



# MANAKULA VINAYAGAR INSTITUTE OF TECHNOLOGY

## KALITHEETHALKUPPAM, MADAGADIPET

### NEWS LETTER JUNE 2024(ODD SEM)



## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



### PRINCIPAL MESSAGE



My heartiest welcome to all the young and budding Engineers who have joined in Manakula Vinayagar Institute of Technology (MVIT). With the guidance of our respected Chair- man and Vice Chairman, with the help of highly qualified and dedicated faculty team, we will be moulding the students to the required shape which will make them industry-ready, employable and well disciplined.

The Manakula Vinayagar Institute of Technology will strive hard to provide pleasant ambience and conducive atmosphere for moulding the young minds to scale greater heights in their chosen field of study. In our college, we give top priority to academic excellence, innovation, and discipline. An effective Training and Placement Cell is in place to provide placement to all our students. Focus is given to Extra Curricular and Co-Curricular activities through various clubs and societies instituted to augment the students skills and knowledge.

A state-of-the-art and up-to-date infrastructure facilities and good learning atmosphere are the hallmarks of our Institution. I hope all the students admitted in this Institution will enjoy their study in the campus. Let us all come together, build together, and achieve together with the blessings of Al- mighty for Tomorrow's India.

### ABOUT THE DEPARTMENT



The Department was established in the year 2008 with a key focus to advance the skills of modern youth in the field of Electronics and Communication Engineering. Adequate emphasis is given to electronic design using innovative teaching methodologies. Emphasis is also given to the digital processing of information for efficient communication. Utmost care is taken in the perspective of imparting more practical knowledge to the student's community in the field of Electronics and Communication.

**An expert team from National Board of Accreditation conducted on-site evaluation of the program from 24<sup>th</sup> to 26<sup>th</sup> August 2018; ECE department has been accredited for 3 years.**

### VISION

To emerge as a center of excellence nurturing innovative engineers in Electronics and Communication technologies who can address global challenges through multidisciplinary approaches, sustainable solutions, and ethical leadership.

### MISSION

1. Impart Quality Education in the field of Electronics and Communication Engineering through experiential learning, project-based curricula, and digital pedagogy to create industry-ready professionals.
2. Foster research temperament by establishing state-of-the-art laboratories and innovation centers focusing on emerging technologies.
3. Enhance industry collaboration to facilitate internships, live projects, and technology transfer initiatives while promoting entrepreneurial mindset among students.
4. Develop socially conscious engineers capable of applying Electronics and Communication technologies for sustainable development and societal welfare.

## PROGRAMME EDUCATIONAL OUTCOMES (PEOs)

Graduates of Electronics and Communication Engineering will

PEO1: Professional Excellence: Graduates will be employed with professional competency in Electronics and Communication, demonstrating expertise in emerging technologies.

PEO2: Research and Innovation: Alumni will excel in research initiatives and entrepreneurial ventures and lead in technological innovation in emerging Electronics and Communication domains.

PEO3: Sustainability: Develop and implement sustainable solutions in Electronics and Communication Engineering addressing global challenges while ensuring environmental responsibility and societal welfare

PEO4: Ethics and Leadership: Graduates will demonstrate ethical leadership in engineering teams while pursuing professional growth and contributing to the field through mentorship.

## PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1: **Products Development:** Use modern tools to design subsystems for simple applications in Embedded Systems and VLSI.

PSO2: **Design Thinking:** Apply engineering concepts to find solutions in the fields of Communications, Signal/Image Processing.

## PROGRAMME OUTCOMES (Pos)

Graduates of Electronics and Communication Engineering will

PO1: Engineering Knowledge: Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.

PO2: Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)

PO3: Design/Development of Solutions: Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

PO4: Conduct Investigations of Complex Problems: Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).

PO5: Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)

PO6: The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).

PO7: Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)

PO8: Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

PO9: Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences

PO10: Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

PO11: Life-Long Learning: Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

# ODD NEWS LETTER

(JULY 2024 –DEC 2024)

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

The Department of Electronics and Communication Engineering was founded in 2008 with a primary mission to enhance the competencies of young individuals in the realm of Electronics and Communication Engineering. The department places significant emphasis on fostering electronic design skills through creative and forward-thinking pedagogical approaches. Additionally, it focuses on the adept handling of digitally processed information to optimize communication efficiency. The department's commitment to delivering hands-on practical knowledge to students in the Electronics and Communication domain is noteworthy. An important milestone in the department's journey was achieved on December 3rd, 2022, when it obtained approval from Pondicherry University to function as a designated Research Center. This recognition highlights the department's commitment to advancing research and contributing to the academic and technological landscape in the field of Electronics and Communication Engineering.

### Staff activities:

1. ICSCAN' 2024 was organized and coordinated by Dr.S.Arunmozhi, HOD/ECE and Dr.R.Valli, R&D in Manakula Vinayagar Institute of Technology, Inaugurated by the chiefguest Dr.Takashi Watanabe, Professor,Kumanoto University, Kumanoto, Japan from 27.12.2024 to 28.12.2024.



