning among students. The club is established with the objective of bridging the gap between theoretical knowledge and practical implementation in the domains of robotics, automation, embedded systems, and intelligent technologies. The club actively encourages students to explore emerging trends in robotics and automation through hands-on workshops, technical training programs, expert lectures, project development, competitions, and interdisciplinary activities. By fostering creativity, problem-solving skills, and teamwork, the club aims to prepare students to meet the challenges of modern engineering and industrial automation. The effective functioning of the club is supported by a dedicated team of office bearers, including the President, Vice President, Treasurer, and Technical Head, who work collectively with enthusiastic club members to plan, organize, and execute various technical and co-curricular activities. Their leadership and commitment play a crucial role in ensuring the successful achievement of the club's objectives. Through continuous learning, innovation, and industry-oriented initiatives, the Robo TecX Club strives to develop technically sound, socially responsible, and professionally competent engineers. The club remains committed to contributing to the overall academic excellence and technological advancement of the institution.



Faculty Coordinator  
Mr. S. Prakash



HoD/ MCTR  
Dr. G.B.M. Mohan Raj



IQAC Coordinator  
Dr. Arivalagar A A



Director Cum Principal  
Dr.V.S.K. Venkatachalapathy

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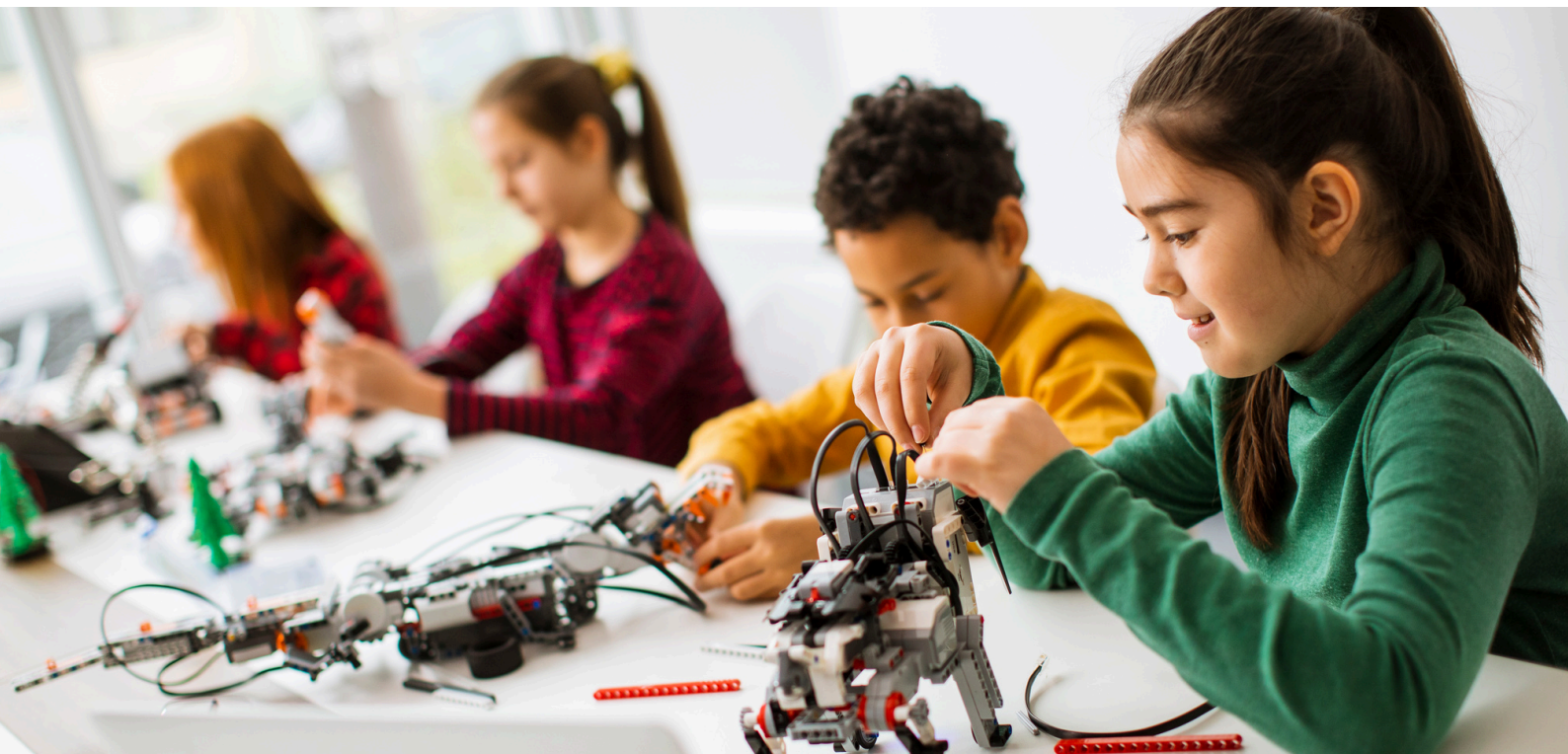
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## ABOUT THE INSTITUTE

