# ELECTROZ

## DEPARTMENT OF ELECTRONICS & COMMUNICATION

### MARIAN ENGINEERING COLLEGE , KAZHAKUTTOM

## CONTENTS:

### VISION OF THE DEPARTMENT

"Emerge as a centre for quality education and research, to grow in pace with the rapidly changing technologies and create Electronics and Communication Engineers capable of accepting new challenges for the service of mankind."

### MISSION OF THE DEPARTMENT

- Impart quality education based on the curriculum, contemporary technologies, value based education that helps students groom into a highly competent Electronics and Communication Engineer.
- Constantly motivate students and faculty members to generate ideas and accept the challenges to provide solution for social needs and to endow competent professionals to undertake research and developmental activities.
- Promote academic growth for students by encouraging post-graduate and research programs.

## FROM DESK OF HEAD OF THE DEPARTMENT:

Staff Editor In Charge
**VINITHA B ELZA**
HOD,ECE

Dear Students and Faculty Members,

As we embark upon the academic year 2024-2025, I extend my warmest greetings to each one of you. This year promises to be a journey of discovery, innovation, and growth as we continue our pursuit of excellence in engineering education.

To our esteemed faculty members: your dedication and guidance are instrumental in shaping the minds that will lead tomorrow's innovations. Your commitment to imparting knowledge and fostering critical thinking is truly commendable. I urge you to continue inspiring our students with your passion and expertise.

To our talented students: you are the heart of our institution. Your enthusiasm, curiosity, and determination are the driving forces behind our collective success. Embrace the challenges and opportunities that come your way this academic year. Let your creativity flourish, and let your passion for engineering propel you towards new heights.

Together, let us uphold the values of integrity, collaboration, and academic excellence that define our institution. Let us strive not only for personal success but also for the betterment of society through the application of our engineering skills and knowledge. As we commence this new chapter, I wish each and every one of you a fulfilling and rewarding academic year. May you find success in all your endeavours, both inside and outside the classroom. Remember, each challenge is an opportunity to learn and grow.

With heartfelt congratulations, best wishes and prayers to the Almighty for the new academic year '24-'25.

# MARIAN CENTER OF EXCELLENCE IN AI & ML

Marian Center of Excellence (CoE) in AI & ML was established by Dept. of ECE, in the year 21-22 for scaling up the skill set of students through out of the syllabus learning, industry and live project exposure. CoE collaborates with UST, a leading multinational company for attaining its vision. Two batches of students were trained by UST in the fundamental of AI & ML. For the academic year '23-'24 , a preliminary discussion on training the second batch of final year students (2020-2024 ECE) batch through Center of Excellence in AI and ML took place on the 1st week of January, 2024. Mr. Sthanu Thampi and Mr. Thomas Koshy addressed the batch of 52 students who have registered on 19th March, 2024.




As part of Centre of Excellence (CoE) Activities Marian CoE and
UST has renewed the MoU signing on 29th April, 2024.






**The 2020-2024 placed students of
UST through CoE ,were given the offer
letters on 11th June , 2024**

## DEPARTMENT ACTIVITIES



On 22$^{nd}$ and 23$^{rd}$ April, 2024 the Kerala Block Chain Academy in collaboration with Department of ECE, organized a 2 day training program coordinated by Prof.Minnu Jayan C. and Prof.Preetha S.L for the registered students of ECE, ES and EEE. The Resource persons were Nikhil V Chandran R&D Engineer, Sumi Maria Abraham R&D Engineer and Niraja Shenoy R&D Engineer from Digital University of Kerala. The Block chain certificates were received by 16 students out of the 21 registered candidates.





• The Faculty of Department of Electronics, visited the United Electrical Industries Ltd. On 14th June, 2024.

- The 2020-2024 ECE final batch students were bid Adieu on 3rd June 2024, a small sent-off party was arranged by the department faculty.



Industrial Visit
DEPARTMENT OF ELECTRONICS
Koodamkulam Nuclear Power Plant
18TH NOVEMBER, 2023
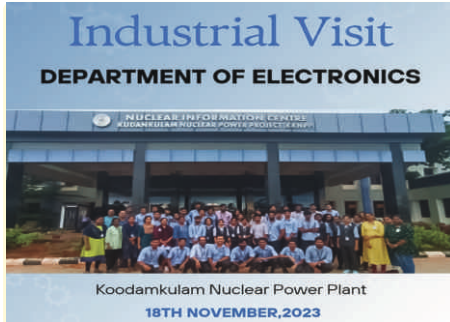
- ECE Department IV from 21st March to 27th March, 2024.
Place of Visit: Wayanad, Mysore, Dandeli, Goa
Industrial Visit: kaynes Technology India Ltd., Mysore (Electronic device manufacturing company)



**PROJECT EXHIBITION - TECH EXPO 2024**



- On 07-05-2024, the Department of Electronics organized an exciting and informative Tech Expo at Project Room (Main Project of S8 students) and Microcontroller Lab (Mini project of S6 students). The event aimed to showcase the talents and innovations of our students, foster interest in technology, and provide a platform for students to exhibit their projects and research in various technological fields.



