FRANCIS XAVIER ENGINEERING COLLEGE

Department of Electronics & Communication Engineering

Newsletter (2023-2024 Even Semester)

Volume: 22   issue: 2

JAN 2024 - JUNE 2024

DEPARTMENT VISION

To develop Electronics and Communication Engineers by permeating with proficient morals, to be recognized as an adroit engineer worldwide and to strive endlessly for excellence to meet the confronts of our modern society by equipping them with changing technologies, professionalism, creativity research, employability, analytical, practical skills and to excel as a successful entrepreneur.

DEPARTMENT MISSION

1. To provide excellence through effective and qualitative teaching- learning process that equips the students with adequate knowledge and to transform the students' lives by nurturing the human values to serve as a precious resource for Electronics and Communication Engineering and nation.

2. To enhance the problem solving and lifelong learning skills that will enable by edifying the students to pursue higher studies and career in research.

3. To create students with effective communication skills, the abilities to lead a ethical values in order to fulfil the social needs.

STATEMENT OF PSOs

PSO1: Design, Implement and Test Embedded and VLSI systems using state of the art components and software tools.

PSO2: Design and develop the signal processing and communication systems for the real time application.

STATEMENT OF PEOs

PEO1: Acquiring Quality Education:
To develop in the students the ability to acquire adequate knowledge on all aspects of Engineering and continue to develop professionally through lifelong learning which would spark an interest for higher studies and cutting-edge research.

PEO2: Developing Multi-skills & professionalism:
To provide ability in dynamic leadership skills, powerful Discerning & Decision making and communication skills with amicable team spirit and ethical responsibility.

PEO3: Contemporary learning:
To get equipped with skills in trending technologies in industries, which delivers excellent job prospects and kindles the spirit of entrepreneurship

EDITOR: Mrs. J. Friska AP/ECE
CO EDITOR: Mrs. E. Francy Irudaya Rani AP/ECE
Student Editor : Jeffrin & Aswini

PONGAL CELEBRATION 2024

Pongal is a harvest festival and holds a lot of cultural and traditional significance in the minds of the people who are celebrating it. It is a celebration of prosperity that comes with a good harvest. It is a celebration to thank the Sun, Mother Nature and the various farm animals that help to contribute to a bountiful harvest. The Harvest festival Pongal was celebrated at Francis Xavier Engineering College on 13th January 2024 which unfolded the symphony of joy, weaving together the vibrant threads of tradition and unity.

The campus was adorned with flowers, thoranam and stacks of sugarcane to grace the occasion. The day started off with the preparation of Sweet Pongal by every Department, followed by which traditional sports like pot breaking and tug of war were conducted, which entrapped the students in awe and enthusiasm. Competitions like Rangoli and Pot painting for girls and Kabadi match for boys were conducted to add more vibrancy to the moment. The celebration took on a cinematic flair as the dynamic cast and crew of the much-anticipated "Marakkuma Nenjam" 2024 Tamil Movie joined in the festivities and infused the occasion with a unique blend of cultural exuberance and cinematic charm. Dr. K. Jeya Kumar, General Manager, (Development), Mr. S. Krishnakumar GM (Admission), Dr. V. Velmurugan, Principal, FXEC, Mr. J. Zahariya Gaberiel, Campus Manager along with an array of Management authorities honored the winners with mementos and shields. To add more spark to the day the student representative performed enticing dance performances which made the audience bubble with cheer. The display of traditional art of Silambam, Surul Kathi, Val Vithai and Tharkappu Kalaigal made the spectators feel proud of being a Tamilian. The entire day was fun filled and brought cheer into the heart and soul of all.

