MANAKULA VINAYAGAR INSTITUTE OF TECHNOLOGY
Kalitheerthalkuppam, Madgadipet 605107

NEWSLETTER AUG 2023(ODD SEM)

DEPARTMENT OF
ELECTRONICS AND COMMUNICATION

ABOUT THE INSTITUTION

Manakula Vinayagar Institute of Technology (MVIT) was established in 2008, with a view to provide quality technical education to young aspirants. The institution is affiliated to Pondicherry Central University and is approved by AICTE, New Delhi.

Our college is professionally managed and guided by the members of the board of Management with vast experience, knowledge and academic excellence, with a vision to achieve the most preferred position globally.

The high performance of our Institution is witnessed by the results produced by our students in the university exams. Our Institution has acquired enviable status for maintaining highest order of discipline.

MVIT is revitalizing itself, to face the challenging expertise with reputed team of faculty. We facilitate to produce efficient Professionals who can meet the demands of the expectations and shine in their profession through innovative ideas, knowledge and team work.

CHAIRMAN'S MESSAGE

Sri Manakula Vinayagar Educational Trust was formed with the objective of imparting quality technical education, medical education and other relevant field of education especially to the weaker section of the society.

The Trust is sponsoring the colleges with the state of art facilities and modern technologies for making our students employable as well as to become successful entrepreneurs. We are running all the colleges in the highest order of discipline among the students and personally take care of their studies, successful completion of the course. We take utmost care about students future and also believe that they all are our customers.

All the colleges have got highest order of discipline, won the reputation and opinion of public and industrialists. That is the success of our institutions which makes us to be a leader in Education.

VICE CHAIRMAN'S MESSAGE

The transition from school to college is a very big step in life. By choosing to create a future for yourself from our institution means that we, the teachers and management at MVIT are responsible for your successful graduation and growth. You will cherish every day at your college, right from day one, you will feel welcome by all of us here – your seniors, your new professors, and members of administration you will get to interact with. What's more the energetic environment will have you charged up to achieve your dream with confi- dence like never before.

It is your career path that you have now embarked upon, which will be a remarkable journey in itself that will prepare you for a life beyond college. We pray and will work with you to see you become one with the society where your contribution will make a definitive difference to our world.

The commitment from us begins from day one - to work with you and walk with you through each day all through the years you will spend here which is your home away from home. The learned staff members and the ever accessible Management are always with you to guide you through your path and help you nurture your dreams and fulfill them – by empowering you to realize your true potential. Be it studies, sports or any extracurricular activities, you don't just graduate with a degree and a certificate – but become a graduate of life and a true citizen of the world of tomorrow.

SECRETARY'S MESSAGE

It give me immense pleasure to present few words as prologue to Seventh Issue of MVIT News Letter. I congratulate all the faculty and students and the editorial board for bringing out such a beautiful issue. Empowerment of students for their all round development through education is our appreciated motto.

Today Higher Education means much more than merely acquiring knowledge. It is acquisition of knowledge and skills, building character and improving employability of our young talent, the future leadership.

I am proud of being the Secretary of SMVE Trust dedicated to the causes of better India. Come a let's give our best and make the institution as a modern temple of learning through our diligence, devotion and dedication. Wishing you all the best...!

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 Chairman 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 Almighty 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 24th to 26th 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

DM 1 : Deliver cutting -edge education in Electronics and Communication Engineering through Experiential learning , Project -Based Curricula , and Digital Pedagogy to create Industry -ready Professionals.

DM 2 : Foster research temperament by establishing state -of -the -art laboratories and innovation centers focusing on emerging technologies like IoT, AI/ML, 5G/6G and Quantum Computing.

DM 3 : Enhance industry collaboration through Internships , live Projects and technology transfer initiatives while promoting Entrepreneurial Mindset among students.

DM 4 : Develop socially conscious engineers capable of applying Electronic and Communication technologies for sustainable development and societal welfare.

PROGRAMME EDUCATIONAL OBJECTIVES

Graduates of Electronics and Communication Engineering will

PEO 1 Professional Excellence : Serve as innovative electronics and communication professionals , demonstrating expertise in emerging technologies.

PEO 2 Research Leadership : Alumni will excel in research initiatives and entrepreneurial ventures , leading technological innovation in emerging electronics and communication domains.

PEO3 Sustainable Engineering: Develop and implement sustainable electronic and communication solutions addressing global challenges while ensuring environmental responsibility and societal welfare.

