CARE COLLEGE OF ENGINEERING

(AN AUTONOMOUS INSTITUTION)

NEWS LETTER

ECE BUZZ

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ISSUE 02

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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.

Knowledge and Attitude Profile & Program Outcomes

Knowledge and Attitude Profile (WK)

WK1 (Natural Science): A systematic, theory-based understanding of the natural sciences applicable to the discipline and awareness of relevant social sciences

WK2 (Mathematics and Modelling): Conceptually-based mathematics, numerical analysis, data analysis, statistics and formal aspects of computer and information science to support detailed analysis and modelling applicable to the discipline.

WK3 (Engineering Fundamentals): A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline.

WK4 (Engineering Specialization): Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline.

WK5 (Environmental impact on design and practice): Knowledge, including efficient resource use, environmental impacts, whole-life cost, reuse of resources, net zero carbon, and similar concepts, that supports engineering design and operations in a practice area.

WK6 (Newer Practical Knowledge): Knowledge of engineering practice (technology) in the practice areas in the engineering discipline.

WK7 (Engineer role and responsibility in Society): Knowledge of the role of engineering in society and identified issues in engineering practice in the discipline, such as the professional responsibility of an engineer to public safety and sustainable development.

WK8 (Critical Thinking and Creativity): Engagement with selected knowledge in the current research literature of the discipline, awareness of the power of critical thinking and creative approaches to evaluate emerging issues.

WK9 (Ethics and Diversity): Ethics, inclusive behavior and conduct. Knowledge of professional ethics, responsibilities, and norms of engineering practice. Awareness of the need for diversity by reason of ethnicity, gender, age, physical ability etc. with mutualunderstanding and respect, and of inclusive attitudes.

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

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

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

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

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

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

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

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

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

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

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

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.

PRINCIPAL'S MESSAGE

Dr.S.Shanthi M.E, Ph.D

" ALL OUR DREAMS CAN COMES TRUE IF WE HAVE THE COURAGE TO PURSUE THEM"

Greetings! As we dive into another exciting term at CARE College of Engineering, I am filled with optimism and enthusiasm about the opportunities that lie ahead for our community. Each new semester brings with it a chance for growth, learning, and innovation, and this one is no exception. I am particularly excited about the upcoming events and activities that will allow us to come together as a community. From guest lectures and workshops to student-led projects and departmental initiatives, there will be numerous opportunities to engage, learn, and contribute. Thank you for your continued dedication and hard work

HOD'S MESSAGE

DR.J.JEYARANI M.E,PH.D

As we embark on a new academic term at the Electronics and Communication Engineering (ECE) department, I am both excited and optimistic about the opportunities and challenges that lie ahead. Our department continues to be a dynamic and innovative hub, dedicated to advancing the field of electronics and communication and providing our students with a comprehensive and forward-thinking education.

We are thrilled to introduce several new initiatives and enhancements to our curriculum. Our updated courses, cutting-edge research opportunities, and industry partnerships are designed to give you practical experience and exposure to the latest technological advancements. We are also expanding our collaboration with industry leaders to bring real-world insights and networking opportunities directly to you. Our dedicated faculty members are here to support and guide you through your academic journey. Their expertise and commitment are instrumental in helping you achieve your goals and excel in your chosen field. Thank you for your enthusiasm and dedication. Together, we will continue to push the boundaries of what's possible in electronics and communication engineering

FDP on Unlocking Faculty Potentials

The three days Faculty Development Program on “Unlocking Faculty Potentials” was organised by the Internal Quality Assurance Cell (IQAC), CARE College of Engineering on 10th August 2024 to 13th August 2024. The first day session was handled by Mr. S. Shanmugam, Director, Design Desk (India) Private Limited, Chennai on the topic “Innovation through Design Thinking” provides the importance of design thinking in our working environment. The session is aimed to bridge the gap between theoretical knowledge and real-world industrial practices. Dr. J. Jeyarani, Dean IQAC felicitated over the function and gave confidence to the participants and brief about the current and future technology.

INDUCTION PROGRAM FOR ECE STUDENTS

The Department of Electronics and Communication Engineering (ECE) at CARE College of Engineering organized an Induction Program on the 19th of August, 2024, at 10:30 AM in the Engineering Seminar Hall. The purpose of the induction program was to welcome students of the II, III, and Final Year ECE batches and provide them with an overview of the department's objectives, activities, rules, and expectations for the academic year.

