DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

NEWS LETTER

2022-23-Volume-2: Issue-1 March

VISION OF THE DEPARTMENT

To impart quality technical education in the field of Electronics and Communication Engineering in the young minds for serving the Society and Industry in a globally challenging environment.

MISSION OF THE DEPARTMENT

To provide sound technical knowledge on Electronics and Communication Engineering to the students

To prepare the students for working in global challenges existing in the industries

To instill competencies in the students for working in interdisciplinary work culture

To create desire for undertaking lifelong learning and entrepreneurship initiatives

PROGRAMME EDUCATIONAL OBJECTIVES (PEO'S)

PEO 1. To educate the students for acquiring sound knowledge in the field of Electronics and Communication Engineering and interdisciplinary field, so as to meet the needs in the field of Electronics and Communication industries.

PEO 2. To provide knowledge and skills for developing new products in the field of Electronics and communication.

PEO 3. To offer excellent academic learning environment in department of Electronics and Communication for facilitating students to become eminent team players.

PEO 4. To facilitate the students with necessary knowledge in the field of Electronics and Communication Engineering so as to succeed in competitive examination for pursuing higher studies.

PEO 5. To expose the students on professional, ethical and social skills to shape them with leadership quality for analyzing and solving engineering and social issues.

PROGRAMME SPECIFIC OUTCOMES (PSOS)

1. ECE fundamental concepts: To analyze, design and develop solutions by applying foundational concept of electronics and communication engineering.

2. Design Principles and Best practices: To apply design principles and best practices for developing quality products for science and business applications.

3. Innovations through ICT: To adapt to emerging information and communication technologies (ICT) to innovate ideas and solutions to existing/novel problems .

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III Year B.E.ECE

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IV Year B.E.ECE

ACDEMIC ACTIVITIES

An **Alumni Guest Lecture** was conducted on **19.01.2023**, delivered by **Mr. K. Kirubakaran**, Capgemini, Chennai. The session provided students with insights into industry practices and professional development opportunities.

A **Guest Lecture through MoU Company** on **Emerging Tools in Industry** was conducted on **07.01.2023**, delivered by **Mr. M. Parthiban** from **Caliber Embedded Technology, Coimbatore**. The session provided students with knowledge about the latest industrial tools and technologies.

An **Industry Guest Lecture** on **Data Science and Applications** was conducted on **07.01.2023**, delivered by **Ms. K. Shalini**, Associate Technical Support Engineer, **Skill Lync, Bangalore**. The session provided insights into data science concepts, tools, and real-world applications.

A **Workshop** on **Design and Implementation of Digital Circuits Using Verilog** and **Embedded Programming and IoT Applications with Energia IDE Tool** was conducted from **23.01.2023 to 28.02.2023**, led by **Dr. S. Madhava Pandian**, Design Lead, **Tessolve Semiconductor Pvt. Ltd**. The workshop provided hands-on training in digital design and IoT programming tools.

An **Alumni Interaction** session was conducted on **27.01.2023**, featuring **Mr. Sankar**, Infosys Ltd, Mysore. The session provided students with insights into industry experiences and career guidance.

A **Seminar and Group Discussion** on **Latest Technology in Digital Transformation** was conducted on **21.01.2023**, coordinated by **S. Theivanayaki**, Assistant Professor, Excel Engineering College. The session aimed to enhance students' understanding of emerging digital technologies and encourage collaborative discussions.

An **Industry Guest Lecture** on **Carving Niche Career in Electronic System Design** was conducted on **04.02.2023**, delivered by **Dr. Vijaya Kumar**, Manager, Research and Development, **Indi Guard System Pvt. Ltd, Thanjavur**. The session provided students with guidance on career opportunities and specialization in electronic system design.

An **Industry Guest Lecture** on **Career Opportunities in Core Industry** was conducted on **04.02.2023**, delivered by **Dr. S. Madhava Pandian**, Design Lead, **Tessolve Semiconductor Pvt. Ltd**. The session provided insights into career paths and growth prospects in the core engineering sector.

A **Workshop** on **Project to Journal Paper Conversion** was conducted on **04.03.2023**, coordinated by **Dr. R. Vinoth**, ASP/Mechanical, Excel Engineering College. The workshop guided students on converting academic projects into publishable journal papers.

FACULTY ACHIEVEMENT

Dr. S. Anbukarupusamy authored the research paper "Efficient Feature-Based Video Retrieval and Indexing Using Pattern Change with Invariance Algorithm" published in the Journal of Intelligent and Fuzzy Systems, Scopus indexed, Vol. 44, Issue 2, 2023.DOI: 10.3233/JIFS-221905

Dr. S. Jayapoorani published a research paper titled "Efficient Employment of Optical Sources Integrated with Both Light Detectors and Free Space Communication Modulated Channel under Ambient Conditions Effects" in the **Journal of Optical Communication**, **Scopus** indexed, March 2023. DOI: https://doi.org/10.1515/joc-2023-0007

Dr. S. Jayapoorani published two research papers in the **International Journal of New Innovations in Engineering and Technology** in 2023:

1. **"Solar Powered Automated Multitasking Agricultural Robot"**
2. **"Waste Water Quality Monitoring System Implemented with IoT"**

Both papers focus on innovative applications of technology in agriculture and environmental monitoring.

NOTABLE INNOVATIONS ON MARCH 2023

Advanced Semiconductor Technologies

TSMC's 2nm Process: TSMC introduced its 2nm technology platform, featuring "N2P" with backside power delivery and "N2X" for high-performance applications. The ARM Cortex-A715 core fabricated on the N2 process demonstrated a 16.4% increase in speed at the same power and a 37.2% reduction in power consumption at the same speed compared to the N3E process.

Sustainable Electronics

Biodegradable E-Textiles: Researchers at the University of the West of England developed biodegradable electronic textiles (e-textiles) using materials like graphene and PEDOT:PSS. These e-textiles, including EKG heart monitors and temperature sensors, exhibited approximately 50% weight loss over four months when buried in soil, demonstrating their potential for reducing electronic waste.

Emerging Technologies

Digital & 3D Additive Manufacturing: TechBlick hosted an event focusing on digital and 3D additive manufacturing in electronics, highlighting advancements in manufacturing processes and applications.

Industry Events

India Electronics Expo (INDEE) 2023: Held from March 27–29 in New Delhi, INDEE 2023 showcased innovations from India's top electronics and IoT companies. The event provided a platform for international B2B networking and highlighted India's capabilities in the electronics sector.