



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)
(Accredited by NBA-AICTE, New Delhi, ISO 9001:2000 Certified Institution &
Accredited by NAAC with "A" Grade)

Madagadipet, Puducherry - 605 107



DEPARTMENT OF
ELECTRICAL AND ELECTRONICS ENGINEERING
ENGINEERING CLINIC
(Academic Year: 2022 to 2023)



Submitted by
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Assistant Professor
Faculty Coordinator



Preface

The Engineering Clinic of the Department of Electrical and Electronics Engineering at Sri Manakula Vinayagar Engineering College functions as a structured academic platform designed to strengthen students' technical competence through experiential and application-oriented learning. The initiative is guided by the Dean, Head of the Department, and dedicated faculty coordinators, with the active support of committed teaching staff. It provides a systematic environment where undergraduate students participate in organized technical activities and hands-on training sessions. The clinic primarily focuses on the troubleshooting and maintenance of real-time electrical and electronic appliances, allowing students to connect theoretical concepts with practical implementation.

Through these activities, students gain exposure to fault identification, component-level analysis, and system-level diagnostics. They are trained to follow structured problem-solving methodologies, use appropriate testing instruments, and adopt safe working practices. The Engineering Clinic also encourages interdisciplinary learning, technical documentation, and collaborative teamwork among students. By working on real-world problems, students improve their analytical thinking, technical accuracy, and decision-making skills.

In addition, the clinic promotes professional ethics, responsibility, and effective communication, which are essential qualities for modern engineers. Regular technical sessions, demonstrations, and guided practice help students build confidence in handling electrical and electronic systems. The initiative not only enhances practical knowledge but also prepares students to meet industry expectations. Overall, the Engineering Clinic plays a significant role in producing competent, industry-ready engineers and contributes to the academic excellence and technological development of the institution.

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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 programme 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.

Vision

To be globally recognized for excellence in quality education, innovation and research for the transformation of lives to serve the society

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.



DEPARTMENT VISION AND MISSION

Vision

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

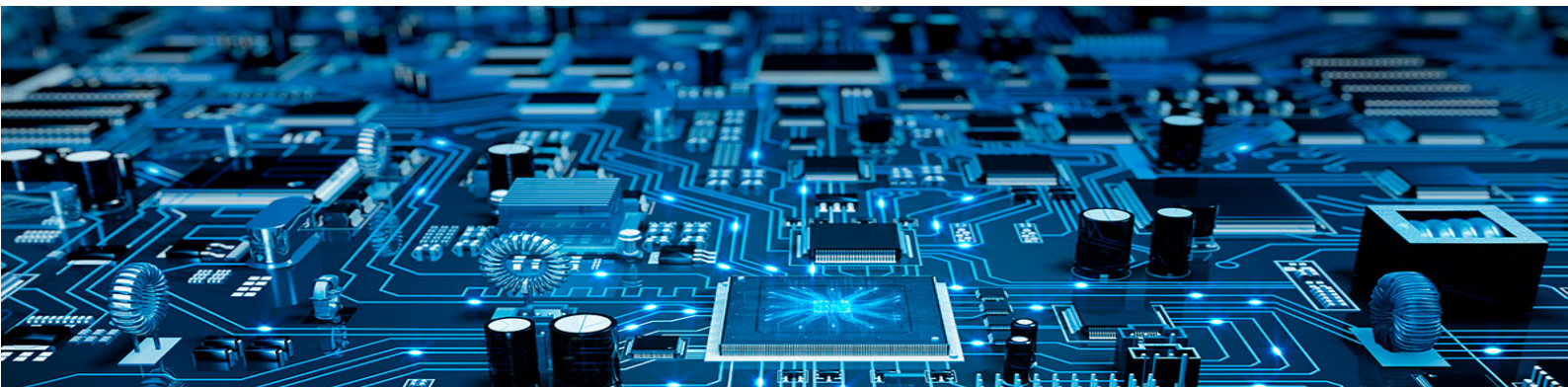
Mission

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.



“From power grids to microchips — we engineer the future.”