2. Dr. S.Arunmozhi, Professor & Head, Dept of ECE conducted an Outreach Programme on “Innovation and Entrepreneurship” for school students from Kalaiyangan Karunanithi Govt. Higher sec Schools on 31.07.2024



3. Dr. S.Arunmozhi, Professor & Head, Dept of ECE conducted a special lecture on “Implementation of NEP 2020 vision” for II year ECE students in the eve of 4th Anniversary of NEP 2020 on 31<sup>st</sup> July 2024,

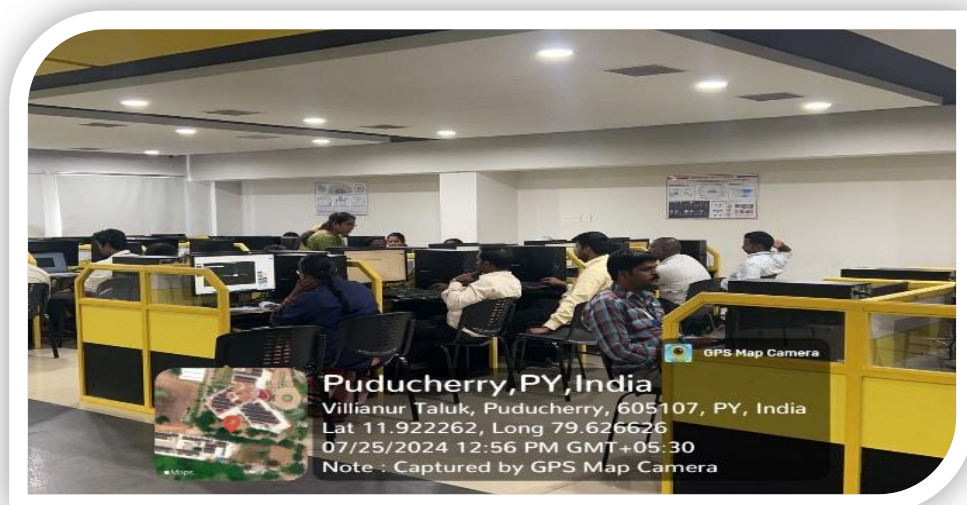




4. Dr. S. Arunmozhi, HOD/ECE, Dr. A. Thenmozhi, Dean Academics, conducted a session on “Outcome-Based Education and Attainment Calculation” for professional development program titled on CO formation and CO-PO mapping on 11<sup>th</sup> November to 15<sup>th</sup> November 2024.

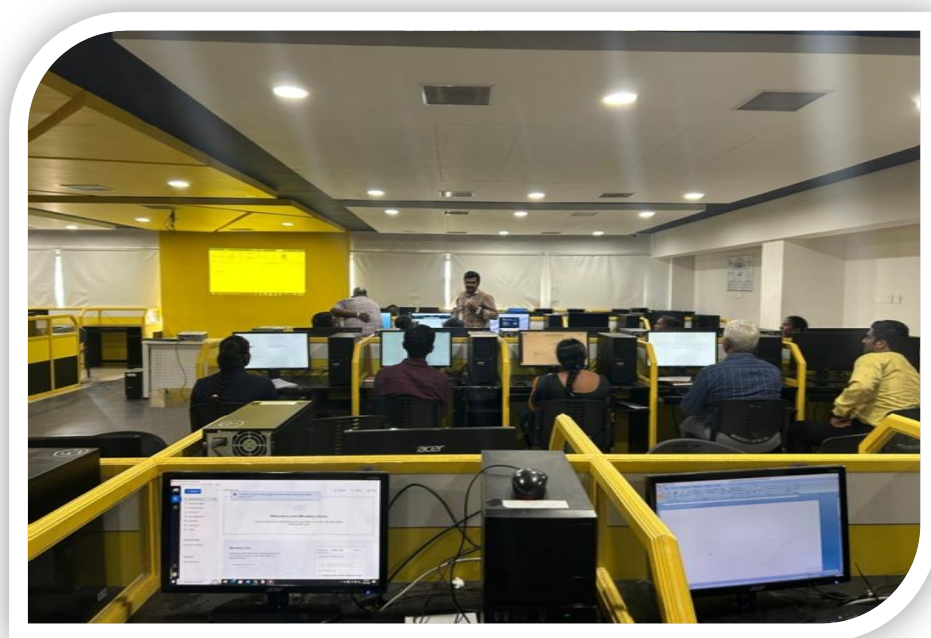


5. Dr.R.Sofia handled a session titled on “Mentimeter” in ICT tools for Interactive Teaching & Learning series-1 conducted by MVIT IQAC cell on 25.07.24.



6. Dr.S.Vinoth, Assistant Professor/ECE delivered the session titled “How to add citations using Mendeley” on 14<sup>th</sup> September 2024 during the Professional Development Program “Tool for

Research and Development” conducted for Faculty Members of various Departments from 11th to 19th September 2024.