Sri Manakula Vinayaga Educational Trust was founded to provide quality and affordable education to the weaker sections of society. The trust established Sri Manakula Vinayagar Engineering College (SMVEC) in 1999. SMVEC is an autonomous institution affiliated to Pondicherry University. It offers 13 undergraduate, 8 postgraduate and 11 Research programs in engineering. SMVEC has been accredited by NAAC with “A” grade and NBA. The institution is also accredited by TATA consultancy services. The college has a good placement record with students getting job offers from top companies in India and abroad. SMVEC students have won many awards and accolades for their academic achievements. To be globally recognized for excellence in quality education, innovation and research for the transformation of lives to serve the society.

### Vision

- To nurture the cornerstone of excellence in engineering education and drive innovation by seamlessly integrating the fundamentals of Science and Humanities

### Mission

**M1: Quality Education :** To provide comprehensive academic system that amalgamates the cutting edge technologies with best practices.

**M2: Research and Innovation :** To foster value-based research and innovation in collaboration with industries and institutions globally for creating intellectuals with new avenues.

**M3: Employability and Entrepreneurship :** To inculcate the employability and entrepreneurial skills through value and skill based training.

**M4: Ethical Values :** To instill deep sense of human values by blending societal righteousness with academic professionalism for the growth of society.



## ABOUT THE DEPARTMENT

The Department of Mechatronics Engineering is a top-notch department that offers high-quality UG, PG and PhD programs. The UG program B.Tech - Mechatronics Engineering is accredited by the National Accreditation Board, AICTE-New Delhi, and has a placement record of over 80%. The department's graduates are highly sought-after by employers in the Mechatronics sector.

Our department contributes significantly to achieving the national objective of envisioning the world with a clear and deep commitment and a sincere desire to meet the expectations of a rising, fast-developing technology.

### Vision

To be a department with outstanding competencies in education and research in interdisciplinary field of Mechatronics Engineering for the prosperity of students and society.

### Mission

- **Quality Integration:** To uphold excellence in education by integrating the teaching learning process with hands on trainings in updated technologies.
- **Research Exploration:** To maintain a dynamic balance between learning and research by encompassing activities related to Research, Industrial projects and Innovation Contests.
- **Personality Development:** To enrich the team spirit and entrepreneurship skills through training programmes on personality development for career prospects.
- **Social Ethics:** To enhance the principle of highest ethical values by inculcating code of conduct for the betterment of the Society.

### Programmes offered

- B.Tech - Mechatronics Engineering
- M.Tech - Mechatronics Engineering
- M.Tech - VLSI & Embedded Systems
- Ph.D - Mechatronics Engineering



*"Shaping a smarter world through circuits, signals, and systems."*

## ABOUT ROBOTICS AND AUTOMATION CLUB

The Robo TecX Club from the department of Mechatronics is dedicated to exploring cutting-edge advancements in robotics, AI, and automation, with the overarching theme of "Empowering and Innovating the future with the intersection of Robotics and AI." Our club provides a platform for students to apply theoretical knowledge in practical, hands-on projects that encourage critical thinking, teamwork, and problem-solving. From designing autonomous robots to implementing intelligent control systems, club activities span a broad range of real-world applications. Through workshops, competitions, and collaboration with industry experts, the club cultivates technical skills and inspires creativity, preparing students to become leaders in the rapidly advancing fields of robotics and automation.

### Objectives of Robo TecX Club

The primary goal of robotics club are as follows:

- To foster hands-on skills in designing, building, and programming robots, enabling students to bridge the gap between theoretical concepts and practical applications.
- To encourage innovative thinking and creative problem-solving by challenging students to develop unique robotic and automation solutions.
- To keep members updated on the latest advancements in robotics and automation technologies through workshops, webinars, and expert talks.
- To prepare students for national and international robotics competitions by providing resources, guidance, and a platform for experimentation.
- To inspire research in emerging areas of robotics and automation, such as AI, machine learning, IoT, and human-robot interaction.
- To promote teamwork and collaboration among students from various disciplines for solving complex engineering problems.



**"Commanding circuits. Controlling motion. Creating change."**

## **I OFFICE BEARERS**

The Robotics Club is led by a dedicated team of office bearers who play a vital role in driving the club's activities and fostering a culture of innovation. The team typically includes a President, Vice President, Secretary, Treasurer, and Technical Leads, each bringing unique skills and responsibilities to the table. These office bearers coordinate workshops, manage resources, mentor junior members, and oversee project development. Their leadership ensures smooth operation of the club while encouraging creativity, collaboration, and hands-on learning in the field of robotics. Through their efforts, the club continues to be a hub of technical excellence and a launchpad for future innovators.