Objective of Engineering clinic club

- To provide students with practical exposure to electrical and electronic systems used in daily life.
- To develop hands-on skills in troubleshooting, servicing, and repairing domestic electrical appliances.
- To enhance students' understanding of electrical components, circuits, and their functions through real-time applications.
- To train students in essential electrical practices such as wiring, soldering, component testing, fuse replacement, and earthing.
- To strengthen problem-solving and fault diagnosis abilities through systematic analysis of equipment failures.
- To bridge the gap between theoretical concepts learned in the classroom and practical industrial requirements.
- To improve technical competency, safety awareness, and maintenance skills in handling electrical equipment.
- To encourage innovation, self-learning, and confidence in addressing real-world electrical and electronic challenges.
- To prepare students for employment and entrepreneurial opportunities in electrical maintenance and service sectors.
- To promote community service by enabling students to provide basic repair and maintenance support for electrical appliances.

Functions of Engineering Clinic

- Hands on - Students apply what they are learning about.
- Integrated - Demonstrate correlations with supporting course work.
- Multidisciplinary - Involve students as a community of problem solvers.
- Teamwork - Emphasize the advantage of effective teaming.
- Entrepreneurial - Reinforce value-based engineering.
- Contextual - Help students understand the big picture.
- Every Saturday Faculties have to explain about the troubleshooting of domestic electrical appliances.
- The faculty members have to train the students to identify the Fault in an electrical appliance.
- The Faculty members need to provide the hands on training to the students.

Student Members of the Club :

All I Year, II Year & III Year students of the Department

OFFICE BEARERS AND THEIR PORTFOLIOS

SL.NO	NAME OF THE FACULTY	DESIGNATION	POSITION
1.	Dr.S. Anbumalar	Dean Academics and HoD/EEE	Convener
2.	Dr. P. Jamuna	Professor / EEE	Faculty Coordinators
3.	Dr. D. Raja	Professor / EEE	
4.	Mr. R. Ragupathy	AP/EEE	
5.	Mr. G. Rajavel	AP/EEE	
6.	Dr.S. Ganesh Kumaran	Assoc. Prof. /EEE	Member
7.	Dr.Sivaraj	AP/EEE	Member
8.	Mr.Parthiban.B	AP/EEE	Member
9.	Mr.A. Janagiraman	AP/EEE	Member
10.	Mr.K. Thangaraj	AP/EEE	Member
11.	Mr.J.Muruganandham	AP/EEE	Member
12.	Mr.Adrien Periyamayagam	AP/EEE	Member
13.	Mr.I. Shivasankkar	AP/EEE	Member
14.	Mr.R. Vignesh	AP/EEE	Member
15.	Mrs.K.Kavinelavu	AP/EEE	Member
16.	Ms. Abinayasaraswathi	AP/EEE	Member
17.	Mr.Elanthamizh	AP/EEE	Member



Dr. D.Raja
Professor



Mr .G. Rajavel
Assistant Professor



Dr.S.Ganesh Kumaran
Associate Professor
Member



Mr.A.Janagiraman
Assistant Professor
Member



Mr.K.Thangaraj
Assistant Professor
Member



Mr.J.Muruganandham
Assistant Professor
Member

ACTIVITIES CONDUCTED BY ENGINEERING CLUB – (2022 – 2023)

Sl. No	Activity	Date	Year/Sem/Batch
1.	Practical Demonstration of Electric Iron Box and its troubleshooting procedures	21.01.2023	I / I / 2022-2026
2.	Practical Demonstration of Electric Iron Box and its troubleshooting procedures	29.01.2023	I / I / 2022-2026
3.	Practical Demonstration of Domestic wiring and Energy meter connection	11.02.2023	I / I / 2022-2026
4.	Practical Demonstration of Mixer Grinder and Fault Identification	18.02.2023	I / I / 2022-2026
5.	Practical Demonstration of Induction Stove and Fault Identification	11.03.2023	I / I / 2022-2026
6.	Practical Demonstration of Domestic wiring and energy meter connections	13.03.2023	IV / VIII / 2019-2023
7.	Practical Demonstration of Mixer Grinder and Induction stove	15.04.2023	III / VI / 2020-2024 & II / IV / 2012-2026
8.	Practical Demonstration of FAN & Iron Box & Mosquito Bat.	29.04.2023	I / II / 2022-2026 A & B
9.	Hands on training in troubleshooting of Laptops and CPU's	6.05.2023	I / II / 2022-2026
10.	To build and troubleshooting of Circuits	29.05.2023	II & III / IV & VI / 2021-2025 & 2020-2024
11.	Hands on training in Procedure of Installation and troubleshooting of Inverter and solar panel	1.07.2023	II / IV / 2021-2025
12.	Troubleshooting of Digital trainer Kit	1.07.2023	I A & B / II / 2022-2026

ENGINEERING CLINIC – ACTIVITY REPORT-1

The Department of Electrical and Electronics Engineering is proudly to announce the launch of its new event, “Engineering Clinic”. This event is designed to provide a platform for students to explore the troubleshooting of Electrical and Electronics home appliances.

