SRI MANAKULA VINAYAGAR
ENGINEERING COLLEGE
(AN AUTONOMOUS INSTITUTION)

DEPARTMENT OF
ELECTRICAL AND ELECTRONICS ENGINEERING

# EMBEDDED CLUB

(Academic Year: 2023 to 2024)

Submitted by
Mr.G.Rajavel
Assistant Professor
Faculty Coordinator

# Preface

The Embedded Club of the Department of Electrical and Electronics Engineering at Sri Manakula Vinayagar Engineering College functions as a vibrant technical forum established to cultivate innovation, design thinking, and application-oriented competence among students. The club provides a structured academic platform where theoretical foundations are strengthened through systematic technical engagement, collaborative learning, and experiential exposure. Guided by faculty coordinators and actively managed by student office bearers, the club promotes an integrated approach to understanding modern electronic systems from a holistic perspective, emphasizing conceptual clarity, logical reasoning, and structured problem-solving methodologies. It regularly organizes technical discussions, knowledge-sharing sessions, design-oriented activities, interactive workshops, simulation-based explorations, and innovation-driven mini projects to enhance practical insight and analytical capability. The club also encourages interdisciplinary collaboration, teamwork, leadership development, and professional ethics, enabling students to adapt to rapidly evolving technological environments. By fostering creativity, critical thinking, and real-time application perspectives, the Embedded Club plays a significant role in equipping students with industry-relevant competencies, strengthening their technical confidence, and preparing them to become future-ready engineers capable of addressing complex engineering challenges with precision, responsibility, and innovation.

**Mr. G. Rajavel**
Program Coordinators

HoD/ EEE
(Dr.P.Jamuna)

Dr. AA. Arivalagar
IQAC coordinator

Dean Academics
(Dr.S.Anbumalar)

Director cum Principal
(Dr.V.S.K.Venkatachalapathy)

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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 DEPARTMENT

### Vision

To promote proficiency in the field of Electrical and Electronics Engineering by creating a stimulating environment for research, innovation and entrepreneurship