PEO 4 Ethical Growth : Graduates will demonstrate ethical leadership in engineering teams while pursuing professional growth and contributing to the field through mentor ship

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

Engineering Graduates of will be able to:

PO1: **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal and environmental considerations.

PO4: **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

ODD NEWS LETTER

(AUGUST 2023 – DECEMBER 2023)

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. Dr.S.Arunmozhi, HOD/ECE organize and coordinated the UHV program for I year students on 07.09.2023.

2. ICSCAN 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 chief .guest Dr.V.Murugesan, Advisor Cresent University, Chennai from 17.11.2023 to 18.11.2023

3. Dr.S.Arunmozhi,HOD/ECE have attended the idea for the vision "VIKSIT BHARAT @2047" in Raj Nivas organized by the Indian government on 11.12.2023.

4. Dr.S.Arunmozhi,HOD/ECE, D.Marygetsy,AP/ECE organized & coordinated two days workshop on "WEB WARRIORS1.0" in simulation lab MVIT from 21.12.2023 to 22.12.2023.

5. Dr.R.Sofia organized a guest lecturer in the topic of "Design Thinking, critical Thinking and Innovation Design" through online portal on 27.06.2023

6. M.Sivaraj attended FDP on "VLSI to System design: Silicon to end application approach" Conducted by (AICTE) in association with Arm Education and ST Microelectronics with support from Cadence Design Systems from 31.08.2023 to 04.08.2023.

7. Mr.V.Rajesh,Mrs.R.Vithiya,Mr.P.Murali,Mr.S.Gowshameed,Dr.A.Shankar attended FDP on "Recent Trends in Healthcare" by Vishwakarma Institute of Information Technology from 18.12.2023 to 22.12.2023.

8. Mrs.D.Marygetsy attended FDP on "Communication & Computation" by Dr.MGR Educational and Research Institute from 18.12.2023 to 22.12.2023.

9. Mrs.D.Marygetsy, Mr.R.Sambath, Mr.M.Sivaraj attended FDP on FDP on "Emerging Trends In VLSI Device,Circuit & System Design" conducted RVR & J.C college of Engineering from 09.11.2023 to 11.11.2023.

10. Mrs.D.Marygetsy,Mrs.K.Alamelu, Mr.P.Murali, Ms.R.Vijiyalakshmi attended Professional development program on "Advanced Excel" Conducted by Manakula Vinayagar Institute of Technology on 12.08.2023.

11. Dr.R.Sofia, Mr.I.Parthiban attended Faculty development program "High Impact Skills in Teaching" Conducted by Manakula Vinayagar Institute of Technology from 31.07.2023 to 04.08.2023.

12. Mrs.D.Marygetsy, Dr.V.Gowthami, Mrs.K.Alamelu, Ms.R.Vijayalakshmi "2weeks Online FTP-Entrepreneurship (Mobile App)" Conducted by Madras Institute of Technology from 26.11.2023 to 08.11.2023.

13. Dr. S. Arunmozhi, HOD/ECE, also published a paper titled "Detection of TB from Chest X-ray: A Study with EfficientNet" at the 2023 International Conference on System, Computation, Automation and Networking (ICSCAN).

14. Dr. S. Arunmozhi, HOD/ECE, authored a paper titled "ResNet/ResNetV2 Supported Framework for Rice-Plant Disease Detection using Leaf Data" at the 2023 International Conference on System, Computation, Automation and Networking (ICSCAN).

15. Dr. S. Arunmozhi, HOD/ECE, published a paper titled "CNN Framework for Automatic Segmentation of Breast Section from Thermal Images" at the 2023 International Conference on System, Computation, Automation and Networking (ICSCAN).

16. Dr. S. Arunmozhi, HOD/ECE, also published a paper titled "Monitoring Street Light using Power Line Carrier Communication (PLCCC) & SCADA" at the 2023 International Conference on System, Computation, Automation and Networking (ICSCAN).

17. Dr.R. Valli, AP/ECEpublished a paper titled "Segmentation of Diabetic Foot-Ulcer from Tsallis and Aquila-Optimizer Enhanced Images" in the 2023 IEEE Conference Proceedings, Volume 2023, Issue ICSCAN, pages 1-5.

18. Dr. R. Sofia published a paper titled "Cortex Feet Pressure Balancing for Diabetic Patient" METSZET Journal, Vol. 8. issue 6, July 2023.