PONGAL COMPETITIONS

ENTREPRENEURIAL OPPORTUNITY THROUGH SEO —————— WORKSHOP

On 01.02.2024, a Workshop on "Entrepreneurial Opportunity through SEO" was organized by the Entrepreneurship Development Cell and IIC in association with the Electronics and Communication Engineering Department from 9.30 AM to 12.30 PM. Anto Joel Valan Mutharasu, CEO and Founding Partner Zenanvibe and Inseatfood Pvt Ltd, FXEC was the resource person. Francis Xavier Engineering College. A total of 41 students and 1 faculty member participated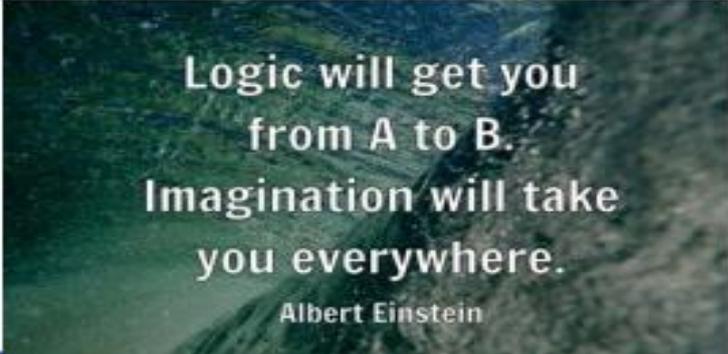. This event was coordinated by Dr. R Prem Ananth, IIC Convener, IIC Innovation Ambassador for "Design thinking & Innovations' ", Assistant Professor, FXEC and conducted with the guidance of Dr. Lourdes Poobala Rayen, IIC President. The program started with the Welcome Address by Dr R Prem Ananth and said that the resource person through his company Zenan Vibe provides paid internship to FXEC students for developing Website, ERP System and Google optimization. The guest speaker started the session by defining the word passive income, and said that Passive income refers to the earnings generated from assets, ventures, or projects in which an individual has limited active involvement or requires minimal effort to maintain. He explained the word limited active involvement and said that to earn money with limited involvement, Search Engine Optimization (SEO) is a better option. He also explained the importance of SEO and further added that nowadays people have their requirement on the internet, So for every business, SEO is required to promote and to increase the number of orders. As an entrepreneur, if he is able to optimize his business by placing proper key words, Meta words and Tag words he can promote his business. He enumerated that as a common person, if he had the skill of Search Engine Optimization, he can start a new business by optimizing other businesses for money. The guest speaker said there are various types of SEO, each focusing on different aspects of optimizing a website for search engines, but he highlighted a few important SEO. They were On-Page SEO, Off-Page SEO, Technical SEO, Local SEO, E-commerce SEO and Enterprise SEO. In Local SEO he said Local Listings: Optimizing business listings on platforms like Google My Business for local search visibility & Local Citations: Ensuring consistent business information across online directories to improve local search rankings. Similarly, he explained all the types of SEO. For a hands-on session, he divided the students into 10 groups, with 4 students each and gave 10 different topics like textile industry, Software industry, Education Institution etc. and made the students explore the key words they were using to promote the business. He also taught a few keys to improve the visibility of a particular business on the internet. He concluded the session by listing his client & the amount paid by the client for each optimization. The interaction between the students and the resource person was highly motivating to all the Participants. The session came to an end with the feedback of the Students. The Program was organized by Dr. R Prem Ananth, IIC Convener, IIC Innovation Ambassador for "Design thinking & Innovations", AP/ECE, FXEC.