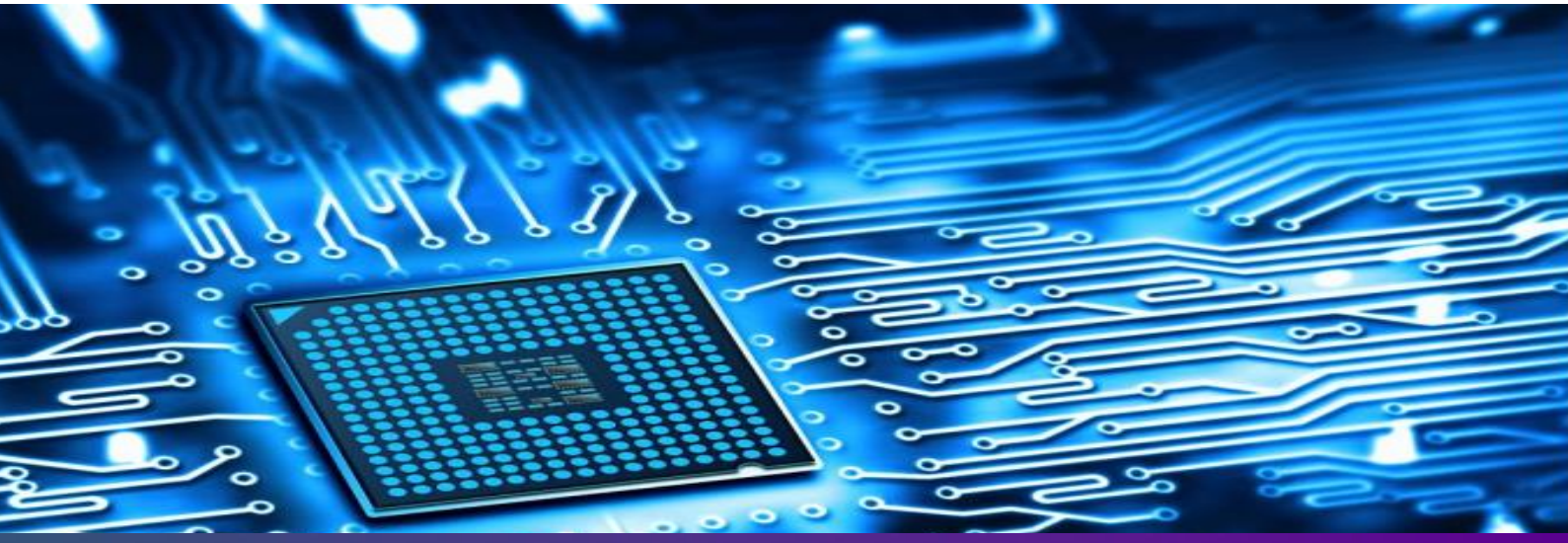
### Mission

**M1: Quality Education:** To impart high quality technical education with problem solving capabilities by innovative pedagogy in emerging technologies.

**M2: Industrial and Societal Needs:** To cater the dynamic needs of the industry and society by strengthening industry-institute interaction.

**M3: Research and Innovation:** To nurture the spirit of research attitude by carrying out innovative technologies pragmatically.

**M4: Placement and Entrepreneurship:** To inculcate the professionalism in career by advancing synergetic skills to compete in the corporate world.



*"Transforming energy into ideas, and ideas into impact."*

## ABOUT EMBEDDED CLUB

Embedded systems are referred to as control systems tailored for specific applications. Embedded systems are used in many different fields such as automotive, robotics, IoT, AI, ML, biomedical equipment, and instrumentation etc. Looking at its diversity of applications and potential for production of highly innovative products, embedded system can be considered as the primary technology of the present and future.

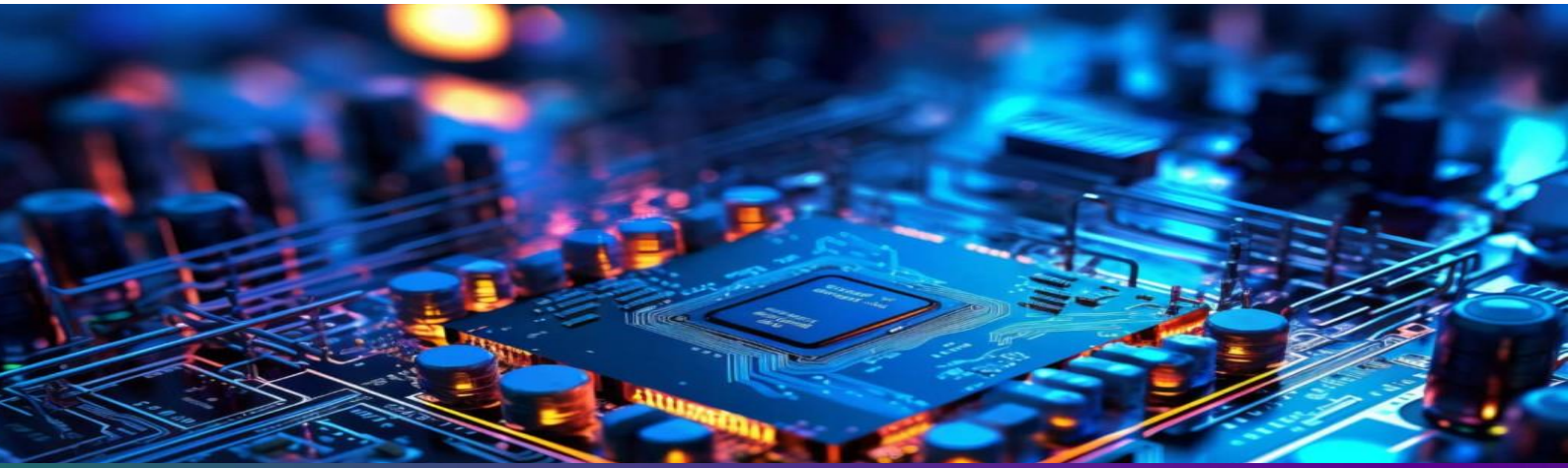
The function of the club is to deal from basics of electronics. This club aims to uncover those key topics that are not part of the curriculum. The club helps the students by integrating their skills in the various fields of engineering and technology to cope up with the highly competitive environment