**Mr. S. Prakash** Assistant  
Professor Faculty  
Coordinator



**Maria Jeffrey. S**  
President  
III



**Arun Prakash. NA**  
Vice President  
III



**Mathews Talma. A**  
Secretary  
III

**LIST OF EVENTS**

<b>S. No</b>	<b>Title of the Events</b>
01	INTRODUCTION TO ROBOTICS & PROJECT MAKING
02	PROJECT DEMONSTRATION AND PRESENTATION

## INTRODUCTION TO ROBOTICS

The Robo TecX Club organized an Seminar titled “Introduction to Robotics & Project Making ” on virtual mode at the Department of Mechatronics.

Introduction to Robotics helps students understand what robots are, how they work, and how they are used in real life. In this topic, students learn about the basic parts of a robot such as sensors, controllers, and actuators, along with simple programming concepts. The course encourages curiosity, logical thinking, and creativity by allowing students to explore how technology can solve everyday problems. It builds a strong foundation for future learning in science, engineering, and technology. Project Making gives students hands-on experience by applying what they have learned to create a working model or solution. Students plan, design, build, and present projects individually or in teams. This topic promotes creativity, teamwork, and practical learning, helping students connect theoretical knowledge with real-world applications.

- Total Number of Participants : 69
- Year of students: I, II, III and IV
- Venue : Department of Mechatronics
- Date : 15/11/2022
- Event Coordinator: Mr. S. Prakash
- Mode of seminar: Offline

### Objective of the Seminar

- The primary objective of this event is to highlight the significance of robotics in industrial automation and to share a glimpse of job opportunities in the field of robotics with the students.
- To enhance the technical knowledge of students about robotics in electronics.
- To create interest among the students towards industry automation.
- To make the students interact with the resource person for knowledge transfer.

### Outcome of the Seminar

- To enhance the technical knowledge of students about robotics in electronics.
- To create interest among the students towards industry automation.
- To make the students interact with the resource person for knowledge transfer.

## CIRCULAR



SRI MANAKULA VINAYAGAR  
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## DEPARTMENT OF MECHATRONICS

SMVEC/MCTR/GL/2024-25/14

Date: 14.11.2022

**CIRCULAR**

(For Students)

We would like to inform you that the **Robo TecX Club**, Department of Mechatronics Engineering, has organized a technical event titled “**INTRODUCTION TO ROBOTICS**” for department students. The objective of this program is to enhance students’ practical knowledge by providing hands-on exposure to project development, working mechanisms, and real-time applications. The session will include live project demonstrations and detailed explanations by club members

**PROGRAMME COORDINATOR**

(Mr. S. Prakash)

**HOD/MCTR**

(Dr. G.B.M. Mohan Raj)

PHOTO GALLERY



## PROJECT DEMONSTRATION AND PRESENTATION

Project Demonstration allows students to practically showcase the working of their project by explaining how it functions in real time. During the demonstration, students display the model or system they have built, describe its components, and show how it solves a specific problem. This activity helps students gain hands-on experience, improve technical understanding, and build confidence by explaining their work to others. Presentation helps students clearly communicate their project ideas, objectives, design, and outcomes using structured explanations, charts, or slides. Students explain the purpose of their project, the process followed, challenges faced, and results achieved. This activity enhances communication skills, logical thinking, and the ability to present technical information in an organized and confident manner.

- Total Number of Participants : 70
- Year of students: I, II, III, & IV
- Date: 20/12/2022
- Venue : Department of Mechatronics
- Event Coordinator: Mr. S. Prakash
- Mode of activity: Offline

### Objective of the Activity

- To inculcate interest among the freshers to involve themselves in the field of robotics
- To enhance the technical knowledge of students about robotics in electronics.
- To create interest among the students towards industry automation.
- To make the students interact with the resource person for knowledge transfer.

### Overview of the Activity

Project Demonstration and Explanation is a technical learning activity designed to help students understand the practical application of theoretical concepts. In this session, students present their projects and explain their design, working principles, components used, and real-time applications. It provides an opportunity to showcase creativity, technical skills, and problem-solving abilities.

### Outcome of the Event

- Students gained practical knowledge of robotics concepts through direct interaction with the Project Making
- Participants successfully assembled and operated the bot, improving their technical confidence and skills.
- The session sparked curiosity and enthusiasm among Department students toward robotics and automation.
- The activity encouraged teamwork and peer learning, fostering a collaborative learning environment within the club.

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## DEPARTMENT OF MECHATRONICS

SMVEC/MCTR/GL/2024-25/14

Date: 19.12.2022

**CIRCULAR**

(For Students)

We would like to inform you that the **Robo TecX Club**, Department of Mechatronics Engineering, has organized a technical event titled **“Project Demonstration and Explanation”** for department students. The objective of this program is to enhance students' practical knowledge by providing hands-on exposure to project development, working mechanisms, and real-time applications. The session will include live project demonstrations and detailed explanations by club members. All students are hereby instructed to actively participate in the event and make effective use of this learning opportunity.

**PROGRAMME COORDINATOR**

(Mr. S. Prakash)

**HOD/MCTR**

(Dr. G.B.M. Mohan Raj)

PHOTO GALLERY