LOGICAL THINKING ESSENTIALS AND APPLICATION DEVELOPMENT ——— IDEATION LAB

The objectives of a training program in Logical Thinking Essentials and Application Development are designed to ensure that participants acquire a comprehensive set of skills and knowledge in both logical thinking principles and apply it for practical Application development. With these objectives, Ideation Lab had organized 4 days Special Initiative Skill on Boot Camp on Linux for III year students from 18.01.2024 to 22.01.2024 under the activity code SK_AL_0092. A total of 38 students from CSE, IT, CSBS and ECE had attended the skill. On Day 1 - Students were imparted training to Cultivate algorithmic thinking for efficient problem-solving, Break down complex problems into manageable components, Identify patterns, relationships, and trends in problem-solving processes, Understand decision-making processes, Evaluate alternatives and make informed decisions, Apply logical thinking in decision-making scenarios. The students were given real time problem statements to solve in coding platforms along with Leetcode assessments. The Day 1 Session ended with a Quiz assessment and coding Assessments. On Day 2 & 3 Students learned about principles of application development and application of algorithmic thinking. Build User Interfaces with Flutter: Understand Flutter widgets and their usage. Create visually appealing and responsive user interfaces. Implement navigation and user interactions. Students were assigned the task of creating the portfolio as developing a portfolio using Flutter can be an excellent way to showcase the skills as a mobile app developer. On day 4, Students were imparted training on invoking Web API, how to integrate a Web API with Flutter application and leverage remote data and functionality to enhance app's capabilities. The students were exhilarated to work with application development. The students were also introduced to integrate the Interface with Firebase Database for full end application. The students were allotted with real time Use Cases as projects for Application development. The training created a holistic learning experience that enables participants to apply logical thinking principles to solve real-world problems and develop intuitive interface design and responsive applications. Dr.T.C.Subbu Lakshmi, Tech Lead Ideation Lab & Professor / IT Dept imparted the training along with Ms. G. B. Kaladevi, Applied Lab Intern. The students actively attended the sessions and interactive quizzes were conducted during the session to make the sessions lively. The training was coordinated by Dr.K.Lakshmi Narayanan, Vertical Head– Applied Lab.

> Logic will get you from A to B. Imagination will take you everywhere.
> — Albert Einstein

MASTERING IN C

MANDATORY SKILL TRAINING

C Programming is ideal for developing operating systems, device drivers, and other applications where performance and efficiency are critical and help developers better understand programming concepts such as memory management, pointers, and data structures. The Department of Information Technology conducted a 7-day Mandatory Skill training on Mastering in C from 11.03.2024 to 19.03.2024. A total of 30 students participated. The session began with an introduction to C and solving Leetcode Problems. During the 6 days of skill training, students learned various topics such as Arrays, One dimensional & two Dimensional arrays, Functions, Recursion, and Pattern Recognition, Strings, Pointers, Structure, concept of Nested Structures, Union, Files, Dates, Time, Algorithmic Complexity, Binary Search-Brute Force Algorithm. On the final day of the training, students were allotted different projects, and Mrs. Bagyalakshmi, AP/CSE evaluated the project. This session was handled by Mrs. C. Jean Celia Grace, AP/IT along with the student trainers.

ALUMNI GUEST LECTURE

STRATEGIZING YOUR PATH TO SUCCESS: EFFECTIVE PREPARATION STRATEGIES FOR ZOHO

On 21.03.2024, the Department of Electronics & Communication Engineering (ECE) organized a guest lecture on "Strategizing Your Path to Success: Effective Preparation Strategies for ZOHO". The program started with a welcome address by Prof. Amarsingh Feroz, ASP/ECE. The resource person for the event was Er. Vengadesh, Manager, ZOHO-Tirunelveli discussed the various applications and services offered by Zoho, including CRM, productivity tools, marketing automation, finance, and more. He also suggested engaging the students with the Zoho community through forums, discussion groups, and social media channels. He suggested that participating in discussions, asking questions, and sharing experiences can provide valuable insights and tips from experienced users and stay informed about these updates through official announcements, newsletters, and community discussions. He also emphasizes Zoho certification exams. After the session, there was a Q & A segment where attendees clarified their doubts with the speaker. This interactive component allowed for a deeper understanding of the topics discussed. The program came to an end with the vote of thanks by Dr. P. S. Suja Pon Mini, Prof/Chemistry.

INNOVATION : AN INEVITABLE REQUIREMENT FOR THE BUDDING ENGINEERS

On 30.01.2024, a Workshop on Innovation : An inevitable requirement for the budding Engineers was organized by the Entrepreneurship Development Cell and IIC in association with the Department of Information Technology. The Session was handled by Dr. Prem Ananth, Assistant Professor, Department of Electronics and Communication Engineering, FXEC, Tirunelveli from 9.00 PM-11.00 PM. A total of 53 students and 2 faculty members participated.