7. Dr. Semmalar participated in a webinar titled "Guidance for drafting and filling out patent" sponsored by the Global Institute of Engineering and Technology on June 17, 2024.
8. Dr. Semmalar, attended an FDP on "Innovative Teaching and Learning Pedagogy" organized by BPIT and ARGA, Research Foundation of India, from June 23 to June 27, 2024.
9. R. Vijayalakshmi, Zarina Begum and D. Marygetsy attended a "Mastering Research" workshop at Takshashila University from June 24 to June 28, 2024.
10. Dr. S. Semmalar, D. Marygetsy, and Dr. R. Sofia participated in Professional Development Programs (PDP) on ICT Tools.
11. Mrs. R.Vijayalakshmi completed NPTEL online course on “Digital Circuits”, on November 3, 2024.
12. Dr. S. Semmalar completed a course on Optical Engineering, with the exam on November 3, 2024.
13. D. Marygetsy completed a self-paced course titled "ChatGPT & AI Hack with MS Office," with the exam on August 8, 2024.
14. Dr. S. Semmalar initiated an MOU between MIT Square London and Manakula Vinayagar Institute of Technology on July 2024,

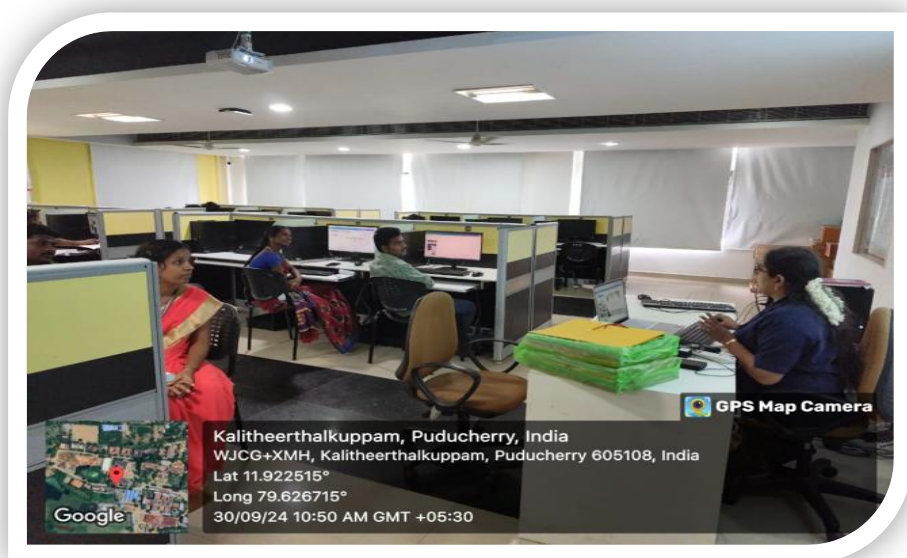


15. Dr. R. Sofia and Mr. V. Rajesh participated in the IKS series-1 titled “Relating Indian Knowledge System With Image Processing, Harmonizing Embedded Systems with Karma Yoga: A Selfless Approach to Task Scheduling” conducted by IQAC on 09.07.24 & 11.07.24 respectively.



16. Dr. R. Sofia, AP/ECE, Dr. S. Semmalar, ASP/ECE, Mr. V. Rajesh, AP/ECE, Mrs. K. Alamelu, AP/ECE, Ms. R. Vijayalakshmi, AP/ECE handled a session titled “Creating Presentations using Canva” as part of the professional development program for non-teaching staff members from 30<sup>th</sup> September 2024 to 5<sup>th</sup> October 2024.





17. Dr.S.Arunmozhi presented a session on “SERB-SUPRA & DST- PURSE” in confluence series-I conducted by MVIT IQAC cell on 08.07.2024



18. Dr. R. Sofia submitted a proposal titled "Real-time Sentiment Analysis and Rumor Detection during Disasters using Contextualized Language Models and Explainable AI" under the NIDM scheme on September 2, 2024.
19. Dr. R. Sofia submitted a patent application for an "AI-Powered Unmanned Aerial Vehicle (UAV) for Persistent Aerial Surveillance in Military Zones" on September 9, 2024, which is currently submitted.



20. D. Marygetsy published a paper titled "Generative AI: ChatGPT Tool" in the Scientific International Publication House in July 2024. The ISBN is 978-93-6132-593-9.
21. Dr.S.Vinoth published "Co: ZnO nanorods synthesis and fabrication of a high-performance photosensor for cost-effective optoelectronic devices" in the Journal of Materials Science: Materials in Electronics, Volume 35, Issue 21, Page 1486.
22. Dr.S.Vinoth published "Effect of Ce doping on MoO<sub>3</sub> thin films for room temperature ammonia sensing application" in Physica Scripta, Volume 99, Issue 8.
23. Dr.A.Shankar published a paper titled "A Secured and Energy Efficient system for Patient E-healthcare Monitoring using the Internet of Medical Things" in SCI indexed journal

### **Student's activities:**

1. Heresh and Sakthiswaran, III year ECE students conducted a student-led Frontend Development Workshop was held on July 31 and August 14, 2024.