AcademicYear	:	2022 – 2023
Date/Day/Time	:	21.01.2023/Saturday / 12.00 p.m to 4.20 p.m
Year/Sem/Batch	:	I / I / 2022-2026
Activities	:	Practical Demonstration of Electric Iron Box and its troubleshooting procedures



Dr. S. Anbumalar, Dean Academics and HoD/EEE, addressed about the “Engineering Clinic” Program and its activities to the I year students.



Mr.R. Ragupathy AP/EEE, presented the basic concepts and working of Iron box with the help of animated videos.



Mr. R. Ragupathy and Mr. G. Rajavel AP/ EEE, shown the live working of Iron Box and the possible faults and their rectifications procedures to the I year students

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Engineering Clinic – Activity Report-2

AcademicYear	:	2022 – 2023
Date/Day/Time	:	29.01.2023/Saturday / 8.45 p.m to 4.20 p.m
Year/Sem/Batch	:	I / I / 2022-2026
Activities	:	Practical Demonstration of Electric Iron Box and its troubleshooting procedures



Mr.A.Janagiraman AP/EEE addressed about the Multisim software and explained about the procedure of handling the multisim software.



Mr.J.Muruganandham AP/EEE, presented the multimeter connections and explained about testing of continuity between the terminals.



Students of First year has been actively operated the faulty Iron Box and known about the parts.



Mr.Rajavel.G AP/EEE has been told about the soldering procedure to the students and have been explained about the fault identification.

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Engineering Clinic – Activity Report-3

Academic Year	:	2022 – 2023
Date/Day/Time	:	11.02.2023/Saturday / 8.45 p.m to 4.20 p.m
Year/Sem/Batch	:	I / I / 2022-2026
Activities	:	Practical Demonstration of Domestic wiring and Energy meter connection.



Dr.S.Ganesh Kumaran Asso.Prof/EEE addressed about the Types of Domestic wiring and explained about finding range of wires and diameter.



Ms. Kavinelavu AP/EEE, presented the connections of Hall and room wiring using MCB via animated video.



Dr.S.Ganesh Kumaran Asso.Prof/EEE and Mr.R.Vignesh AP/EEE have been explained the procedure of wiring in Switch Board.