RESOURCE PERSON

DR. PREM ANANTH,
ASSISTANT PROFESSOR
FXEC

This event was coordinated by Ms. R. Shirly Myrtle AP/IT and conducted with the guidance of Dr. Lourdes Poobala Rayen, EDC Director. The program started with the welcome address by Ms. R. Shirly Myrtle. The Resource Person started his session by addressing a group of aspiring engineers. He emphasized the critical role that innovation plays in shaping the future of engineering and its impact on society. He highlighted that the field of engineering is no longer just about applying established principles and techniques; it now demands a creative and forward-thinking approach to solve complex and ever-changing problems. He continued by explaining that the challenges faced by modern society, such as climate change, resource scarcity, and the need for sustainable development, require engineers to think outside the box. He pointed out that innovation is not just about inventing new technologies, but also about improving existing ones to make them more efficient, affordable, and accessible. Moreover, he enumerated the importance of interdisciplinary collaboration in fostering innovation and further added that today's engineering challenges are so complex that they often require knowledge and expertise from multiple fields.

Therefore, budding engineers must be willing to collaborate with professionals from other disciplines, such as science, business, and the arts, to develop holistic and effective solutions. He reiterated that innovation is not just a desirable quality in budding engineers; it is a necessity. The interaction between the students and the resource person was highly motivating to all the Participants. The session came to an end with the feedback of the Students.

Reach high, for stars lie hidden in your soul. Dream deep for every dream precedes the goal.

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PRINCIPLES OF COMPUTER NETWORKS

The Department of ECE organized a Guest Lecture on the topic Principles of Computer Networks on 06-05-2024 from 11.30 am to 12.30 pm for the II year ECE students. Dr. B.Ezhilavan, Founder & CEO, VEI Technologies PVT. LTD, Chennai was the resource person. During the lecture, the resource person discussed the following topics in detail such as World Wide Web and HTTP, DNS, Electronic Mail (SMTP, POP3, IMAP, MIME) and explained some real time applications for the above mentioned topics. The session came to an end with the interaction of the resource person and the students. The program was convened by Prof.J.Friska, HOD/ECE and coordinated by Dr.S.Allwin Devaraj, ASP/ECE & Dr.K.Lakshmi Narayanan, ASP/ECE.

Workshop on ROBOTICS
SPONSORED BY INTEL

—— TWO DAYS WORKSHOP ——

In a stride towards promoting women empowerment in STEM fields, Francis Xavier Engineering College hosted a workshop on robotics sponsored by Intel and facilitated by Intel's Channel Partner, DIYA (DO IT YOURSELF ACADEMY) on 5th and 6th, February 2024 for the FXEC female students.

The training was offered by Mr. Anish, CCO of DIYA Academy, and his team members. students delved into the realm of robotics, gained hands-on experience and invaluable insights. The workshop garnered rave reviews from participants who found it both engaging and enlightening. In addition to empowering knowledge on Robotics to the students, Diya Academy signed a Memorandum of Understanding (MOU) marking the beginning of a collaborative effort to provide students with comprehensive internal and external training opportunities, as well as internships and placement support. Francis Xavier Engineering College's commitment to fostering innovation received a significant boost with the generous sponsorship from Intel. In addition to supporting the recent robotics workshop aimed at empowering female students, Intel has provided 13 Line Follower Robot Kits and 2 sets of sensor kits comprising various sensors.

The workshop was coordinated by Dr. K. Lakshmi Narayanan, Vertical Head of Industrial Applied Lab, in association with the Department of Electronics and Communication Engineering.

"Everything is theoretically impossible, until it is done."
— ROBERT A. HEINLEIN

PROTOTYPING IOT SOLUTIONS WITH ARDUINO AND TINKERCAD

The Department of Information Technology organized a five day Evening Skill Training Programme on Prototyping Iot Solutions with Arduino and Tinkercad from 05th Feb 2024 to 09th Feb 2024.

On **day 1**, the session started with the Introduction to IoT and Login to Tinkercad. In IoT, students were explained with basic concepts like IoT, Sensors and Actuators for their easy understanding and were asked to create an account in Tinkercad. The students were also asked to implement the basic program Blink with LED.

Day 2 session started with the Programming using Tinkercad and were given explanations on concepts in Tinkercad and asked them to implement some list of programs by using Tinkercad. The trainers suggested them to view an Udemy course for more understanding about Tinkercad.

The **Day 3** of Evening Skill Training started with Programming using Arduino. The trainers taught some basic concepts in Arduino and asked the students to implement the list of programs.