2. On March 3, 2024, Sherley Suzane Tremot participated in the "ROBO-TRICKS BY SAUMADEEP GUHA" event organized by Elewayte.
3. Sherley Suzane Tremot participated in "Foundations of Cybersecurity" on June 30, 2024, organized by Coursera.
4. On June 8, 2024, Sherley Suzane Tremot took part in the "GRAMMAR CRAMMER E-QUIZ" organized by the Education Department Government of Gujarat.

5. Kavinraj, Deepika R – II yr ECE students have completed NPTEL online Certification course in Digital circuits during July-October 2024 Examination.



6. On September 7, 2024, Sherley Suzane Tremot attended the "8 Bit Microcontrollers: Architecture of the PIC16" workshop at MICROCHIP UNIVERSITY.
7. On July 20, 2024, Sherley Suzane Tremot participated in various MongoDB workshops including "MongoDB Atlas Search," "MongoDB Data Modeling Intro," "MongoDB CRUD Operations: Insert and Find Documents," "Getting Started with MongoDB Atlas," and more, all organized by MongoDB.
8. On April 8, 2024, Kalaivani S participated in the "Web Development" workshop organized by TechnoHacksEduTech.
9. Heresh.M has completed the online course "Introduction to data Analytics" from simplilearn on 12th December 2024.



10. On April 10, 2024, Gowtham Raaj participated in "Data Analytics WithSpecialisation" organized by Jobaaj Learnings.
11. Gowtham Raaj attended several Python courses and data science workshops on November 19, 2024, organized by IntelliPaat Academy.
12. Mohamed Baasith A participated in the "Embedded for Beginners" workshop on October 9, 2024, organized by NIELIT, and the "Python Essentials" workshop on October 12, 2024, organized by CAN & PI.



13. Ramya S participated in multiple UiPath workshops on March 4, 2024, including "Explore Automation Development," "Variables, Constants and Arguments in Studio," and "Build Your First Process with Studio."



14. Kalavani.S, III year ECE attended "Full Stack Web Development Bootcamp" on June 17, 2024, organized by KIMO
15. Ramya S also attended a "7-Day UX-UI Challenge" on March 9, 2024, organized by MadX.
16. On July 12, 2024, multiple students including Sherley Suzane Tremot, Devakumaran M, Mohamed Baasith A, Karthick S, Naresh Kumar S, and others participated in the "Handcraft using paper bag" event organized by MVIT.
17. On February 26, 2024, several students including Akshaya N, Adharsh Patel B, and Monishwaran G participated in the "Paper Presentation-MECHNIUM 2K24" event at Puducherry Technological University.
18. On July 2, 2024, students including Tharika A and Devakumaran M took part in the "Role of Youth on Skill and Entrepreneurship Development" organized by Vishwa Yuvak Kendra.

### **Extension/NSS Activities/Extra-Curricular Activities:**

1. The NSS Team contributed funds to the Wayanad landscape in July 2024.



2. Various students including Deepan M and Bathreesh participated in the "Grand Master Chess Tournament" on August 30, 2024, organized by MVIT.
3. On August 28, 2024, students including Anand A, Vishnuprabu S, and Harish M participated in the "Red Ribbon Club" event organized by MVIT.
4. On March 28, 2024, students including Guruprasad S participated in the "Red Run Marathon 2024" organized by MVIT.

5. On October 4, 2024, Sudharsan T received a certificate of appreciation for voluntary blood donation from the Tamilnadu State Blood Transfusion Council.
6. On August 29, 2024, multiple students including Harini K, Madhumitha M, Jeevitha M, and Roshini T participated in the "Millet Product Showcasing" event organized by MVIT.

### **Industrial Interaction Details/ Internship and Implant Training**

1. II-year ECE students visited Odugaatech Pvt. Lt as part of industrial visit , Salem, on July 27, 2024.



2. III-year ECE students visited the Radio Astronomy Centre, Ooty, on August 23-24, 2024.



3. Kalaivani S has completed "Python Programming Internship" on June 22, 2024, by CodSoft.
4. On July 15, 2024, several students including M.Mathubala, Sumithran K, Lakshminarayananaraj L, and Pradeepraj K participated in internships at the Electrical Board Office, Thethampakkam.