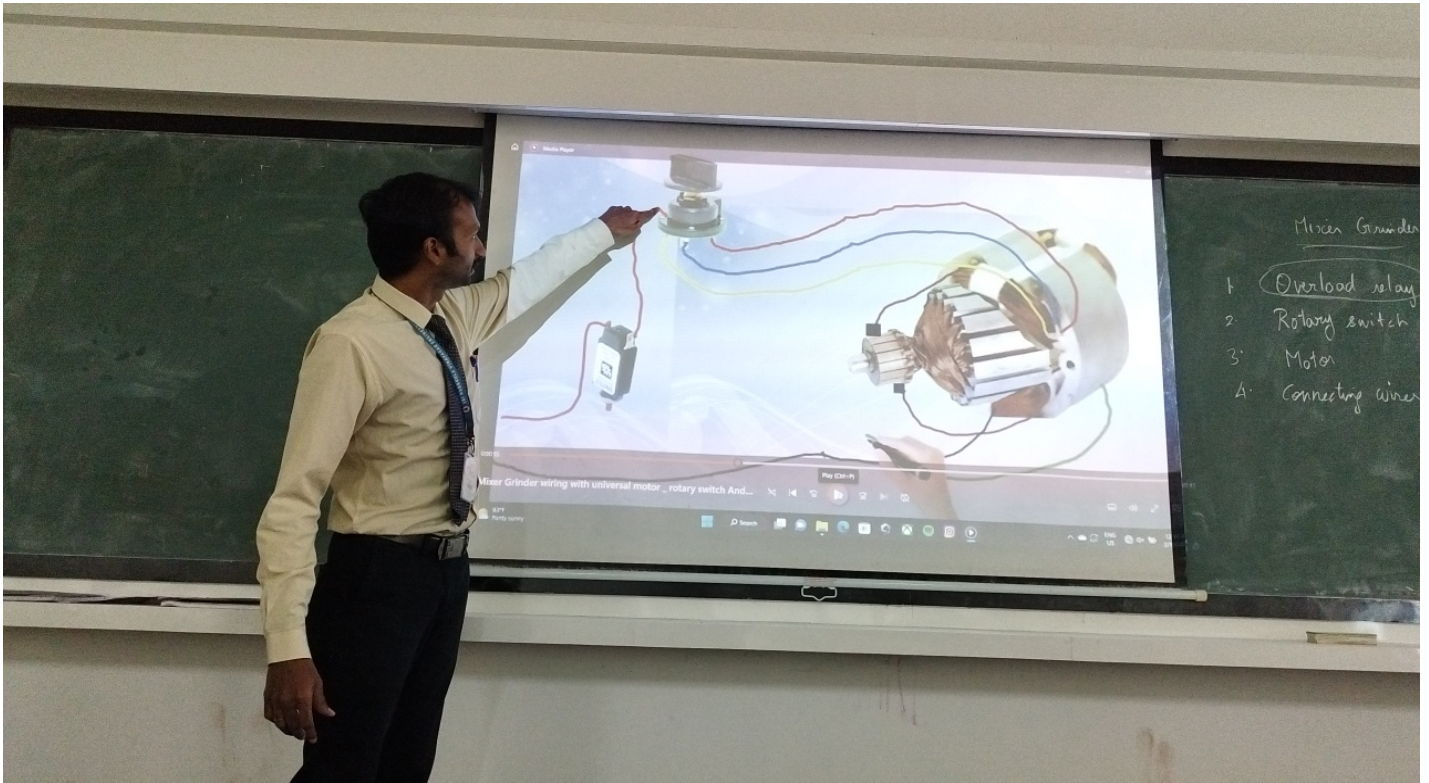
Students Actively connected the switch board wiring in a practical manner under the Guidance of Mr.J.Muruganandham.



Mr.G.Rajavel AP/EEE Explained about the Energy meter connection and students had given the Practical wiring of energy meter and calculating the procedure.

Engineering Clinic – Activity Report-4

Academic Year	:	2022 – 2023
Date/Day/Time	:	18.02.2023/Saturday / 8.45 A.m to 4.20 p.m
Year/Sem/Batch	:	I / I / 2022-2026
Activities	:	Practical Demonstration of Mixer Grinder and Fault Identification



Mr.I.Shivasankkar AP/EEE addressed about the Mixer Grinder with working diagram via animated video.



Mr.G.RajavelAP/EEE, delivered about the connections and faulty identification of Mixer Griender.



Mr.K.Thangaraj AP/EEE and Mr.G. Rajavel AP/EEE have been explained the procedure of wiring and Fault identification to a Mixer Grinder for Final year Students.



Mr.K.Thangaraj AP/EEE Practically Explained the Connections and parts of Mixer grinder and fault identifications.

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Engineering Clinic – Activity Report-5

AcademicYear	:	2022 – 2023
Date/Day/Time	:	11.03.2023/Saturday / 8.45 p.m to 4.20 p.m
Year/Sem/Batch	:	I / I / 2022-2026
Activities	:	Practical Demonstration of Induction Stove and Fault Identification



