CARE IT IN COLLEGE OF ENGINEERING (An Autonomous Institution)

NEWS LETTER

ELECTRONICS AND COMMUNICATION ENGINEERING

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ECE BUZZ JUNE 2024 ISSUE 01

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VISION AND MISSION

VISION OF THE INSTITUTION

Transform lives through Education and Research

MISSION OF THE INSTITUTION

To impart quality education to students through critical thinking, creativity, leadership and the spirit of entrepreneurship

VALUES OF THE INSTITUTION

We develop in each member the ability and passion to work effectively for the betterment of humanity with cultural awareness, high ethical and moral values and a sense of social responsibility

DEPARTMENT VISION

To produce globally competent Electronics and Communication Engineers.

DEPARTMENT MISSION

M1: To Impart Value-based Technical Education with a state of art technologies to meet industry standards.

M2: To foster critical thinking and creativity through research and experimentation.

M3 : To prepare our students to be a lifetime professional with Creativity and Leadership.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO 1 – Shall pursue higher education and research, or have a successful career in industries or as entrepreneurs.

PEO 2 – Shall have the ability and attitude to adapt to emerging technological changes.

PEO 3 - Shall exhibit leadership abilities, professional ethics, communication skills, interpersonal skills and life-long learning.

PROGRAM OUTCOMES (POs)

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.

POII - 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.

PO12 - Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OBJECTIVE (PSOs)

Students of the Electronics and Communication Engineering Program

PSO 1 - Shall have Potential to analyze, design, synthesize and provide technical solutions in the field of VLSI, Embedded Systems, Communication, Networking and Real Time Processing.

PSO 2 - Shall exhibit leadership skills and pursue entrepreneurship and contribute in the field of Electronics and Communication Engineering.

12TH GRADUATION DAY



Chief Guest : Mr. Sidd Ahamed, Founder & CEO, VDart Groups





WORKSHOP ON ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING



Department of ECE jointly with Pantech E-learning private Limited, Chennai conducted A Workshop on "Artificial Intelligence and Machine Learning" through zoom (online mode) on 8.2.2024 at 3.00 pm for III Year Students. The Resource person was Mr.V.Sankar Expertise in AI & ML from Pantech, Chennai. He gave a brief introduction on AI Applications and machine learning concepts with more interesting data collection steps in Machine learning. Workshop Objectives: Introduce fundamental concepts of AI and ML. Discuss various applications of AI and ML across industries. Key Takeaways: Students gained a comprehensive understanding of AI and ML concepts and their practical applications. The session provided insights into the ethical implications and challenges of AI adoption sparked meaningful discussions among participants. Also the future trends and opportunities highlighted the growing importance of AI skills in various industries and career paths. The AI and ML workshop provided an enriching learning experience for the students, equipping them with valuable knowledge and skills to navigate the rapidly evolving landscape of artificial intelligence and machine learning. The workshop fostered collaboration and networking opportunities, laying the foundation for continued exploration and innovation in this exciting field.

INDUSTRIAL VISIT TO RADIO ASTRONOMY CENTRE



The Industrial Visit to the Radio Astronomy Centre in Ooty organized by the Department of Electronics and Communication Engineering on 17.02.2024. It was an enriching experience for the students of the III ECE batch. The trip aimed to provide practical insights into the applications of theoretical knowledge gained in the classroom setting

The primary objective of the visit to the Radio Astronomy Centre was to provide students with firsthand exposure to the practical applications of their academic knowledge in the field of electronics and communication engineering. By witnessing cutting-edge technologies and observing real-world research in action, students gained valuable insights into the role of radio astronomy in advancing our understanding of the universe

The visit to the Radio Astronomy Centre provided students with a unique opportunity to witness the convergence of technology, science, and exploration. It ignited their curiosity about the mysteries of the cosmos and inspired them to pursue careers in research and innovation. By bridging the gap between theory and practice, the visit reinforced the importance of experiential learning in shaping future engineers and scientists.

FACULTY DEVELOPMENT PROGRAMME ON EMBEDDED SYSTEM & IOT DESIGN



The Faculty Development Programme on Embedded System & IoT Design organized by the Department of Electronics and Communication Engineering aimed to provide faculty members with comprehensive insights into the latest trends and technologies in the field. The program featured Er. A. Syed Ibrahim, M. E., Technical Lead at Enthu Technology Solutions India Pvt. Ltd, Coimbatore, as the key resource person.