19. Dr.R.Sofia published a paper titled "Infrared Image Enhancement Using Nearest Neighborhood Contrast Pixel Matching" METSZET Journal, Vol. 8. issue 6, July 2023.

20. Dr.R.Sofia published a paper titled "Automatic Medicine Dispatcher Using Tele-Monitoring System" METSZET Journal, Vol. 8. issue 6, July 2023.

21. Mr.P.Murali published a paper titled "Augmented Reality based real time automation for IOT devices" METSZET Journal, Vol. 8. issue 7, July 2023.

22. Ms.D.Marygetsy have published a book titled "Modern VLSI Design on SOC", Scientific International Publishing House, India.

23. Sambath Kumar, AP/ECE Distributed lens based Beamforming for Robust Millimter wave 5G Network 2023 International Conference on System, Computation, Automation and Networking (ICSCAN)

24. A. Shankar published a paper titled "A Robust Method of Hiding Patient Secret Data Using Hybridization of Hyperchaotic System with LSB-Based Encryption for Medical Images" at the 2023 International Conference on System, Computation, Automation, and Networking (ICSCAN), IEEE, 2023.

25. A. Shankar, AP/ECE, also published a paper titled "A Robust Blind Watermarking Technique for Improved Medical Image Security" at the 2023 International Conference on System, Computation, Automation, and Networking (ICSCAN), IEEE, 2023.

26. R. Sofia, AP/ECE, published a paper titled "Design and Implementation of Low-Cost Diabetes Level Prediction Using Machine Learning" at the 2023 International Conference on System, Computation, Automation, and Networking (ICSCAN), IEEE, 2023.

27. R. Sofia, AP/ECE, also published a paper titled "Implementation of Information Decoding and Interference Signals for Energy Harvesting" at the 2023 4th International Conference on Smart Electronics and Communication (ICOSEC), Trichy, India, 2023.

28. Dr. S. Arunmozhi, HOD/ECE, published a paper titled "Automatic Concrete Surface Crack Recognition using EfficientNetV2 Variants" at the 2023 International Conference on System, Computation, Automation and Networking (ICSCAN).

29. Mrs.R. Vithiya, AP/ECE published a paper titled "Expressive and Deployable MIMO Using Chaos Shift Keying System" at the 2023 International Conference on System, Computation, Automation, and Networking (ICSCAN) in Puducherry, India.

30. Mrs. V. Gowthami, AP/ECE, published a paper titled "Raw Bayer Pattern Image Synthesis on Histogram of Gradients for Pedestrian Detection" at the 2023 International Conference on System, Computation, Automation, and Networking (ICSCAN).

31. Mr. V. Rajesh, AP/ECE, published a paper titled "Comparing the Performance Measures of Underwater Image Enhancement Through Improved CNN with Gaussian and Kalman Filter Method" at the 2023 International Conference on System, Computation, Automation, and Networking (ICSCAN).

32. Mr.S.Gowshameed has attended Webinar on "Journey Beyond Chip War-Art Of Chip Design" Conducted by Maveensilicon on 07.10.2023.

33. Mr.K.Kumaran have organized "Superset Demo" online meet on November 2023.

Student's activities:

1. D.Sherlin Iswarya from III Year completed the diploma course in UiPath Studio Family-Learnathon India on 09.09.2023.

2. D.Kirubagaran from III-A completed the Python fundamentals for beginners in the portal Great Learning Academy on 10.09.2023.

3. K.Reventh from III-A attended the workshop conducted through placement cell on the topic of "API and web apps creation" by TCS on 14.09.2023.

4. S.Ramya from II year has completed "Exploring the Vast Capabilities of ChatGPT" course in VYTCDC online platform on 14th Oct 2023

5. N.Cedrin from III Yr-A has completed the course "Micropython Primer" in NIELIT, Calicut on 12.12.2023.

6. T.Niranjana Sara from III YR- A has completed the course " Introduction to HTML" through the platform Sololearn on 29.12.2023.

7. M.Subiksha, K.Reventh, C.Cedrin, Naveen Raj, Srinidhi Valliappan, A.Monika, Nirmal Raj, Dasari Sherlin Iswarya, III YR ECE students has attended "Consumer outreach programme" Conducted by Manakula Vinayagar Institute of Technology on 11.10.2023.

8. Dasari Sherllin Iswarya from III-A has completed "Excel for Beginners" course in Great Learning online platform on October 2023.