### Objectives of Engineering Clinic

- To make the students aware of the upcoming embedded system technologies.
- To understand hardware and software design requirements of embedded system.
- To analyze the embedded system specifications and develop software program.
- To create a platform for sharing innovative ideas and to develop mini projects.
- To make students to design real time applications.

### Functions

- Organising Lecture session on embedded systems.
- Conducting frequent weekend contest.
- Weekly Hands-on training sessions.
- Designing of interfacing circuits.
- Conducting Hackathon for the benefit of students.



"Where circuits connect and innovation flows."

## Office Bearers and portfolios

| S.No | Name | Position |
|---|---|---|
| 1. | Mr.G.Rajavel<br>Assistant professor/EEE | Staff Coordinator |
| 2. | Mr. R. Vignesh<br>Assistant professor/EEE | |
| 3. | Mr. C. ADREIN PERIYANAYAGAM<br>Assistant Professor / EEE | |
| 4. | Mr. P. Mohan Raj | President |
| 5. | Mr. K. Jothikrishnan | Vice president |
| 6. | Mr.Srisanthosh B | Secretary |
| 7. | Mr. E.K Abdullah | Joint Secretary |
| 8. | Mr. Tom Tijo Edattukaran | |
| 9. | Ms. M. Savitha | Executive Members |
| 10. | Mr. Mohanlal | |
| 11. | Ms. M.Swetha | Technical Members |
| 12. | Mr. Jeeva sudhan | |
| 13. | Ms. Susangati Samantaray | |

Mr.G.Rajavel
Assistant professor/EEE
Staff Coordinator

Mr. P. Mohan Raj
President

Mr. K. Jothikrishnan
Vice president

Mr.Srisanthosh B
Secretary

Mr. E.K Abdullah
Joint Secretary

Ms. M. Savitha
Executive
Members

## List of student members

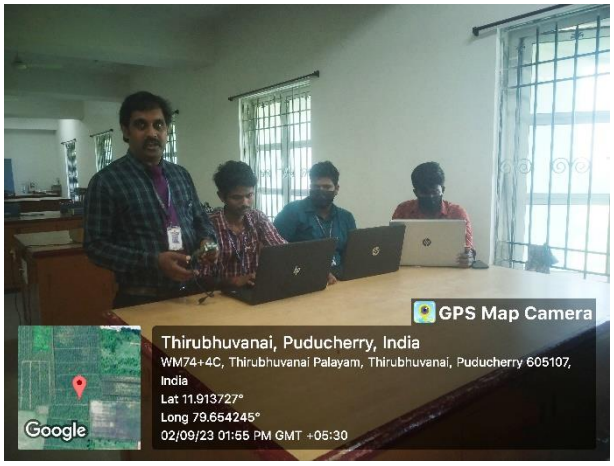
| S.NO | NAME OF THE STUDENT | YEAR |
|---|---|---|
| 1 | Swetha M | IV |
| 2 | A. Sakthi | IV |
| 3 | Arunprasath.S | IV |
| 4 | Akash Sv | IV |
| 5 | Poobathi | IV |
| 6 | V. Arthi | IV |
| 7 | Mohan Raj P | IV |
| 8 | Badhma Priya M | IV |
| 9 | Kalpanadevi | IV |
| 10 | Devapriya D | IV |
| 11 | Kriahna Kumar. R | IV |
| 12 | Anusha.C | IV |
| 13 | Savitha.M | IV |
| 14 | Nithishkumar.K | IV |
| 15 | Srisanthosh B | IV |
| 16 | Mohamed Thofique | IV |
| 17 | Kabilan S | IV |
| 18 | Kirankumar S | IV |
| 19 | Abdullah E K | IV |
| 20 | Surendhar V | IV |
| 21 | Keerthiga M | IV |
| 22 | Danush Balaji S | IV |
| 23 | Vighneshwar.V | IV |
| 24 | Sivabalan G | IV |
| 25 | Rozalan J | IV |
| 26 | Vijaya Boopathy.S | IV |
| 27 | Srinevan V | IV |
| 28 | Sasidharan R | IV |
| 29 | M.Latchiavasan | IV |
| 30 | Karthikeyan.P | IV |
| 31 | Kirubagaran P | IV |
| 32 | Priyadharshini | III |
| 33 | Tom Tijo Edattukaran | III |
| 34 | Sanjai.S | III |
| 35 | Jothikrishnan K | III |
| 36 | Mohan Lal | III |
| 37 | Srinivasan S | III |
| 38 | S. Logesh | III |
| 39 | Pranav | III |
| 40 | Abdul Hafreed | III |
| 41 | Vigneshwaran. V | III |
| 42 | Susangati Samantaray | III |
| 43 | J.Sabarigireesane | III |