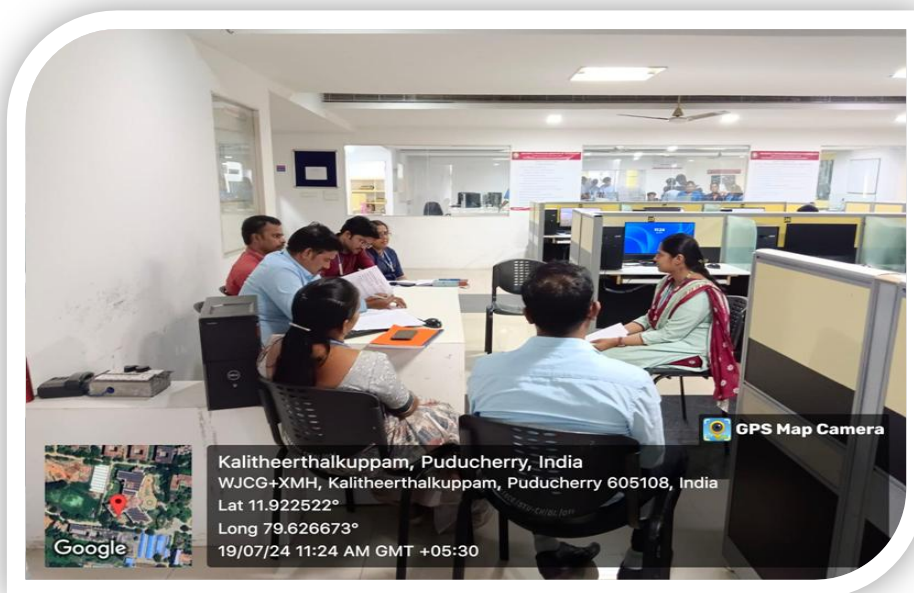


5. Heresh.M has successfully completed the industrial internship training program on “Medical Device Manufacturing Industrial training” from Aerobiosys on 12/11/2024.



6. Department of ECE organized a Mock interview for the Final year student batch 2021-2025 on 19.7.2024 and 22.7.2024





## Alumni Activities

1. An Interview Awareness session among Final year ECE students was conducted by Alumni students Mr. Dharanidharan, Cybersecurity Analyst, Hexaware, Mr. Balaganapathy Sales Force Developer, System Engineer, TCS on 27.07.2024



2. Mr. Velmurugan, Alumni student of ECE, Nullogic Private Limited conducted a session on "Salesforce Fundamentals" for III year ECE Students on July 13, 2024.



3. A motivational talk was arranged for III year ECE students by Mr. B. Prakashraj, Alumini student of ECE, Senior Test Analyst Cognizant Technologies on July 27, 2024.

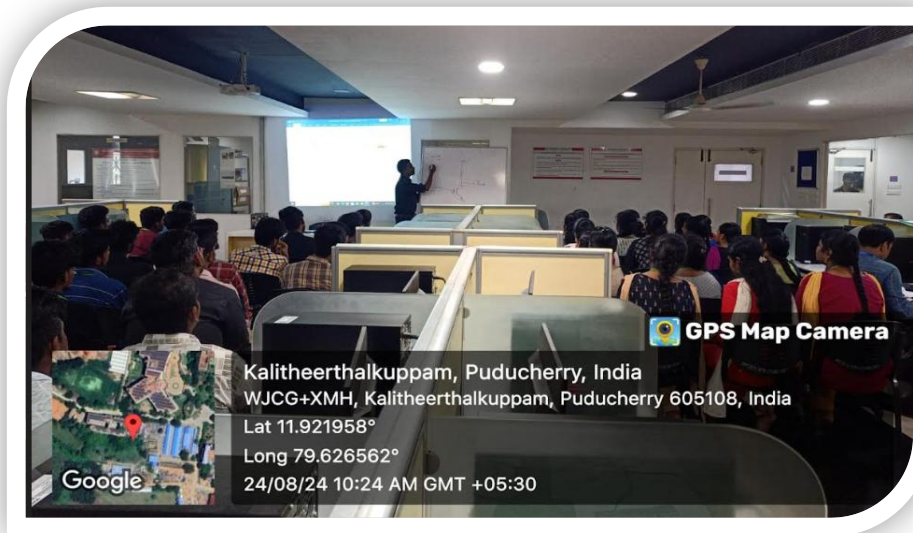


### **Activities of the Department (guest Lecture /workshop/special Lectures)**

1. On August 14, 2024, Mr. A. Aashiq Ahamed, CEO of Bistate System, Puducherry, delivered a guest lecture on "VLSI Design Methodologies" conducted by Dr. S. Arunmozhi (HOD/ECE) and D. Marygetsy (AP/ECE).



2. Mr. J. Ajayan, Professor/Dean of ECE at SR University, Telangana, led a workshop on "Digital Design IC using Advanced Spice-Tools," with Dr. S. Arunmozhi (HOD/ECE) and Mr. Sivaraj (AP/ECE) facilitating on August 24, 2024



3. Mr. G. Laxmi Narayanan, HR-Director at Manuvera Digital Solutions Private Limited, presented a guest lecture on "Skills and Personality Management in IT Culture," organized by Dr. S. Arunmozhi (HOD/ECE) and Mr. R. Sambath Kumar (AP/ECE) on August 26, 2024.





4. Dr. S. Arunmozhi, HOD/ECE and Mr. V.Rajesh, AP/ECE conducted a Guest lecture on " The future of Embedded system: Navigating opportunities in Today's industry by Mr. Viswanadh, Vice President, Echo brains and Mr.Tejas, Embedded Trainers on 30th August 2024.