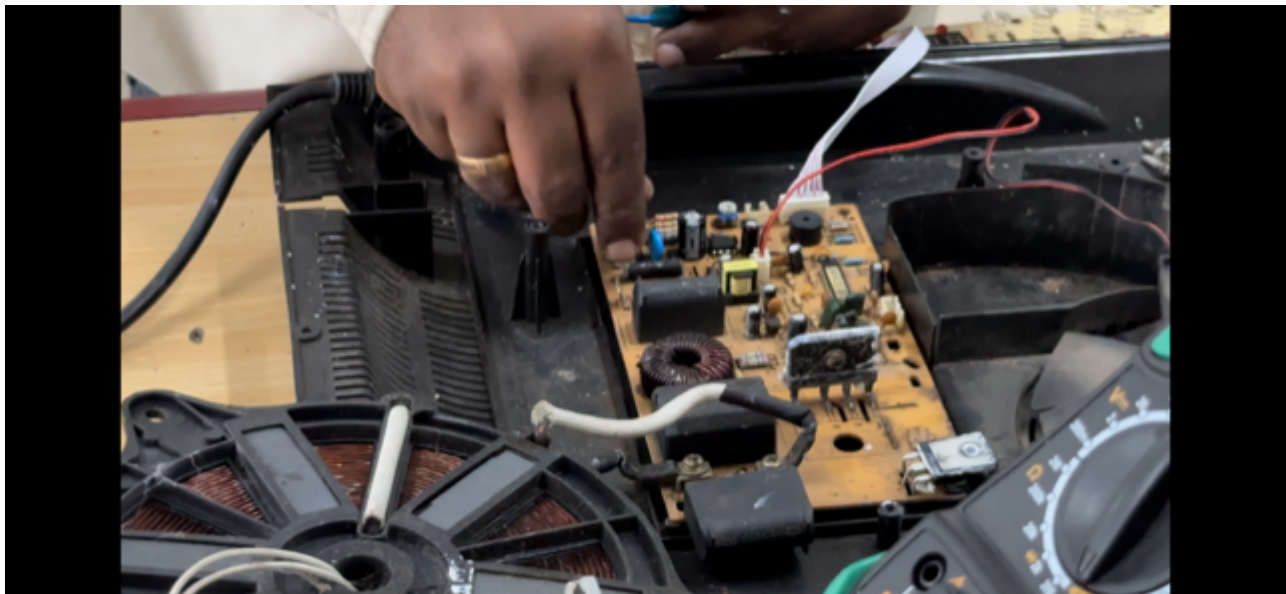
Mr.J.Muruganandham AP/EEE addressed about an Induction Stove with working diagram via animated video.



Dr.A.Sivaraj AP/EEE, Mr.J.Muruganandham AP/EEE delivered about the connections and faulty identification of an Induction Stove.



Dr.A.Sivaraj AP/EEE and Mr.J.Muruganandham AP/EEE, Mr.G.Rajavel AP/EEE have been explained the procedure of Connection and Fault identification to an Induction Stove & Troubleshooting procedures.



Practically Explained the Connections and parts of Induction Stove and fault identifications.

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Engineering Clinic – Activity Report-6

AcademicYear	:	2022 – 2023
Date/Day/Time	:	13.03.2023/Saturday / 8.45 p.m to 4.20 p.m
Year/Sem/Batch	:	IV / VIII / 2019-2023
Activities	:	Practical Demonstration of Domestic wiring and energy meter connections



Mr.R.Ragupathy AP/EEE addressed about an Domestic wiring connections and fuse rating calculation and diameter of wiring.



Mr.A.Janagiraman AP/EEE, delivered about the Domestic wiring connections and Procedure to handling multimeter, Energy meter connections.

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Engineering Clinic – Activity Report-7

AcademicYear	:	2022 – 2023
Date/Day/Time	:	15.04.2023/Saturday / 9.00 a.m to 4.50 p.m
Year/Sem/Batch	:	III / VI / 2020-2024 & II / IV /2012-2026
Activities	:	Practical Demonstration of Mixer Grinder and Induction stove



Mr.G.Rajavel AP/EEE Explained about the troubleshooting of Mixer grinder in a practical manner



Mr.I.Shivasankkar AP/EEE, delivered about the Mixer Grinder connections and troubleshooting Procedure with an animated video and circuit picture.



Dr.D.Sivaraj AP/EEE, delivered about the Practical demonstration of wiring and energy meter connections

Engineering Clinic – Activity Report-8

Academic Year	:	2022 – 2023
Date/Day/Time	:	29.04.2023/Saturday / 8.45 a.m to 1.10 p.m
Year/Sem/Batch	:	I / II / 2022-2026 A & B
Activities	:	Practical Demonstration of FAN & Iron Box & Mosquito Bat.



Mr.G.Rajavel AP/EEE Explained about the troubleshooting of FAN in a practical manner, and finding the Faults procedure in FAN



Mr. John Powl AP/EEE, delivered about the troubleshooting Procedure of Mosquito Bat in a practical



With known procedures students are actively troubleshooting the Iron box by their own under the guidance of Mr.G.Rajavel G & Mr.S.John Powl AP/EEE



With known procedures students are actively troubleshooting the Induction stove by their own, under the guidance of Mr.I.Shivasankkar & Mr.R.Vignesh AP/EEE

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Engineering Clinic – Activity Report-9

Academic Year	:	2022 – 2023
Date/Day/Time	:	6.05.2023/Saturday / 9.30 a.m to 1.30 p.m
Year/Sem/Batch	:	I / II / 2022-2026
Activities	:	Hands on training in troubleshooting of Laptops and CPU's



Mr.G.Paranidharan, External Expert has been delivered the presentation about troubleshooting of Laptops and CPU



Demonstration of the internal parts like motherboard, RAM, cables, SMPS in Laptops and CPU to the students.