On **Day 4 & 5**, students had in-depth learning on Arduino and also asked to complete their assessment on the same.

The students actively participated in all the sessions by interacting and voluntarily asked their doubts. A Total of 32 students benefited. This Five days Evening Skill Training Programme was coordinated by Mrs. C. Jean Celia Grace, AP/IT.

INDUSTRIAL VISIT TO KERALA AUTOMOBILES LTD, NETTIYANKARA, KERALA

The Department of Mechanical Engineering organized an industrial visit to Kerala Automobiles Ltd, Nettiyankara, Kerala on 01.03.2024. A total of 40 I year Mechanical Engineering students along with 2 faculty members visited the site. KAL product range comprises Electric Three Wheelers suitable for passengers and goods traffic. The main deliverable products of the company are Swing Arm Suspension at the front and Leaf Spring Suspension at the rear, Electric tipper van, E Cart etc., Mr. Ajith Kumar, Manager (GAD) received the students and gave a brief explanation about the various manufacturing processes involved in the production of three-wheeler e vehicle. The factory is equipped with the most modern CNC machines to ensure dimensional accuracy of each component being manufactured. The visit provided valuable insights into automobile parts manufacturing and chassis fabrication processes. The experience also shed light on current trends in e-vehicles, offering a comprehensive overview of the industry's advancements. The students gained knowledge of workplace norms and employee involvement in the industry. The visit was organized by Mr.J.Jeremy Jeba Samuel, AP/Mech and Mr.S.David Blessley, AP/Mech.

PAPER PUBLICATION

ACCURATE LIVER FIBROSIS DETECTION THROUGH HYBRID MRMR-BILSTM-CNN ARCHITECTURE WITH HISTOGRAM EQUALIZATION AND OPTIMIZATION

Dr.G. Rajakumar
Professor ECE
Controller of Examinations
Francis Xavier Engineering College

Dr. G. Rajakumar, Prof. & COE, FXEC published a paper in the Journal of Imaging Informatics in Medicine on the topic "Accurate Liver Fibrosis Detection Through Hybrid MRMR-BiLSTM-CNN Architecture with Histogram Equalization and Optimization". The paper proposed the early detection and accurate diagnosis of liver fibrosis, a progressive and potentially serious liver condition, are crucial for effective medical intervention and Invasive methods like biopsies for diagnosis can be risky and expensive. This research presents a novel computer-aided diagnosis model for liver fibrosis using a hybrid approach of minimum redundancy maxi-mum relevance (MRMR) feature selection, bidirectional long short-term memory (BiLSTM) & convolutional neural networks (CNN).

ORIENTATION SESSION ON "HIGHER STUDIES AND HIGHER PLACEMENT IN AUSTRALIA"

A total of 92 students from III and IV year attended the orientation session. After the session, the students were given time to interact with him. Students felt that the session was more informative and interactive. This event was organized by Training and Skill Development in association with Department of Computer Science and Engineering and Electronics and Communication Engineering. Dr. Y. Harold Robinson, Professor/CSE, Dr. S. Allwin Devaraj, ASP/ECE Mr. N. Ragavendran, AP/CSE were the coordinators for this event. This event was conducted with the guidance of the Dr. S. Balaji, Director, Training and Skill Development, Mr. S. Krishna Kumar, General Manager /Administration, Dr. V. Velmurugan, Principal – FXEC and Dr. K. Jeyakumar, the General Manager/Development.

An Orientation program was conducted by the Training and Skills Development along with the Department of Computer Science and Engineering on 15th February 2024 from 11.00 am to 12.30 pm in APJ Auditorium. Mr. Sathish Vasudevan, Co founder, Academic Director – ARO Australian Training Academy India, Chennai was the resource person. The resource person started his session by explaining the opportunities available in Australia and Malaysia for higher studies, IELTS exam, Bank loan procedures, Top 10 Universities in Australia and Malaysia.