COSMOS CONNECT

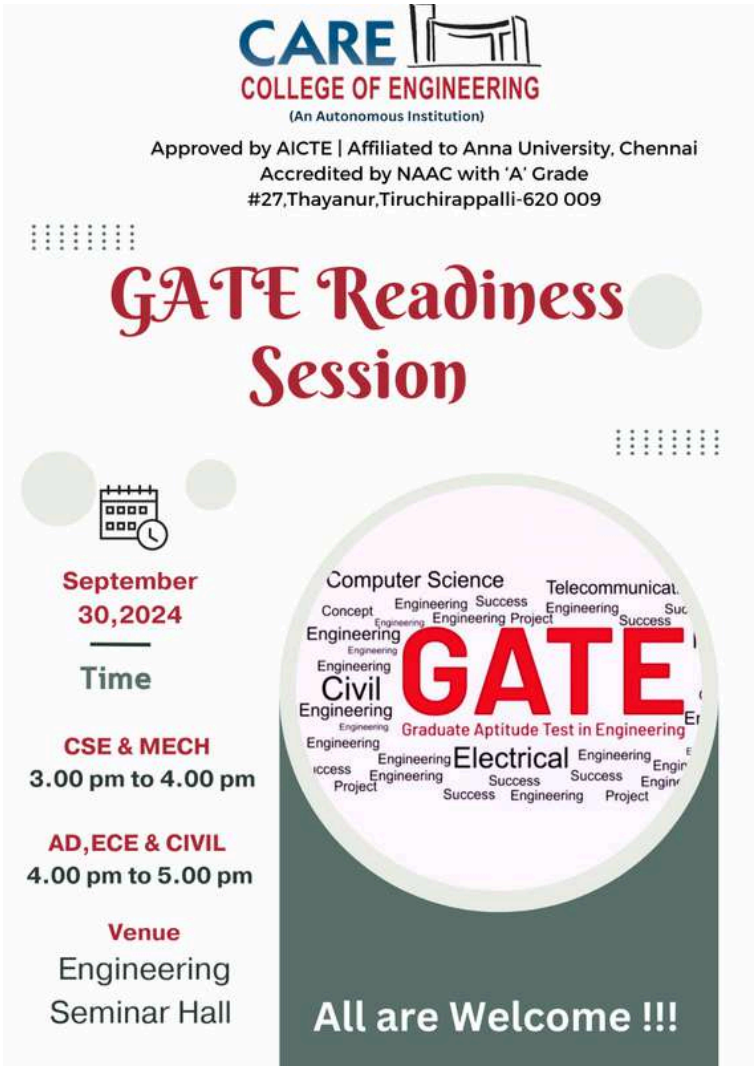
On 24th August 2024, the Department of Electronics and Communication Engineering (ECE) at CARE College of Engineering organized an innovative and interactive program titled COSMOS Connect on the occasion of National Space Day. The event was designed to celebrate space exploration and related technologies while fostering a deeper interest in space sciences among students. The program targeted third-year ECE students and was conducted in the DSP (Digital Signal Processing) Lab, led by final-year ECE students.

ECE Project Expo

The Department of Electronics and Communication Engineering at CARE College of Engineering, Trichy, organized a Project Expo on 30th September 2024. The event showcased the innovative projects developed by the students of the department, providing a platform to exhibit their technical skills and creativity.

A total of 13 projects were displayed during the expo, covering various domains of electronics and communication engineering, including embedded systems, IoT applications, robotics, automation, and wireless communication. The projects demonstrated the students' ability to apply theoretical knowledge to solve real-world problems, reflecting their academic growth and hands-on learning experiences.

GATE Readiness Session



The GATE Readiness Session, held on September 30, 2024, and organized by the Higher Education Cell, was aimed at creating awareness about higher education opportunities through competitive exams, focusing on the Graduate Aptitude Test in Engineering (GATE). Targeting Final Year and Third Year students, the event sought to motivate and guide them in pursuing advanced studies. Students from the Departments of Computer Science (CSE), Artificial Intelligence & Data Science (AIDS), Electronics & Communication (ECE), and Civil Engineering (CIVIL) actively participated. The session provided an overview of the GATE exam, its significance, and various post-GATE opportunities, with speakers discussing the application process, preparation strategies, and the benefits of achieving a good GATE score. The event was well-received, sparking increased interest in the GATE exam and successfully achieving its goal of motivating students to consider it as a pathway for their higher education aspirations.

ECSA inauguration

The inauguration ceremony of the Electronics and Communication Students Association (ECSA) began with a traditional invocation and the lighting of the Kuthuvilakku, symbolizing enlightenment and guidance for the students. The event was officially opened with a warm welcome address, emphasizing the significance of ECSA in fostering academic and professional growth. The chief guest, Mr. Santhosh Kumar, a distinguished software engineer, was honored for his achievements and inspired students with his journey. Dr. J. Jeyarani, in her presidential address, highlighted the objectives of ECSA, encouraging collaboration, innovation, and skill development. Mr. Santhosh Kumar's address provided valuable insights from his professional experiences, motivating students to embrace challenges and continuous learning in the evolving tech industry.

CARE TECH FEST'2K2k

We are excited to announce a One-Day National Level "CARE TECH FEST'2K24", and we would like to welcome you to be a part of this prestigious event. This tech fest will provide a platform for students to showcase their talents, exchange ideas, and explore the latest trends in Engineering and Technology.