| | | |
|---|---|---|
| 44 | R.Yogesh | III |
| 45 | Nirmal D | III |
| 46 | Raghul R | III |
| 47 | I. Gladson Joshua Paulraj | III |
| 48 | Rahul T | III |
| 49 | S. Gunapriya | III |
| 50 | Jeevasudhan G | III |
| 51 | Periasamy .R | III |
| 52 | Maheyndiran.S | III |
| 53 | Prasanaa.K | II |
| 54 | Rajesh.M | II |
| 55 | Reeshma R | II |
| 56 | Dharani | II |
| 57 | Vidhyasri | II |
| 58 | Mohamad Fazil.J | II |
| 59 | Sharmilaa.R | II |
| 60 | Dhanush | II |
| 61 | M.Mathan | II |
| 62 | S.Madhan | II |
| 63 | Selvam | II |
| 64 | Afrena.A | II |

## CLUB ACTIVITIES DETAILS

| | | |
|---|---|---|
| **Name of the Students Club** | : | Embedded Club |
| **Name of the Staff Coordinators** | : | 1. Mr.K.Thangaraj AP/EEE<br>2. Mr.C.Adrien Perianyagam AP/EEE<br>3. Mr.R.Vignesh AP/EEE |
| **Activities** | : | Hands-on Training on "Simulation of ESP32, STM32 and ARM7" |
| **Academic Year** | : | 2023 – 2024 |
| **Date/Day** | : | 02.09.2023 / Saturday |
| **Time and Duration** | : | 5th and 6th Hour (1.15 PM to 2.55 PM) |
| **No of Participants** | : | 17 (III/A) |

The Hands-on Training on the simulation of ESP32, STM32, and ARM7 microcontrollers


aimed to provide participants with practical experience in simulating and programming specific applications. The training commenced with an overview of microcontrollers, their applications, and the significance of simulating them for development and testing purposes. Practical exercises including writing and debugging code for applications like LED control, switch control, and LCD interfacing, were conducted. This session provided participants with opportunities to clarify doubts and gain deeper insights into the world of embedded systems.

**Attendance Sheet**

**Date: 02.09.2023** **Class: III-A**

| Sl.No | Student Name | Present/Absent |
|---|---|---|
| 1. | ABDUL HAFREED H | Present |
| 2. | ARCHANA R | Present |
| 3. | DEVANATHAN A | Present |
| 4. | DHIVYASHREE M | Present |
| 5. | DINESH R S | Present |
| 6. | ELAMPARUTHI K | Present |
| 7. | GANDHAM NAGENDRA KARTHIK | Present |
| 8. | GAYATHRY G | Present |
| 9. | GLADSON JOSHUA PAULRAJ I | Present |
| 10. | GUNAPRIYA S | Present |
| 11. | GURUDEVAN L | Present |
| 12. | HEMANATHAN D | Present |
| 13. | JAYAKUMAR D | Present |
| 14. | JEEVASUDHAN G | Present |
| 15. | JOTHIKRISHNAN.K | Present |
| 16. | KALAIYARASSI M | Present |
| 17. | KARTHIKEYAN P | Present |