5. Mrs. V. Mohana conducted workshop for II year ECE students on August 13-14, 2024.
6. Dr. S. Semmalar handled Research Methodology Lecture on the topic of Crafting Clarity: Mastering the Art of Research Paper Writing on 21.8.2023 for the IV year ECE students



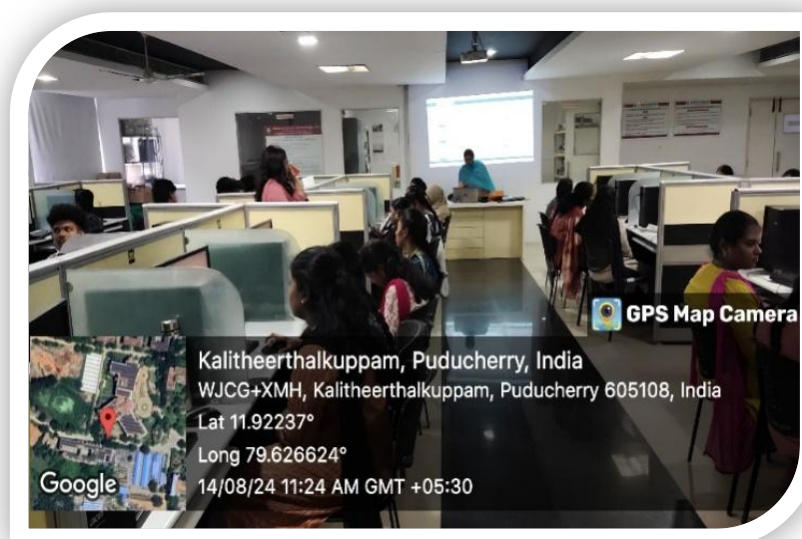
7. On August 20, 2024, Dr. R. Sofia presented a Quality Improvement program on the topic "Mapping IKS for Quality Enhancement in Image Processing." for II year ECE students.



8. Dr.S.Semmalar conducted a workshop on Optical link booster using optical simulation software for IV year ECE on 20-08-24.



9. Workshop on “Master the Art of IOT and Embedded Systems: Builds Innovative Smart Solutions” on 13.8.2024 to 14.8.2024 by Ms. Shanthini and Ms. Ramya Founder and Trainer, of Datanerdz.AI, Puducherry.

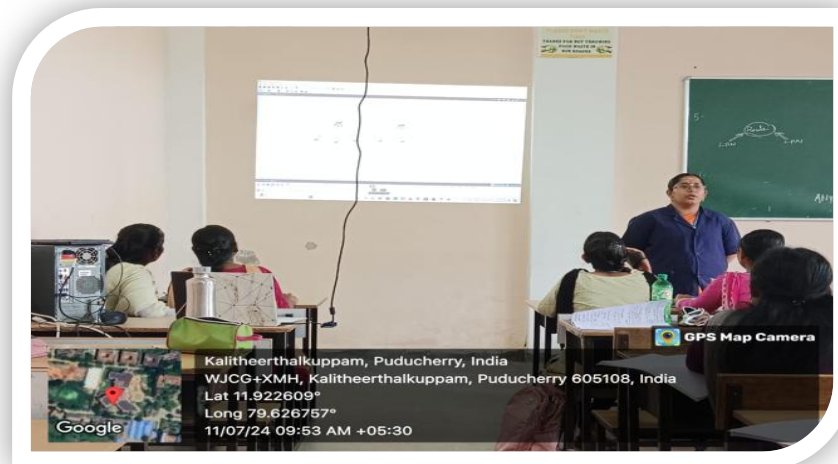


10. An endowment Lecture on “Underwater wireless drone for Sustainable Development” was conducted by Mr. Jagadeesh Kanna, CEO, Vaayusastra Aerospace PVT LTD, Chennai on 5<sup>th</sup> October 2024.