9. N.Akshaya from II year has attended seminar in the topic of "Drone Technology" organised by MSME-Startupindia through virtual mode on 29.10.2023

10. Avinash Raman from II year has completed "Analytics with SQL and PYTHON" course in Great Learning online platform on October 2023.

11. S.Ramya from II year has completed "UI/UX For Beginners" course in Great Learning online platform on 10.10.2023.

12. S.Ramya from II year has completed "Introduction to Digital Marketing" course in Great Learning online platform on 10.10.2023.

13. D.Sherlin Iswarya from III-A have completed the diploma course in UiPath Studio Family-Learnathon India on 09.09.2023.

14. Dasari Sherllin Iswarya from III-A have completed "Getting started with Bard" course in Great Learning online platform on Nov 2023.

15. A.Sujitha from III-A have completed the course "VLSI for Beginners" through online in National Institute of Electronics and Information Technology, Calicut. From 10.11.2023 to 14.11.2023.

16. Dasari Sherllin Iswarya from III-A have completed "ChatGPT Beginners" course in Great Learning online platform on Nov 2023

17. A.Monika from III-A have completed "Introduction to MS EXCEL" course in Simplilearn online platform on 13.11.2023

18. A.Monika from III-A have completed "Marketing Analytics and Retail Business Management" course in the Digital Adda online platform on 22.11.2023.

19. Akshaya, Kokila II yr ECE students participated in Presentation Competition for World Television Day conducted by Manakula Vinayagar Institute Of Technology on 21.11.2023.

20. S.Ramya II Yr ECE Student has participated in Kalaizhgar Nootrandu Vizha Tamil Oratory held at Manakula Vinayagar Institute of Technology on 4.11.202.

Extension and NSS activity

1. Dhivya.A, III Year ECE student participated in the Painting Competition held at Pondicherry Heritage in November 2023.

2. Final Year ECE students took part in the Volleyball competition held at Pondicherry University on 08.12.2023.

3. Prasanth, IV Year ECE student participated in Badminton during the sports event at Pondicherry University on 10.12.2023.

4. K.Ramprasath, R.Suji has donated blood in Blood Donation Camp held at MVIT on 26.09.2023 as part of NSS activity.

Industrial Interaction Details/ Internship and Implant Training

1. Mr.M.Baskaran from R&D and S.Vishnu student of IV year ECE have installed the product counter display in L&T industry on 01.09.2023 .

2. Mr.E.Ramassamy, Mr.V.Rajesh, Mrs.D.Marygetsy and Ms.R.Vijayalakshmi handled UHV class for I year from 07.09.2023 to 15.09.2023.

3. Vanmathi, S.Sanjaivarathan and Suji from III-A has undergone internship training at NLC INDIA LIMITED in the topic of "Study of telecom components in thermal power station-I expansion" from 7.09.2023 to 20.09.2023.

4. A.Monika,S.Hariharan and Thanuja from III Year ECE have undergone Internship Training in Whirlpool Private Ltd, Pondicherry from 9.10.2023 to 13.10.2023.

5. III Year students have participated in IMPEXPO 2023 organized by MSME government of Pondicherry on 5.10. 2023.

6. R.Avinash Raman have done 1 month Internship in the topic of " Data Science" at OASIS INFOBYTE in the month of September 2023.

7. A.Monika and N.Hariharan from III-A have attended the garnishing talent conducted by Eaton through the placement cell in the month of September 2023.

8. Mrs.D.Marygetsy have attended IWIN member meet in TAB Office, White Town, Puducherry on 18.11.2023.

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

1. ECE Department has organized the "Consumer Out-research Program" -Telecomm Regulatory Authority of India on 11.10.2023.