RESOURCE PERSON
MR. SATHISH VASUDEVAN
CO FOUNDER, ACADEMIC DIRECTOR

POSTER COMPETITION ON "TECH IN YOUR PALM"

IDEATION LAB

Ideation lab envisions turning an innovative idea into a tangible concept by involving students in creativity, product development, design thinking and fostering skills among engineering students in all disciplines that are required to identify opportunities and bring them to life. Ideation Lab in FXEC explores to bring out the creativity, innovation and skills of the students through their Ideas and foster them to get along with futuristic technologies. Ideation Lab organized a Poster competition for

I year students on Jan 11th 2024 on "Tech in your Palm". The competition encouraged the young minds to explore innovations and trends in handheld technology. The event aimed to showcase cutting-edge developments and foster presentation on the role of technology in our daily lives. A total of 12 Teams from CSE, IT & CSBS departments participated in the event and displayed their posters. Mr. Sumil Kumaran, AP/Civil and Mr. Paul Meriton Issac, DB Analyst, MyDBops were the Juries. The presentations underscored the transformative potential of handheld devices in various domains from augmented reality applications to mobile health monitoring systems. The students displayed their ideation as posters in Wearable Devices, Handheld projectors, Smart printers, Virtual Glass, Wearable smart gloves, Entertainment devices, and AR Glasses. Mahasri. M, Krishna Veni. A, and Anuciya. S from the IT Team department won First place with a cash award for their presentation on wearable devices for challenged people. Mohamed Riyaz. S, Muthu Pravin. B & Muthu Mariappan .T from the IT department won second place for their presentation on Handheld holographic projector. The event was organized by Dr. T. C. Subbu Lakshmi, Tech Lead Ideation Lab supported by the Applied lab interns Mr. Praveen C, Ms. G. B. Kala Devi and Nazrin Fathima and Coordinated by Dr. K. Lakshmi Narayanan, Applied Lab Vertical Head under the guidance of Mr. S. Krishnakumar, GM(A) & Applied Lab Director and Principal Dr. V. Velmurugan.

IPR TECHNICAL TECHNOLOGIES

To create awareness about Intellectual Property Rights among our budding inventors, the FX- Intellectual Property Rights club organized an online quiz on "IPR TECHNICAL TECHNOLOGIES'' on 29th Feb 2024. The session was followed up by a quiz contest based on intellectual property rights with the MCQs based questions. A total of 106 students registered and participated in the online quiz. The winners were awarded appreciation certificates and all participants got the participation certificates as well.

> **Coming together is a beginning; keeping together is progress; working together is success.**
> – Edward Everett Hale

INDUSTRIAL VISIT

Industrial visits grant the students a great opportunity to interact with industries and know more about the industrial environment. The Department of Computer Science and Business Systems organized an Industry visit to M - Squared Technologies, Technopark Campus, Trivandrum on 06.03.24. Mrs. M. Yasmin, AP/CSBS and Mrs. M. Deepa coordinated the industrial visit. During the visit, the students gained knowledge on the recent technologies and innovations developed in the company and provided with several valuable takeaways, including: a better understanding of the practical applications of academic knowledge, insights into the latest trends and technologies in the industry, exposure to a professional work environment and corporate culture, the importance of research and development in staying competitive and the significance of teamwork and collaboration in achieving success. A Total of 51 students visited the industry.

6TH INTERNATIONAL CONFERENCE ON SMART SYSTEMS AND INVENTIVE TECHNOLOGY

(ICSSIT 2024)

The Department of ECE organized the 6th International Conference on Smart Systems and Inventive Technology (ICSSIT 2024) on 04th & 05, April 2024. The program started with the Prayer. The welcome address was given by Prof. J. Friska, HOD/ECE. Dr. G. Rajakumar, Professor and COE gave an Introduction about the Conference. Dr. V. Velmurugan, Principal and Dr.L.R.Priya, Professor Academics delivered the Presidential Address. The Conference proceedings CD was released by Dr. V. Velmurugan, Dr. G. Rajakumar, Prof & COE and Dr. L. R. Priya, Professor Academics. Ms. Shiny Cross, II PG – CS gave an introduction about the Chief Guest. The Keynote address was given by Chief Guest Dr. Alexandru TUGUI, Alexandru Ioan Cuza University, Faculty of Economy and Business Administration, Romania. He gave a detailed note on Principles of Calm Technology in Smart System Development – A Human centric approach. The conference presentations were conducted through both virtual and physical and the top research papers were awarded the Best Research Paper award. A Total of 421 papers were received and after review 41 papers were presented in the conference. The conference provided a platform for researchers to engage with accomplished individuals, including the chief guest

& keynote speakers, offering valuable insights into emerging technologies in Smart Systems. The conference came to an end with the vote of thanks by Dr. S. Allwin Devaraj, ASP/ECE. The event was coordinated by Dr. P. Kannan, ASP/ECE, and Dr. S. Allwin Devaraj, ASP/ECE with the guidance of Prof. J. Friska, HOD/ECE.