Explanation of various cables and their connection procedure in Laptops & CPU



Description of advanced types of motherboard used for Laptop & CPU

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Engineering Clinic – Activity Report-10

AcademicYear	:	2022 – 2023
Date/Day/Time	:	29.05.2023/Saturday / 9.00 a.m to 4.50 p.m
Year/Sem/Batch	:	II & III / IV & VI / 2021-2025 & 2020-2024
Activities	:	“To build and troubleshooting of Circuits”



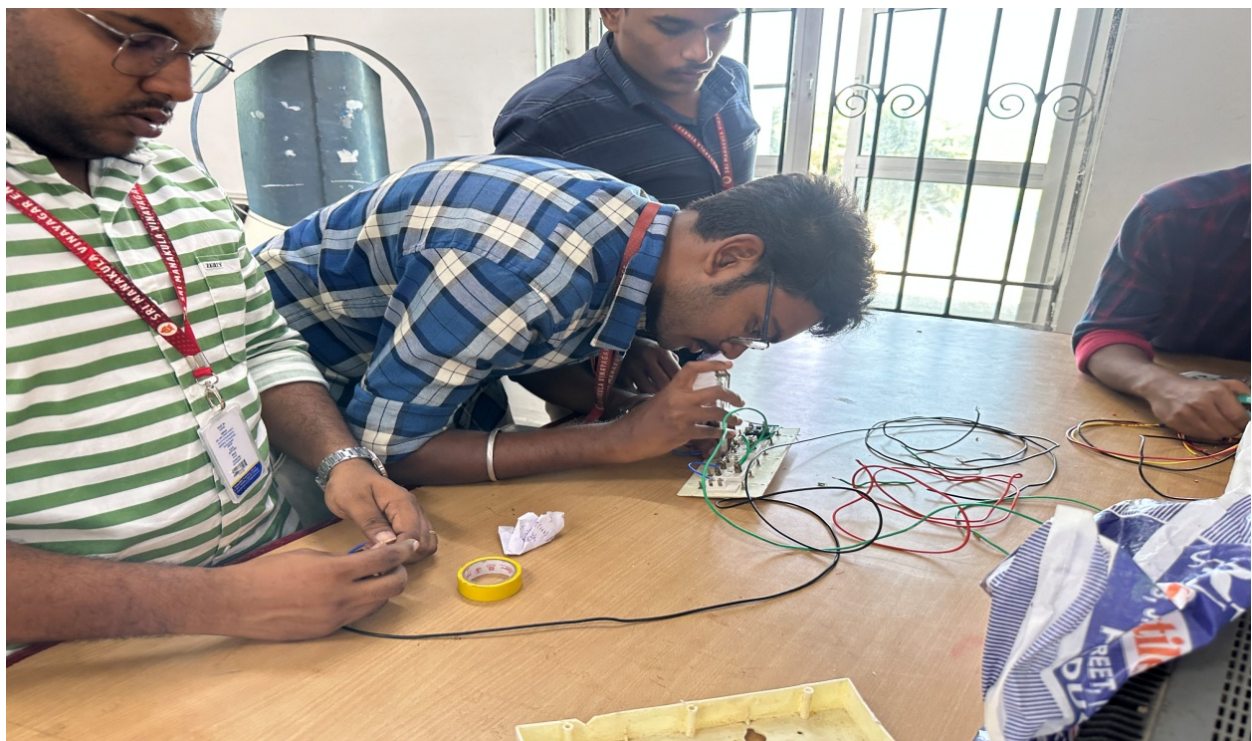
II year girls candidates have been making a Extension box with safety and precaution.



II year Boys are actively participating the event of to build a troubleshooting of circuits.



III-year girls are making the extension box for an event of To build a troubleshooting of circuits



III-year boys are making the extension box for an event of To build a troubleshooting of circuits

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Engineering Clinic – Activity Report-11

Academic Year	:	2022 – 2023
Date/Day/Time	:	1.07.2023/Saturday / 10.00 a.m to 12.35 p.m
Year/Sem/Batch	:	II / IV / 2021-2025
Activities	:	“Hands on training in Procedure of Installation and troubleshooting of Inverter and solar panel”

The Department of Electrical and Electronics Engineering is proudly to announce the launch of its new event, “Engineering Clinic”. This event is designed to provide a platform for students to explore the troubleshooting of Electrical and Electronics home appliances.