**TECH EXPO on 7-12-2023**

Based on the two day workshop on Arduino on 13th and 14th November, 2023 a competition was held for the S3 ECE and ES students (2022-2026) on 7th December, 2023. Of the 11 batches who participated the 1st prize was won by Kiran, Shreyas and Sacheth of ES batch for their product

**Two day workshop on Arduino by Aester India Pvt. Ltd.**
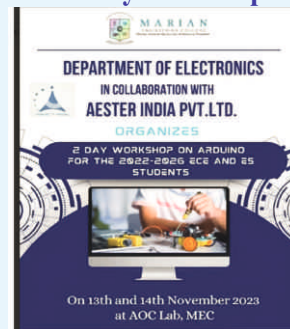


Two day workshop was organized by the Department of Electronics in collaboration with Aester India Pvt. Ltd for the 2022-2026 ECE and ES students on 13th and 14th November.

**AUXILIUM- an Assistive Technology club on 14-11-2023**
On 14th November,2023  Dr. Ashmi M (Lead Project Scientist), Dr. Priyalakshmi S.,



(Project Scientist) & Mr. Deepu Raj, (Senior Engineer)of  National Institute of Speech and Hearing (NISH), inaugurated the Club AUXILIUM- an Assistive Technology hub coordinated by the Department of ECE, and as part of that an awareness session was taken by the guests of Honour

Expert Talk DSP and its Applications was held at
ECE Semninar Hall on 31$^{st}$ October, 2023

# DEPARTMENT ACHIEVEMENTS

### FACULTY ACHIEVEMENTS

- Prof. Sreena V.G, Prof. Dhanya Mathew and Prof. Evan Kumar of Department of Electronics were awarded for College day celebrations for producing top score result more than 90% for the subjects taught in the academic year 23-24.

- Congratulations to Dr.M.Manoj ( Prof.ECE), for being part of Institutional patentee for the invention entitled "Walker for uneven plains with a spring suspension system, which was submitted in the year 2019.

# STUDENTS ACHIEVEMENTS

- Akul Balakrishnan, Nandini D.S, Nobiya Noyal, Naziya N.J of 2020-2024 ECE batch has bagged First place at College Level and Department level for the Marian Technology Innovation Contest MTIC 2024, held on 5th June, 2024. They were awarded with cash prize of Rs 10,000/-



- For Marian Technology Innovation Contest (MTIC 2023), the best ECE Project of the year 2023 was awarded to Adithya Sankar J.B, Ananya Carolin G and Hiba Bathool S of 2019-2023 ECE for their project Z-Cart: The Complete Shopper.

- Fiza Akbar ( 2021-2025 ECE) and Naziya N.J (2020-2024 ECE), had published a paper on May 2024, titled " IOT based Smart Crib", in International Journal of Advanced Research in Science , Communication and Technology (IJARSCT). They both were selected as Research Interns  by AStar-Telecom-360.

- The 2020-2024 ECE batch of students namely Nandini D.S, Naziya M.G, Nobiya Noel and R.S Akul Balakrishnan were the Second Prize winners with cash award of Rs 10,000/- for participating in UST Technical Expo in which more than 500 teams participated.

- Aswin J.S, Abhiram A.B, Savin, Ben S.Clive,Sherhan of 2021-2025 ECE batch participated in ECHO (Electronic Components Hackathon) on 5th April 2024 at CET, and bagged the Second Prize Position with cash prize of Rs 5000/-for their project "Arduino Based Wearable Glass for Drivers", that detects driver drowsiness to enhance road safety through timely alerts and automatic braking.
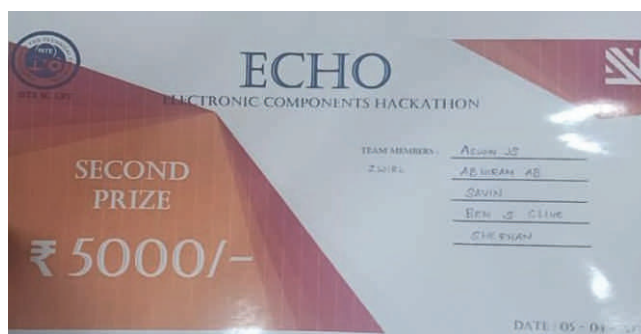




The students of S6 ECE namely Vimal Victor, Savin, Abhiram and Gouri (2021-2025) were selected as one among 10 in all Kerala level, to presened their project ' Agrospy 2.0' for the Rural Innovators Meet KSCSTE 2023, in November 2023.