INDUSTRIAL VISIT — VIKRAM SARABHAI SPACE CENTRE, TRIVANDRUM

Industrial visits bridge the gap between classroom theoretical training and practical learning in a real-life environment. The Department of Electronics and Communication Engineering organized an industry visit to Vikram Sarabhai Space centre, Trivandrum on 1.3.24 for the I year ECE Students. A total of 105 students accompanied by 4 faculty members visited the VSSC. The VSSC is one of the major research and development establishments within ISRO and it is an entirely indigenous facility working on the development of sounding rockets, the Rohini and Menaka launchers, and SLV, ASLV, PSLV, GSLV, and GSLV Mk III families of launch vehicles. During the visit, the students were shown a documentary revealing the growth of ISRO and the contributions of great Scientists like Dr. Vikram Sarabhai, Prof U R Rao, Dr A P J Abdul Kalam. Students learned about the Indian Space Program from its inception to the latest Gaganyann mission and technological development in Reusable Launch Vehicles (RLV). This visit gives great insight for the young engineers to be part of the Indian space mission.The visit to VSSE was really a great experience and students learnt about geostationary satellites and polar satellites. The visit was coordinated by Balammal Geetha S with the guidance of Mrs J. Friska, HoD/ECE.

KERALA ELECTRICAL AND ALLIED ENGINEERING CO.LTD (KEL)

The Department of Electronics and Communication Engineering organized an Industrial Visit to KERALA ELECTRICAL AND ALLIED ENGINEERING CO.LTD (KEL) on March 1st, 2024. A batch of 88 students along with 4 faculty Members visited KEL. This visit was mainly focussed on to understand the practical knowledge about the function of the organisation and the equipment used. Students were split into two groups and were explained about the equipment for manufacturing of Electrical Generators and its applications. The expert member explained about the maintenance of the equipment and ethics considered during manufacturing. This visit provided valuable insights into Electronic parts manufacturing the transformer and alternator process. The experience also shed light on current trends in Electronics, offering a comprehensive overview of the industry's advancements.

CONVERTING OPPORTUNITY IN TO BUSINESS VENTURE : TO EARN WHILE LEARN

On 10.05.2024, a session on "Converting Opportunity into Business Venture: To Earn While Learn" was organized by the Entrepreneurship Development Cell and IIC in association with the Electronics and Communication Engineering department from 1.30 PM to 04.30 PM. The session was handled by Er. P. Harries Pandi, Co-Founder, Heyareweare Technologies, III year CSBS student, FXEC. A total of 40 students and 1 faculty member participated. This event was coordinated by Dr. R Prem Ananth, IIC Convener, IIC Innovation Ambassador for "Design thinking & Innovations", AP/FXEC. This event was conducted with the guidance of Dr. Lourdes Poobala Rayen, IIC President. The program started with the welcome address by Dr R Prem Ananth and introduced the resource person who is running a successful startup in the field of Augmented Reality Services & Virtual Reality Services. Through his company Heyareweare (HAWA), they focused on providing Augmented Reality (AR) and Virtual Reality (VR) services to the customers who are in need of the services worldwide. The guest speaker started the session and gave an introduction to the fundamental concepts of entrepreneurship, emphasizing the importance of innovation, risk-taking, and resilience in the entrepreneurial journey and shared valuable insights from his personal entrepreneurial journey. He discussed the challenges he faced, the lessons learned, and the strategies employed in establishing Heyareweare Technologies as a successful venture. He elaborated on the significance of recognizing opportunities in various domains, including technology, social trends, and market gaps and encouraged students to adopt a proactive approach in identifying problems that can be solved through innovative solutions. The speaker provided practical advice on how to convert ideas into viable business ventures and discussed the importance of market research, prototyping, and iteration in the product development process. The speaker shared how the Kamath brothers recognized the need for a low-cost, technology-driven brokerage platform in India's financial market. They identified an opportunity to democratize stock trading and investing, particularly among the youth and retail investors. The students learned about the innovative business model adopted by Zerodha, characterized by low brokerage fees, transparent pricing, and a user-friendly trading platform. He shared anecdotes and real-life examples to illustrate the importance of learning from failures and adapting to changing market dynamics.