An External Expert Mr. V. Karthi, Founder, Sri Annai Saraswathy Pvt.Ltd had described about the procedure for installation of an Inverter and erection of solar panel for domestic purpose.



He had shown the practical demonstration of an inverter connection and solar panel connection for domestic purpose.



The Students had trained for practical connections and troubleshooting procedures of an inverter and solar panel erection.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

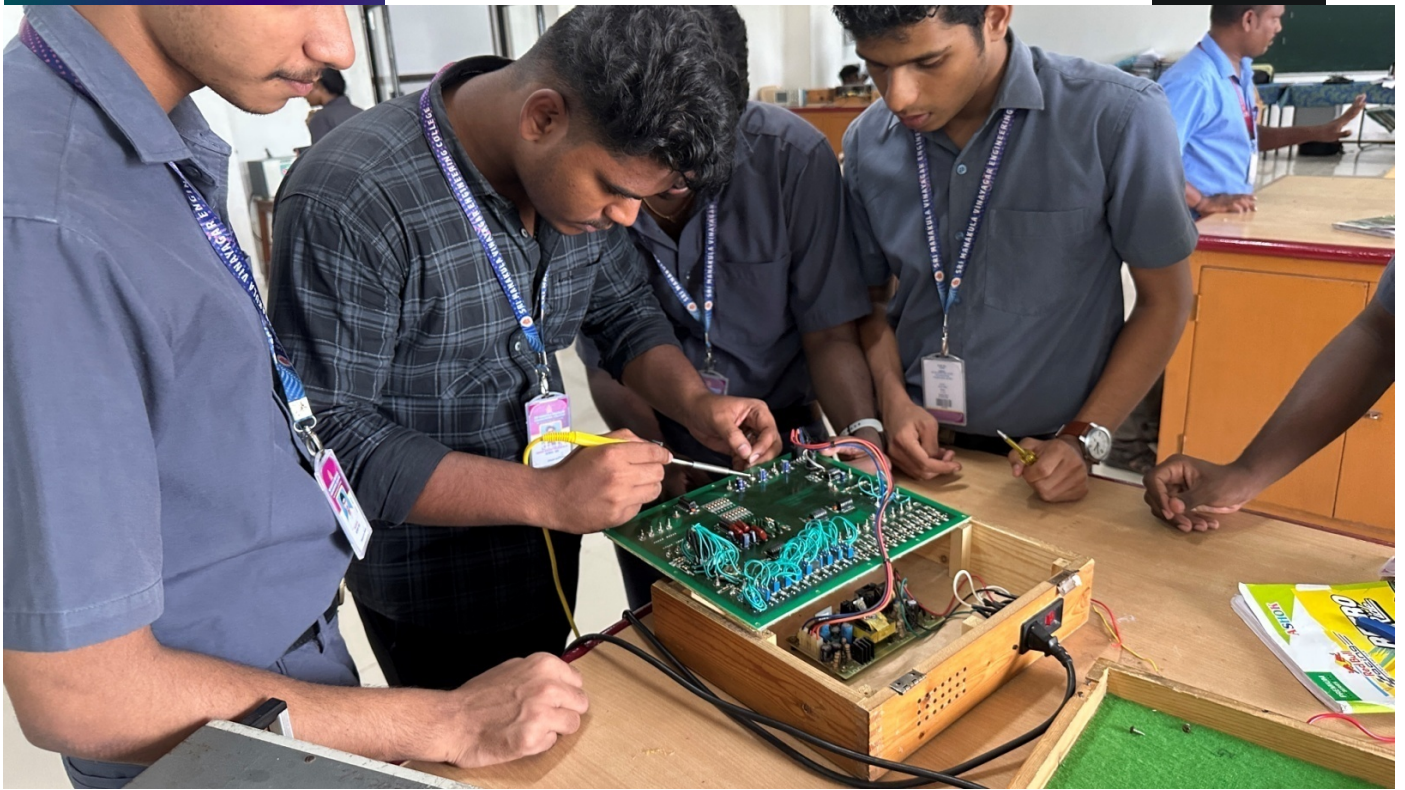
Engineering Clinic – Activity Report-12

AcademicYear	:	2022 – 2023
Date/Day/Time	:	1.07.2023/Saturday / 1.50 p.m to 4.20 p.m
Year/Sem/Batch	:	I A & B / II / 2022-2026
Activities	:	“Troubleshooting of Digital trainer Kit”

The Department of Electrical and Electronics Engineering is proudly to announce the launch of its new event, “Engineering Clinic”. This event is designed to provide a platform for students to explore the troubleshooting of Electrical and Electronics home appliances.