Dr. J. Jeyarani, the esteemed leader of the Department of Electronics and Communication Engineering, inaugurated the Faculty Development Programme on Embedded System & IoT Design with an insightful introduction

Program Highlights:

- Sessions Content: The sessions covered a wide range of topics including Embedded Systems fundamentals, IoT architecture, sensor integration, data communication protocols, and practical applications.
- Hands-on Workshops: Participants engaged in hands-on workshops where they had the opportunity to work with real-world IoT devices and development boards. This practical experience helped in reinforcing theoretical concepts.
- Interactive Discussions: The program encouraged interactive discussions where participants could ask questions and share their insights. This facilitated a dynamic learning environment and encouraged collaboration among participants.
- Networking Opportunities: Participants had the chance to network with industry experts and peers, fostering valuable connections and potential collaborations.

Key Takeaways:

- Enhanced understanding of Embedded System and IoT Design principles.
- Practical skills in developing IoT applications and integrating sensors.
- Insights into the latest trends and advancements in the field.
- Networking opportunities with industry professionals and peers.
- Increased confidence in teaching and research endeavors related to Embedded Systems and IoT.

The Faculty Development Programme on Embedded System & IoT Design was a resounding success, providing participants with valuable knowledge and practical skills. The program served as a platform for continuous learning and professional development in the rapidly evolving field of Embedded Systems and IoT. We extend our gratitude to Er. A. Syed Ibrahim and all participants for their active participation and contributions.



AI&ML HACKATHON



The Al&ML Hackathon, organized by the Department of Electronics & Communication Engineering in collaboration with Tessolve Semiconductor Pvt Ltd, aimed to provide students with a platform to apply theoretical knowledge in Al and ML to real-world problems. Held on March 9th, 2024, the event saw enthusiastic participation from second and third-year ECE students who were divided into teams and provided with problem statements. Following a designated hacking period, teams presented their solutions to a panel of judges comprising faculty members and industry professionals, engaging in insightful Q&A sessions. The event highlighted remarkable creativity and problem-solving skills among participants, fostering collaboration and practical exposure to Al and ML. Moreover, it facilitated networking opportunities with industry experts, bridging the gap between academia and industry. The successful collaboration between the academic and industrial sectors laid a strong foundation for future endeavors in fostering innovation and addressing real-world challenges. Overall, the Al&ML Hackathon served as a testament to the power of teamwork, creativity, and practical learning in driving advancements in artificial intelligence and machine learning.



HANDSONINDUSTRIALTRAININGONAI&MLUSINGPYTHON



HANDS ON INDUSTRIAL TRAININER

Mr. Venkatesh Rajakutti



Department of ECE and Tessolve Semiconductor Pvt. Ltd organized Six days Hands on Industrial Training on Artificial Intelligence & Machine Learning using Python (04.03.2024 to 09.03.2024). The Industrial training programme started on 4th MARCH 2024 at 09:00 A.M. There were 49 participants include II year and III Year ECE from CARE Engineering college, Trichy.

Mr. Venkatesh Rajakutti, Design Engineer, Tessolve Semiconductor Pvt. Ltd, Chennai, addressed the participants. This Industrial training focused on Artificial Intelligence and Machine Learning, Revised AI types, Machine learning algorithm and python Programming concepts At the end of this training session, Students will establish themselves as effective professionals by solving real problems through the use of computer science knowledge and with attention to team work, effective communication, critical thinking and problem solving skills.

ALUMNI INTERACTION



ALUMNI INTERACTION Mr. S. SURIYA



Placement cell and Student placement coordinators organized Alumni interaction with students on 14.03.2024.

ECE 2022 Alumnus, Mr. S.Suriya, Assistant System Engineer, Tata Consultancy Services, New Delhi interacted with students and shared his experience.

WORKSHOP ON GENERATIVE AI



WORKSHOP ON GENERATIVE AI, LED BY

> Mr. Raju Kandaswamy

On March 16, 2024, the CARE College of Engineering hosted a workshop on Generative AI, led by Mr. Raju Kandaswamv from Thoughtworks. Mr. Raiu Kandaswamy explained why it's important to learn about Artificial Intelligence (AI) and how it's shaping our world. He talked about Large Language Models (LLMs), which are big AI systems that understand and generate human-like language. He showed attendees how these models work and how to use them by giving them specific instructions, called prompts. He also introduced Google Colab, a tool that lets people work together on coding projects in the cloud, making it easier to try out AI techniques and algorithms. Through hands-on activities and discussions. participants learned how AI can be applied in different areas and gained practical skills they can use to explore AI further.

AWARENESS SESSION ON (OBE) AND CURRICULUM DEVELOPMENT

A One day "Awareness session on "Outcome Based Education (OBE) and Curriculum Development organized by IQAC cell under the Quality initiatives of was held on 22.3.2024 **IOAC** in Engineering Seminar Hall at 9.30a.m. The main objective of the session is to eauip us all with the necessarv knowledge and tools to enhance our educational practices and ensure the holistic development of our students. The session topics were handled by the distinguished quest speaker Dr. Tholkappiya Arasu, from Aasan Education, Chennai.