Date: 09 -11-2024

Venue: FULCRUM

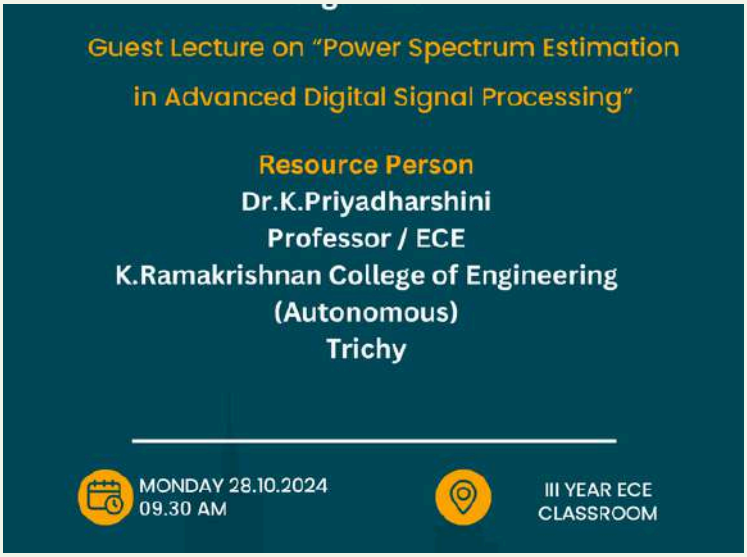
Open To: All Students Across Various Engineering Streams

The event will feature:

- **Technical paper presentations**
- **Project Expo**
- **Technical Events**
- **Exciting prizes and certificates for winners and participants!**

We request you to kindly spread the word among your students, and encourage them to participate to explore their horizon.

GUEST LECTURE ON POWER SPECTRUM ESTIMATION IN ADVANCED DIGITAL SIGNAL PROCESSING



The Department of Electronics and Communication Engineering organized a guest lecture on "Power Spectrum Estimation in Advanced Digital Signal Processing" on 28th of October, 2024 for the III- year ECE students. The invited expert was Dr. K. Priyadharshini, an esteemed professor with significant expertise in digital signal processing and its applications from K. Ramakrishnan College of Engineering (Autonomous), Trichy.

The objective of the guest lecture was to provide third-year ECE students with an in-depth understanding of power spectrum estimation techniques, a critical topic in advanced digital signal processing. This lecture aimed to bridge theoretical knowledge and practical application, enhancing students' competencies in signal analysis.Dr. Priyadharshini began with an introduction to the importance of power spectrum estimation in various engineering fields, particularly in signal processing. She explained the different methodologies used for spectrum estimation and the mathematical foundations behind them.

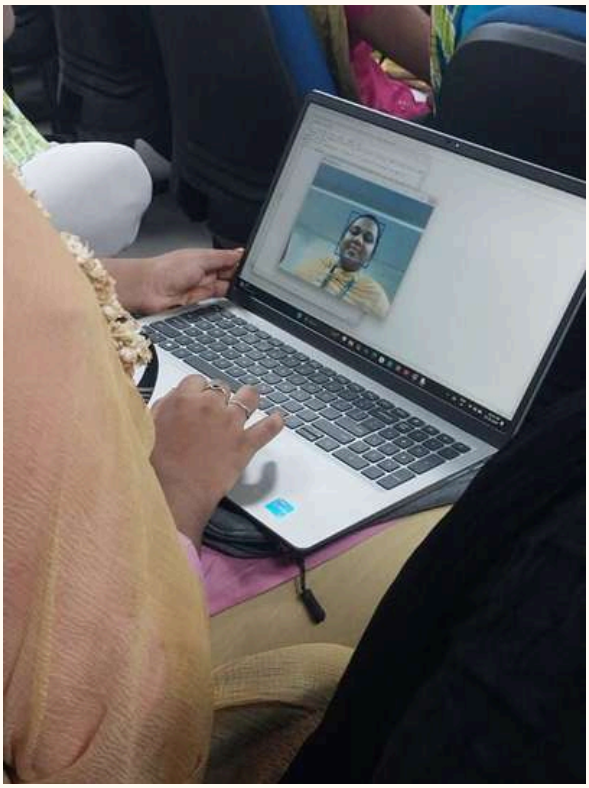
CSE, ECE and Mechanical Engineering programmes secures prestigious National Board of Accreditation

Department of Computer Science and Engineering, Electronics and Communication Engineering and Mechanical Engineering accredited by National Board of Accreditation. Congratulations to all Stakeholders.

INDUSTRIAL VISIT TO THE RADIO ASTRONOMY CENTRE, OOTY

The Department of ECE organized the Industrial visit to the Radio Astronomy Centre, Ooty on 23.10.2024 for II ECE Students to provide exposure towards practical understanding of radio astronomy and its role in astrophysics research. The centre is a significant part of the National Centre for Radio Astrophysics, recognized globally for its contributions to understanding the universe. This visit aimed to expose students to advanced astronomical observation techniques, data analysis, and the technology used to explore cosmic phenomena through radio waves.

AI AND ML WORKSHOP



A one-day workshop on "Artificial Intelligence and Machine Learning with OpenCV" on October 24, 2024. This workshop aimed to provide participants with hands-on experience in applying AI and ML concepts through OpenCV, a widely-used open-source computer vision library.Workshop successfully equipped participants with foundational knowledge and practical skills in AI, ML, and OpenCV. Attendees gained confidence in using OpenCV for real-world applications, fostering an environment conducive to further research and exploration in the field of computer vision..