HoD/ EEE
(P. Jamuna)

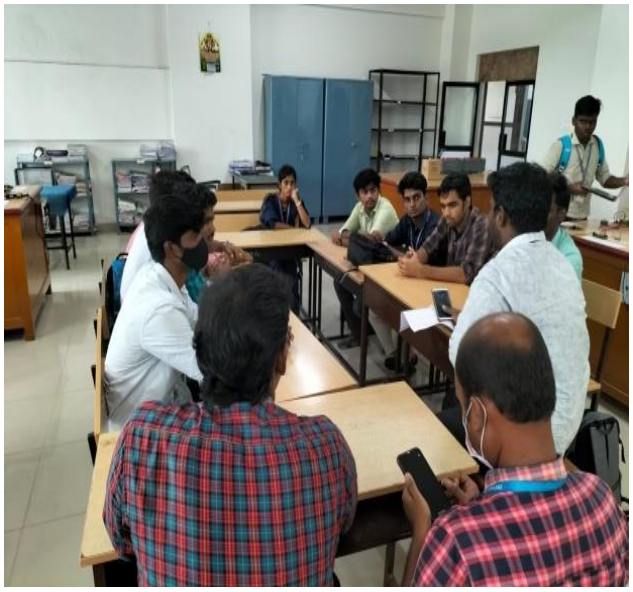
Dean Academics
(Dr.S.Anbumalar)

Director cum Principal
(Dr.V.S.K.Venkatachalapathy)

## CLUB ACTIVITIES DETAILS - 1

| | | |
|---|---|---|
| **Name of the Students Club** | : | Embedded Club |
| **Name of the Staff Coordinators** | : | 4. Mr.K.Thangaraj AP/EEE<br>5. Mr.C.Adrien Perianyagam AP/EEE<br>6. Mr.R.Vignesh AP/EEE |
| **Activities** | : | Hands-on Training on "Selection of Microcontroller and developing environment" |
| **Academic Year** | : | 2023 – 2024 |
| **Date/Day** | : | 16.09.2023 / Saturday |
| **Time and Duration** | : | 5th and 6th Hour (1.15 PM to 2.55 PM) |
| **No of Participants** | : | 17 (III/A) |

**Hands-on Training on "Selection of Microcontroller and developing environment"**



Microcontrollers are crucial components in embedded systems, powering a wide range of devices from simple household appliances to complex industrial automation systems.

The selection of an appropriate microcontroller development environment decides the efficiency, functionality, and cost-effectiveness of the final product. Students were trained, how to choose specific microcontrollers for a particular applications and IDE tools. Teams were formed to develop prototype systems using ARM7 based LPC2148 microcontroller, ESP NodeMCU - (ESP8266/ESP32) and

**Date: 16.09.2023** **Class: III A**

| Sl.No | Name | Present/Absent |
|---|---|---|
| 18. | KARTHIKRAJA S.D | Present |
| 19. | KASTHURI C | Present |
| 20. | KAVEEYA K | Present |
| 21. | KAVIARASAN M | Present |
| 22. | KAVIYA S | Present |
| 23. | KEERTHIRAJ. V | Present |
| 24. | LOGESH.S | Present |
| 25. | LOKESH N | Present |
| 26. | LOKESHWARI D | Present |
| 27. | MAHEYNDIRAN.S | Present |
| 28. | MOHAN LAL S | Present |
| 29. | MURUGAN.S | Present |
| 30. | NIRMAL D | Present |
| 31. | NIVEDHA G | Present |
| 32. | PRANAV B | Present |
| 33. | PRIYADHARSHINI A | Present |
| 34. | RAGHUL R | Present |

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