The session started with a welcome note by Mrs.A.Keerthana Devi, AP/MBA. Dr.S.Shanthi, Principal, CARE College of Engineering felicitated the gathering and insisted the importance of Curriculum Development in OBE.

The session coverage included the following,

IntroductiontoOutcome-BasedEducation(OBE):Understanding theprinciplesandsignificanceofOBEincontemporary educational frameworks.

Curriculum Development: Exploring effective strategies and methodologies for designing and implementing student-centered curricula aligned with OBE principles.

Assessment Techniques: Exploring innovative assessment methods that align with OBE objectives and promote meaningful learning outcomes.

Best Practices Sharing: Facilitating discussions and sharing best practices among faculty members to foster collaboration and collective learning.

Also Dr. Tholkappiya Arasu insisted on self-conscious about quality education and continuous and research. improvement in knowledge competency and teamwork. The session was more interactive with the faculty members and got new insights on the framework of Education Outcome Based and Curriculum Development. At the end the gratitude note was addressed by Mrs. A.Gomathi, AP,CSE.



GUEST LECTURE ON "RFID ENABLED SENSORS IN HEALTHCARE APPLICATIONS



Department of ECE organized a Guest lecture for the course RFID System Design and Testing for the III year ECE Students on 10.4.2024 in DSP lab (Online mode). Dr. V. Gowrishankar, Associate Professor, Vellalar College of Engineering and Technology, Erode. He is a renowned expert in the field of RFID (Radio Frequency Identification) technology with IOT. He delivered an enlightening guest lecture on "RFID Enabled Sensors in Healthcare Applications" in healthcare and many other applications. He highlighted the significance of RFID tags, readers, and antennas in facilitating wireless data transmission and identification.

He also discussed applications in supply chain management, asset tracking, healthcare, agriculture, and smart cities. The lecture served as a catalyst for further exploration and innovation in the realm of RFID-enabled sensor systems.



LECTURE SERIES "TALK'S 4 NXTGEN" BEYOND AI BOUNDARIES

We are extremely happy to share that tomorrow (22/04/2024 Monday) "Lecture Series on Talk's 4 NextGen" has been scheduled for our II, III year of CSE, AI&DS, MECH, ECE, CIVIL, MBA students at Engineering seminar hall by 11.00 Am. We have invited Esteemed guest Mr. Sudhakaran Thirupathi – Managing Director @ Accenture, Bangalore to address our students to talk about industries expectations, the tremendous things going on technology, exact guidance for the career to become a successful IT professional.

It's our immense pleasure to invite you all for this wonderful occasion so we kindly request you all to join with this remarkable moment.





15TH ANNUAL DAY CELEBRATION

On the 27th of April, 2024, at 4 PM, the vibrant halls of our institution echoed with jubilant celebrations as we marked our 15th Annual Day with fervor and delight. It was an honor to have Mr. Sujith Kumar, the esteemed Founder and Managing Trustee of Maatram Foundation, grace the occasion as our Chief Guest. The event commenced with a soul-stirring invocation, setting the tone for an evening filled with nostalgia and achievements.

The Chief Guest's insightful address inspired everyone present, emphasizing the importance of education in shaping a brighter future. A highlight of the the recognition evening was of academic excellence and extracurricular achievements, motivating our students to strive for excellence. Our students showcased their talents through mesmerizing cultural performances. A heartfelt vote of thanks was extended to Mr. Sujith Kumar for gracing the occasion and for his invaluable words of wisdom. The event concluded with a sense of pride and camaraderie, as memories of this memorable Annual Day will be cherished for years to come. We express our gratitude to all who contributed to the success of this grand celebration, marking another milestone in our journey of education and enlightenment.





ENTREPRENEURSHIP DEVELOPMENT CELL "INVENT PHASE 1 (SEED)"

CARE Entrepreneurship Development Cell !!!

Creating Future Entrepreneur !!!

The "INVENT PHASE 1 (SEED)" event engaged to the second-year students from various disciplines including CSE, AI&DS, MECH, CIVIL, and ECE by CARE Entrepreneurship Development Cell on 30th May, 2024 at CARE College of Engineering

Students showcased a plethora of innovative solutions to predefined challenges.

Totally we have received 90+ excellent problems statements from the students and from 90+ submissions, rigorously assessed across three rounds, the top 5 ideas emerged victorious.

The winners of INVENT PHASE 1 (SEED) were recognized with awards.

Students started to work for the next level.

Regards CARE Entrepreneurship Development Cell