The event concluded with an engaging Q&A session, where students had the opportunity to seek clarification on various aspects of entrepreneurship directly from the guest speaker. The interaction between the students and the resource person was highly motivating to all the Participants. The Program was organized by Dr. R Prem Ananth, IIC Convener, IIC Innovation Ambassador for "Design thinking & Innovations", AP/FXEC.
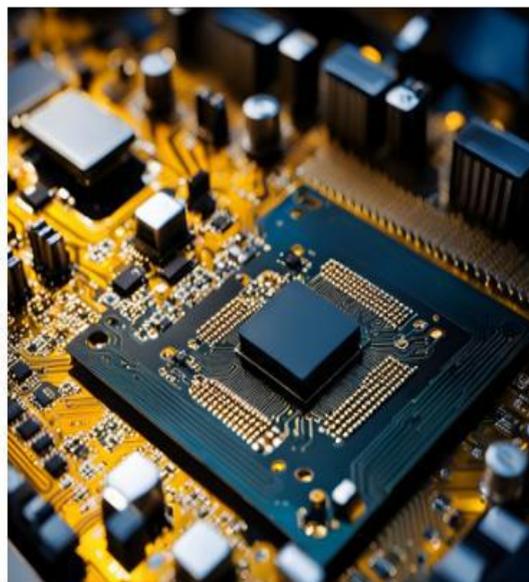
GUEST LECTURE ON CONTROL SYSTEMS

> **The fantastic advances in the field of electronic communication constitute a greater danger to the privacy of the individual.**
>
> EARL WARREN

The Department of Electronics and Communication Engineering organized a guest lecture on Control Systems on 26.04.2024 from 09.30 AM to 12.30 PM. The session was convened by Mrs.J.Friska, HOD/ECE-FXEC. The main focus of this guest lecture was to impart knowledge on the topic fundamentals of Control systems and Stability techniques. The Resource person Mr. K. S. Kavin, Managing Director, ABTechnologies Chennai, discussed in detail the different types of Control Systems, Modeling of Control Systems, time response Analysis, Stability analysis, State Space Representation modeling and real time applications of Control Systems. A total of 110 students attended the guest lecture. The session was interactive and informative and the students participated in an active manner. The session was coordinated by Dr. P. Kannan, ASP/ECE and Mrs. U. Lenin Marksia, Assistant Professor/ECE.

TRENDS AND OPPORTUNITIES IN VLSI, RF AND IOT

An interactive webinar on "Trends and Opportunities in Vlsi, Rf and Iot" was conducted by the Department of ECE on 25-04-2024 from 06.30 pm to 08.30 pm. The resource person for the session was Dr. Swetha Amit, Sr. HF Application Engineer, Shivaprasad BK, Senior Field Application Engineer, Vikas Gowda, IOT Application Engineer, Entuple Technologies, Bangalore. The topic of the interactive session was Trends and Opportunities on RF and Antenna Technologies, Healthcare Monitoring with Electronic Devices, Job Profiles in RF and Antenna domain, Internet of things, Top players in Internet of Things, IoT Certification Programs, Disruptive Industry Trends, 75 years of transistor evaluation, VLSI Design Job Profiles, Key Skills for Jobs in VLSI,ESDM and Emerging Technologies and VLSI Ecosystem. Total of 146 students from I,II,III and IV year ECE Department students registered and attended the webinar. This event was organized by Department of Electronics and Communication Engineering. Dr. S. Allwin Devaraj, ASP/ECE was the coordinator for this event. Mrs. J. Friska , HOD/ECE was the Convener for the event.