KARPAGAM
COLLEGE OF ENGINEERING
Rediscover | Refine | Redefine
Coimbatore - 641 032
Autonomous | Affiliated to Anna University, Chennai
Accredited by NAAC with 'A' Grade | NBA (ECE, EEE, CSE, MECH & IT)

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ELECTRO MEDIA

Department News Letter

IN THIS ISSUE

Vision

- To provide innovative teaching and learning methodologies for excelling in a high-value career, higher education and research to the students in the field of Electronics and Communication Engineering to meet the needs of the industry and to be a part of the advancing technological revolution.

Mission

- To create engineers of high quality on par with international standards by providing excellent infrastructure and well qualified faculty.
- To enhance the collaborative and multidisciplinary activities to develop human and intellectual qualities.
- To provide technical expertise to carry out research and development.

PROGRAM EDUCATIONAL OBJECTIVES

PEO1: Graduates will be able to comprehend Mathematics, Science, Engineering fundamentals, laboratory and work based experience to formulate and solve problems related to the domain and shall develop proficiency in computer based engineering and the use of computational tools.

PEO2: Graduates will be prepared to communicate and work team-based on the multidisciplinary projects practicing the ethics of their profession with a great sense of social responsibility.

PEO3: Graduates will recognize the importance of lifelong learning to shine as experts either as entrepreneurs or as employees and thereby broadening their professional knowledge.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

DEPARTMENT ORGANIZED EVENTS

- ❖ Conducted Virtual Alumni Meet – 2020 – "Class of 2004" on 25th July 2020.
- ❖ Conducted Virtual Alumni Meet – 2020 – "Class of 2006" on 26th July 2020.
- ❖ Conducted Virtual Alumni Meet – 2020 – "Class of 2016" on 26th July 2020.
- ❖ Conducted Virtual Alumni Meet – 2020 – "Class of 2018" on 2nd August 2020.
- ❖ Conducted Webinar on "Fire up your career in Embedded Industry" on 3rd August 2020.
- ❖ Conducted "Career Awareness Programme from 04th to 8th August 2020.
- ❖ Conducted Webinar on "Thematic Funding Opportunity for Students, Faculties and Research scholars" on 20th August 2020.
- ❖ Conducted Five day Online Faculty Development Program on "Recent Advancement in Embedded System" from 24th to 28th August 2020.
- ❖ Conducted Webinar on "IoT for Smart Campus" on 26th August 2020.
- ❖ Conducted Webinar on "Wireless Sensor Networks" on 29th August 2020.
- ❖ Conducted Webinar on "Embedded Solutions for Critical Applications" on 31st August 2020.
- ❖ Conducted Virtual Alumni Meet – 2020 – "Class of 2015" on 5th September 2020.
- ❖ Conducted Virtual Alumni Meet – 2020 – "Class of 2008" on 6th September 2020.
- ❖ Conducted Webinar on "Data Analytics and Big Data" on 7th September 2020.
- ❖ Conducted Virtual Alumni Meet – 2020 – "Class of 2012" on 13th September 2020.
- ❖ Conducted Virtual Alumni Meet – 2020 – "Class of 2006" on 13th September 2020.
- ❖ Conducted Five Day Online Faculty Development Program (FDP) on "Research challenges, Developments & Avenues in Cyber Security (RCDACS 2020)" from 15th to 20th September 2020.
- ❖ Conducted Virtual Alumni Meet – 2020 – "Class of 2019" on 20th September 2020.
- ❖ Conducted Webinar on "GIT - Description: Code Management Differentiation" on 20th September 2020.
- ❖ Conducted Five Day Online Faculty Development Program (FDP) on "Emerging Trends in VLSI Design (ETVD 2020)" from 21st to 25th September 2020.
- ❖ Conducted Webinar on "CAREER ENHANCEMENT IN IT INDUSTRY AND ENTREPRENEURSHIP" on 11th October 2020.
- ❖ Conducted Webinar on "ASIC FPGA Front End Design and Verification" on 11th October 2020.
- ❖ Conducted Two Day webinar on "Python -Open CV Python for Digital Image Processing & JAVA GUI Development" from 29th to 30th October 2020.
- ❖ Conducted Webinar on "Data Transmission in Wireless Networks" on 8th November 2020.
- ❖ Conducted Webinar on "Cyber Security" on 21st November 2020.