Mr.S.Johnpowl and Mr.J.Muruganandham AP/EEE had trained the student's to troubleshoot a digital trainer kit.



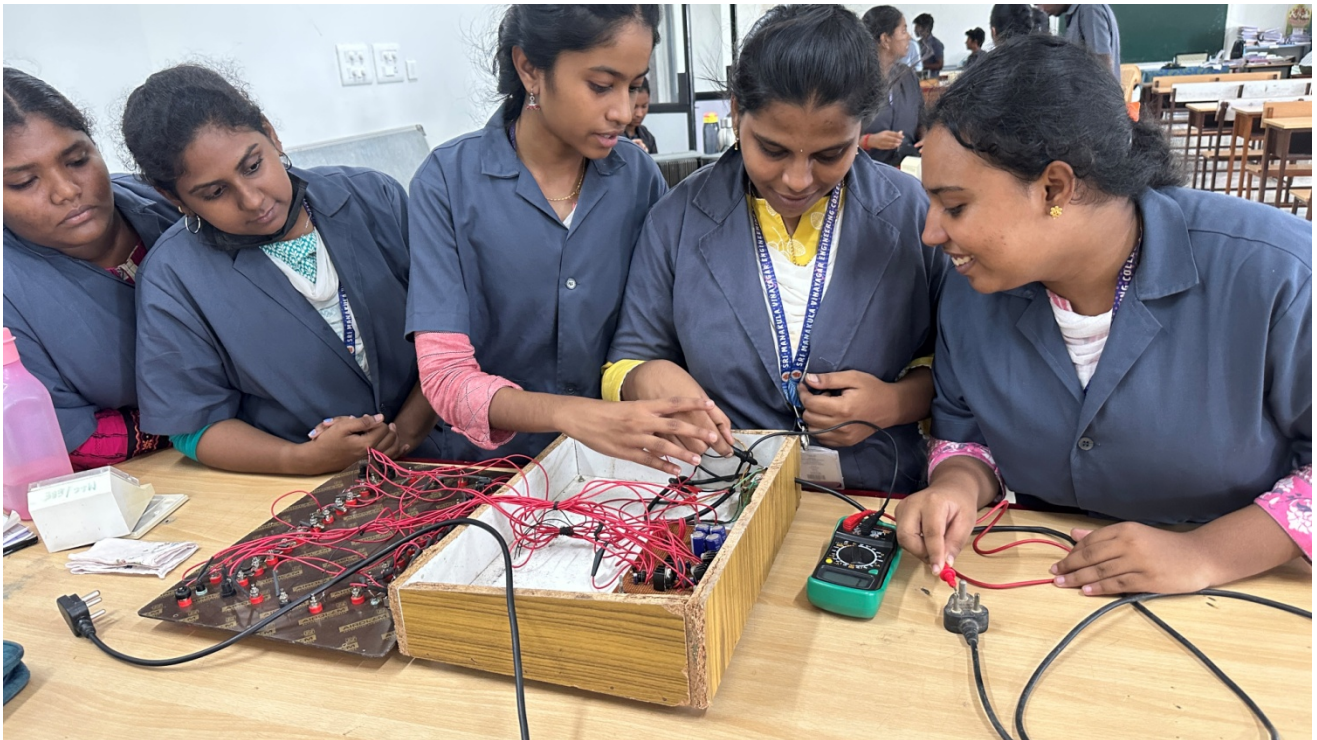
Students had serviced the Digital trainer kit with presence of Mr.G.Rajavel AP/EEE



Mr.S.Johnpowl AP/EEE described about the working of Tabletop wet grinder and possibilities of faults in tabletop wet grinder.



Mr.G.Rajavel AP/EEE described about the troubleshooting procedure of tabletop grinder



The Students had serviced the digital trainer kit under the guidance of Mr.G.Rajavel AP/EEE