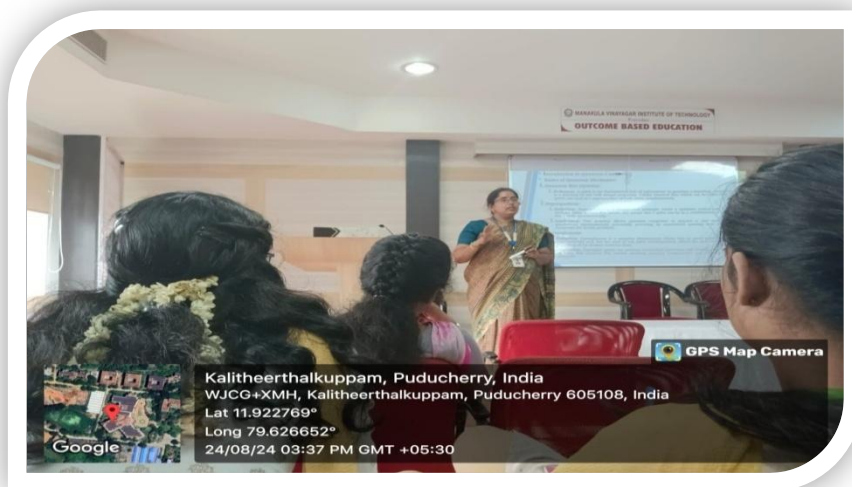




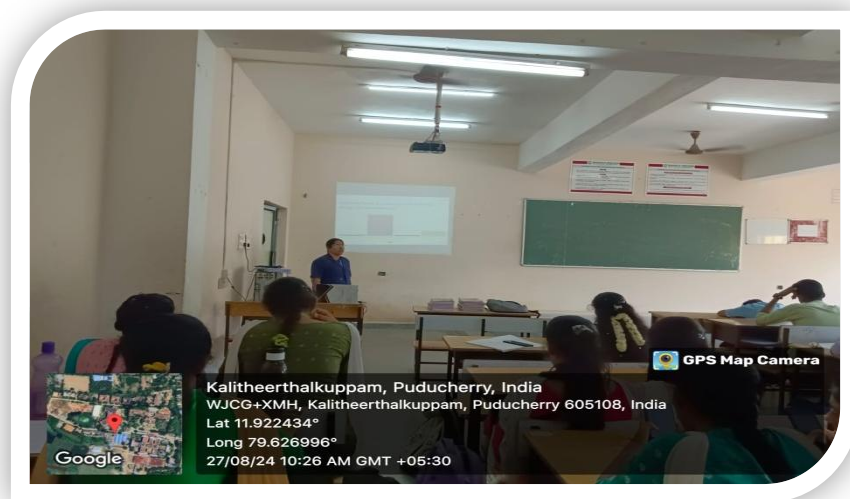
11. A workshop on "Python for Data Analysis using AI" was conducted by A2Z Edulearning Hub LLP on June 18 and 19, 2024.
12. Dr. R. Sofia led a course on "VAC - Cisco Packet Tracer" for III year ECE students from July 9 to July 13, 2024.



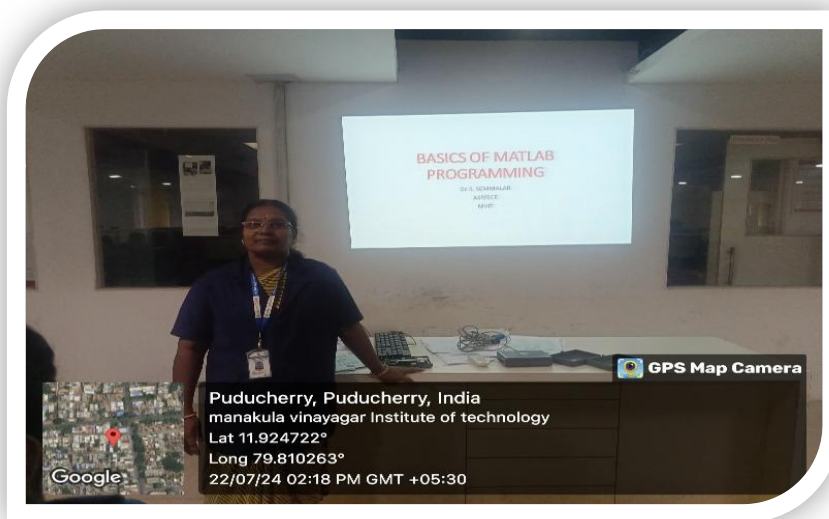
13. Dr. R. Sofia AP/ECE, conducted a CGC program for II year ECE A sec students on 24.8.2024 titled "Beyond the Degree: Preparing for the Future of Work and Industry Trends"



14. Dr.R. Sofia, AP/ECE, handles a Research Methodology Seminar on “Software tools in Engineering for Research” dated on 27th August 2024



15. On July 22 and 26, 2024, Dr. S. Semmalar facilitated a course on Basics of MATLAB Programming, with II year ECE students participating.



16. A course on Digital Logic Implementation using QCA, led by Mr. V. Rajesh conducted for II year ECE students from July 13-18, 2024.



17. On August 20, 2024, Dr. S. Semmalar facilitated a workshop on Optical Link Booster using optical simulation software.

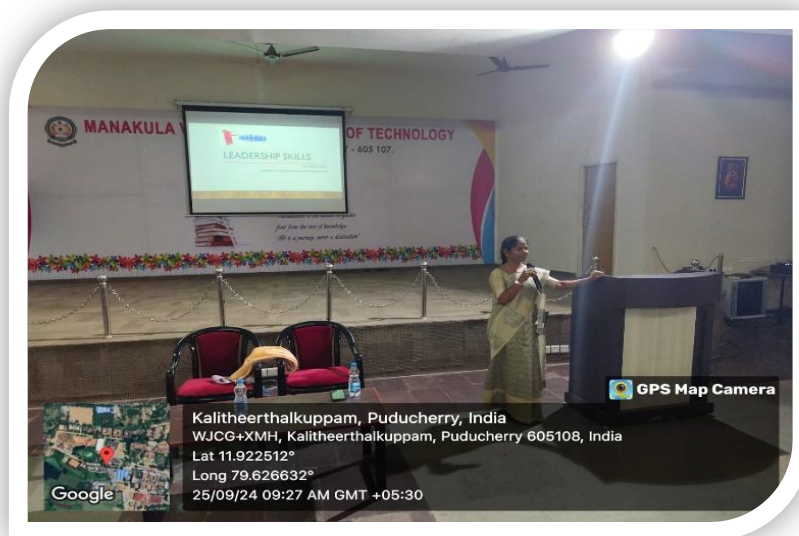


18. Dr. S. Arunmozhi, HOD/ECE, along with Dr.S. Semmalar, ASP/ECE facilitated a Quality Improvement Program (QIP) on "Testing and Measuring Electronic Instruments" conducted by Mr. Rajkumar Venkatesan for II-year ECE students on July 12, 2024.