2. Dr.S.Arunmozhi,HOD/ECE and D.Marygetsy,AP/ECE organize and coordinates two days workshop on "WEB WARRIORS1.0" in simulation lab MVIT on 21.12.2023 & 22.12. 2023.
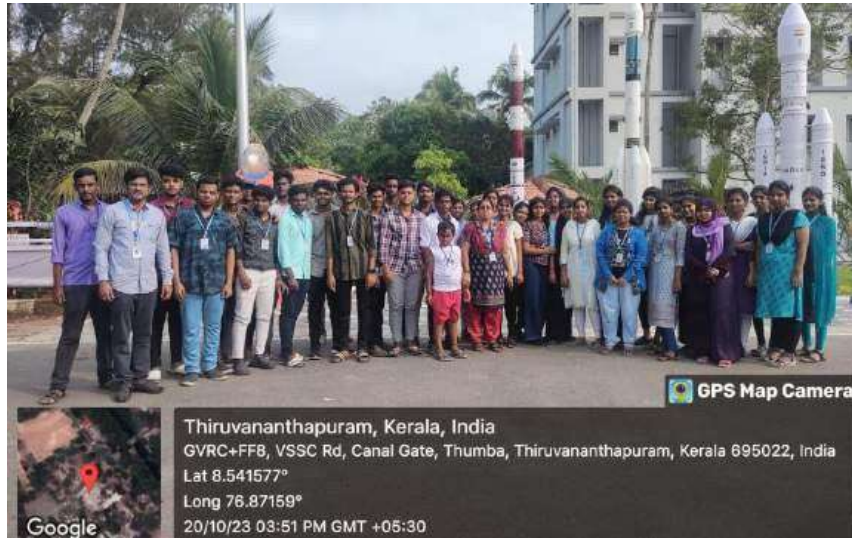

3. Dr.S.Arunmozhi,HOD/ECE,D.Marygetsy,AP/ECE organized and coordinates competition in the topic of "Design Thinking Contest" held on 23.12.2023 in the AV Room.

4. S.Vishnu from IV Year have got an opportunity to acquire the knowledge from Industrial Visit to Global Automotive Research Center, Oragadam. from this industry on 19.10.2023.

5. Mr.E.Ramasamy, AP/ECE organized an Industrial Visit to ISRO-Thiruvananthapuram for the III Year students on 19th October 2023.

Thiruvananthapuram, Kerala, India
GVRC+FF8, VSSC Rd, Canal Gate, Thumba, Thiruvananthapuram, Kerala 695022, India
Lat 8.541577°
Long 76.87159°
20/10/23 03:51 PM GMT +05:30

6. Mrs.Alamelu, AP/ECE organized the guest lecture through online mode in topic of "WIFI Working Principles" delivered by the resource person Mr.Nishanth Radja Mohane,Senior QA Specialist, Espressif, Bangalore.on 12.11.2023.

Kalitheerthalkuppam, Puducherry, India
WJFG+6G7, Kalitheerthalkuppam, Puducherry 605107, India
Lat 11.922817°
Long 79.626313°
04/11/23 03:22 PM GMT +05:30

7. Mrs.R.Vidya,AP/ECE coordinated the guest lecturer in the topic of "Emerging Technologies in Artificial Intelligence for Wireless Communication" by the resource person Mr.K.Premkumar on 14.10.2023.

8. Mrs.D.Marygetsy organized the guest lecture in the topic of "Product development using embedded system" by the speaker Dr.R.K.Pongiannan, Professor, Dept. Of Computing Technologists Institute of Science and Technology on 30.09.2023.

Achievements and Awards

1. A.Vanmathy and Srinidhi k Valliappan got Women innovator certificate for presenting the innovation idea in Aluminum sector during diamond jubilee celebration G20 on 60th Independence day 2023 in MSME.

2. Karthik.K.M, Anbarasan.S, YuvanShankar, S,Sathiya.K, Aravindraja.V, Bhavadharani.S.I, II ECE has won the SIH 2023 (Hardware Edition) for "Low Cost Myoelectric Prosthetic Arm" held at Galgotias University, Noida. The team mentored by Dr.Valli and Mr. Manoj, Ignite skylab

3. Mrs.D.Marygetsy Awarded with a unique GUINNESS RECORD for contribution in the book entitled "World 2023 Wide Outcome on Research and Latest Development" published by ESN publications with ISBN 978-93-95196-75-8 on 27th August 2023.

4. Dr.Vinoth,AP/ECE has been awarded for the "Best Research Faculty" from IQAC of Manakula Vinayagar Institute of Technology, Puducherry on Nov 2023.

5. Dr.V.Gowthami,AP/ECE has been awarded with Scholastic award for the research paper presented in ICSCAN 2023-ECE TRACK 3 at Manakula Vinayagar Institute of Technology,Puducherry on 17.11.2023

6. A.Monika from III ECE students have done more than 50 designs through CANVA on 22.11.2023

7. Devanathan, Suriya and Karthik from II year have attended the GENESIS'23 in Pondicherry University and won 1st prize, October 2023.