# ALUMNI MEET @ ECE DEPARTMENT

2005-2009 ECE batch visited the Department during the Onam Holidays to cherish their memories during Onam Holidays of 2023



## ALUMNI ACHIEVEMENTS

- 2012- 2016 ECE graduated Sarath Warrier was awarded 'Certificate of Appreciation' for his meticulous execution in consistently delivering impactful contributions to the team outcome and organization goals, upholding Finastra commitment behaviours, fostering a positive mindset among his peers.
- 2017-2021 ECE Sruthi Savithri Vijayakumar, received token of apprecation for her valuable project deliverables.



## ALUMNI INTERACTION

Our alumni Arun R.K (2005-2009 ECE) Lieutenant Commander, Southern Naval Command, Indian Navy had given as session to the First year students (2023-2027) of ECE and ES on 14th March, 2024.

# FDP PARTICIPATIONS/
# JOURNAL & CONFERENCE PUBLICATIONS

## FDP PARTICIPATED

- Ms. Preetha S.L (AP, ECE) has participated in 5 days FDP on Digital Manufacturing organized by Mahaguru institute of technology, from 15.6.24 to19.6.24

- Ms.Minnu Jayan C.(AP,ECE) has participated in Online Workshop on Data Analytics & AI organized by Centre for Computer Science and Information Technology (CCSIT), Manjeri, University of Calicut on June 15th 2024

- Ms.Vinitha B Elza, has participated in two day workshop on 'Triboelectric Nanogenerator and Super capacitor' organized by Dept. of Mechanical Engineering, College of Engineering Trivandrum from 23rd to 24th March, 2024

- Ms.Vinitha B Elza, has participated in 'Recent Research Trends in Green Energy Technologies' organized by Dept. of Mechanical Engineering,College of Engineering Trivandrum from 8th to 12th January, 2024

- Ms. Minnu Jayan C. has participated in 5 day FDP on VLSI Design and Modelling organised by LBSITW from 8th to 13th January , 2024

- Ms. Minnu Jayan C. has participated in 5 day online FDP on 'Recent Trends in Biomedical applications using AI', organized by Department of Biomedical Engineering from 29th January to 2nd February, 2024 at St. Peters Institute of Higher Education and Research, Chennai.

- Ms.Vinitha B Elza and Ms.Minnu Jayan C, has participated in 'VLSI to system design:Silicon to End Application Approach' organized by AICTE and Arm Education and STMicroelectronics from 31st July to 4th August, 2023.

## CONFERENCE PUBLICATIONS

- Ms.Preetha S.L (AP,ECE) Has Published A Paper Titled " Rescue Assisting UAV", In The International Journal Of Progressive Research In Engineering Management And Science (Ijprems),Vol. 04, Issue 06, June 2024, Pp: 321-330

  E-Issn :2583-1062 Impact Factor: 5.725

- Minnu Jayan C. .(AP,ECE) has presented a paper in an International conference "IEEE International Conference on Innovations in Engg and Technology" paper titled "A Survey on the control techniques used in Process Control" 13-14 july 2023

- Vinitha B Elza (Asso.P,ECE) has presented and published in proceedings a paper entitled 'Impedance Spectroscopy Analysis of Low-Cost mixed halide MAPbI1-xClx, Highly Efficient FAPbI3 and Non-Toxic Lead-free CsBi3I10 Perovskite Solar Cells: A Comparative Numerical Analysis using SCAPS-1D',in the International Conference on advanced Functional Materials and Devices , AFMD 2024 held by SRM from 26th to 28th February, 2024

- Ms. Vinitha B Elza (Asso.P,ECE), presented paper entitled 'Numerical Analysis for Thermal Stability Evaluation of Perovskite Solar Cell using SCAPS-1D', in 7th International Conference on Nanoscience( and Nanotechnology (ICONN -2023) ,SRMIST DURING MARCH 27-29 ,2023. Manuscript was published in AIP Proceedings on 6th June, 2024. AIP Conf. Proc. 3170, 040003 (2024), https://doi.org/10.1063/5.0215922