19. Dr. Phemina Selvi Murugesan conducted a session on "Enhancing Qualities for Leadership Skill" for III year ECE students on September 25, 2024.





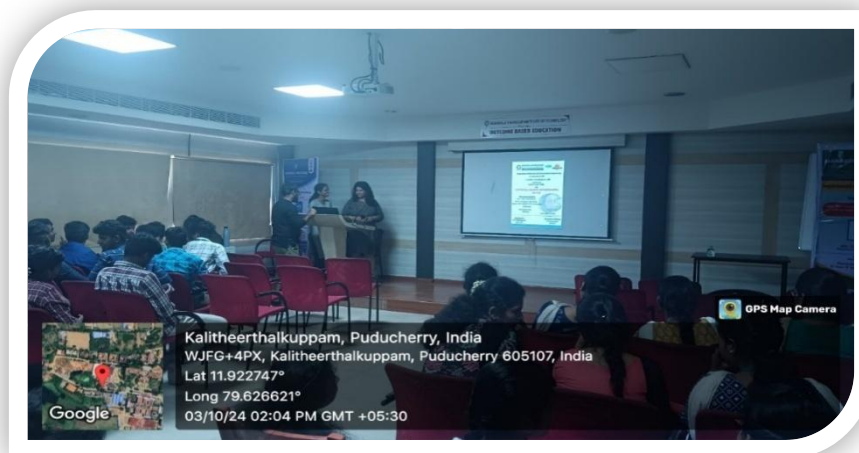
20. Mr. K Kumaran facilitated an IPR seminar on "Design Patent Application" for II-Year ECE students conducted by Dr.Dr. P. Jayakumar, JSIP design Solutions,Madurai. from July 9-13, 2024.



21. Dr. B. Hemakumar, Associate Professor, Dept of EIE, PTU, conducted a Seminar on Digital Intellectual Property for II year ECE students on 22.08.2024.



22. Mr. UmaShankar, Igene VFX School of Technology, Chennai presented a session as part of Career guidance program on Potential Career opportunities in VFX on 3.10.2024, for II year ECE students, organized by Mr.C. Thiagarajan, AP/ECE



23. An endowment Lecture on “The Next Frontier: Exploring the Convergence of Artificial Intelligence and Quantum Computing” conducted by Mr. V. Githendra, Quality Analyst, HCL, Chennai and V. Aswin, Engineer, Renault Nissan, Chennai on 24.8.2024 Mr. Jagadeesh Kanna held a lecture on "Underwater Wireless Drone" on October 5, 2024.



24. Dr. Sheela Ramachandran, Pro Chancellor, Atmiya University Quality Improvement Seminar ON “ Assessment Strategies for Autonomous Institutions ” Organized By IQAC in association with Department of ECE on 22.11.2024



25. National Friendship Day was celebrated on August 10, 2024, led by Mr. R. Sambathkumar.



26. World Paper Bag Day was observed on July 12, 2024, organized by Mrs. R. Vijayalakshmi.



27. Mr. C. Thiagarajan conducted a Code of Conduct program on "Principles of Conduct" on August 26, 2024.





6. Dr.S. Semmalar has got a appreciation certificate from MIT Square Group of Companies, London for initiating MOU between MVIT and MIT Square Group of Companies, London.
7. Dr.R. Sofia AP/ECE, Delivered the session on Mentimeter in the professional Development Programme conducted by IQAC on the title “ICT tools for Interactive Teaching and Learning” on 25th July 2024
8. Dr. R. Sofia, Mr. V. Rajesh, Mrs. R. Vithiya, Mrs K. Alamelu, Mr. P. Murali, Mr. R. Sambathkumar, has chaired the session titled ECE Track-1 AI and Image Processingor healthcare, Agriculture in ICSCAN 2024
9. Dr. R. Sofia, has been a part in organizing the 1st international Conclave on Sustainnovation (ICS 1.0) on 29th Nov 2024.
10. Mr. M.Sivaraj, Got a Best paper award in ICSCAN 2024 for presenting the paper titled A Comprehensive Study on Recess Gated Fe-doped AlN/Gan/ AlGaN HEMT for next Generation
11. Ms. R. Vijayalakshmi got a Best paper award in ICSCAN 2024 for presenting the paper titled Revolutionizing Plant health: A Cutting-Edge approach to leaf Disease Detection, Classification and severity Estimation by Advanced Image processing.



## **EDITORIAL MEMBERS**

**1. Dr.S.ARUNMOZHI**

**Professor & Head**

**2. Mr.V.RAJESH**

**Assistant Professor (Sr.Grade)**

**3. Mrs.V.MOHANA**

**Assistant Professor**

**Department of Electronics and Communication  
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