FACULTY ACHIEVEMENTS

Seminar / Workshop / FDPs / STTPs – Presented / Attended

Dr.P.Karthigaikumar, Professor and Head / ECE

- ❖ Attended one day workshop on "CAE for Product Design - An Insight" organized by Sri Eshwaar Engineering College, Coimbatore on 3rd July 2020.
- ❖ Attended one day workshop on "Your Mind Your Master" organized by Sri Eshwaar Engineering College, Coimbatore on 6th July 2020.
- ❖ Attended one day workshop on "4G AND 5G TECHNOLOGIES IN MIMI SYSTEMS" organized by Sri Eshwaar Engineering College, Coimbatore on 13th July 2020.
- ❖ Attended one day workshop on "Automotive Infotainment Systems - An Overview" organized by Sri Eshwaar Engineering College, Coimbatore on 15th July 2020.
- ❖ Attended one day workshop on "Quantum-dot Cellular Automata - Emerging Technology for Nano architectures" organized by Sri Eshwaar Engineering College, Coimbatore on 20th July 2020.
- ❖ Attended one day FDP on "FUTURE OF DATA TRANSMISION LIFI" organized by Sri Eshwaar Engineering College, Coimbatore on 25th July 2020.
- ❖ Attended one day FDP on "Digital Transformation" organized by Sri Eshwaar Engineering College, Coimbatore on 29th July 2020.
- ❖ Attended one day workshop on "Demand Side Management - The Utility Approach" organized by Sri Eshwaar Engineering College, Coimbatore on 31st August 2020.

Dr.T.K.Sethuramalingam, ASP / ECE

- ❖ Attended One day workshop on "esim, first course in the IoT series for teachers" organized by IIT Bombay on 21st September 2020.

Dr.C.Priya, ASP/ECE

- ❖ Attended one day workshop on "CAE for Product Design - An Insight" organized by Sri Eshwaar Engineering College, Coimbatore on 3rd July 2020.
- ❖ Attended one day workshop on "Your Mind Your Master" organized by Sri Eshwaar Engineering College, Coimbatore on 6th July 2020.
- ❖ Attended "INTERNATIONAL WEBINAR 2020 SERIES 1 ON CYBER SECURITY" organized by Pantech Solutions, Chennai on 9th July 2020.
- ❖ Attended one day online workshop on "Functional Verification of Complex SoC designs using UVM" organized by PSG ITECH, Coimbatore on 20th July 2020.
- ❖ Attended one day online workshop on "COMPUTER NETWORKING" organized by St. Joseph College of Engineering, Chennai on 22nd July 2020.
- ❖ Attended one day online workshop on "Industrial IoT" organized by Avinashilingam Institute for Home Science & Higher Education for Women, Coimbatore on 25th July 2020.
- ❖ Attended one day FDP on FUTURE OF DATA TRANSMISION LIFI organized by Sri Eshwaar Engineering College, Coimbatore on 25th July 2020.
- ❖ Attended one day FDP on "Digital Transformation" organized by Sri Eshwaar Engineering College, Coimbatore on 29th July 2020.
- ❖ Attended 5 DAYS STTP: "BRIDGE GAP BETWEEN INDUSTY AND ACADEMIA" organized by Don Bosco Institute of Technology, Bengaluru from 3rd to 7th August 2020.

- ❖ Attended ICT Mode STTP on "MEDICAL ELECTRONICS (ICT93)" organized by NITTTR, Kolkata from 17th to 21st August 2020.
- ❖ Attended Faculty Development Program "WISSEM 2020" organized by PSG College of Technology, Coimbatore from 15th to 19th September 2020.
- ❖ Attended ATAL Online FDP on "Biomedical Instrumentation & IoT" organized by Sri Krishna College of Technology, Coimbatore from 21st to 25th September 2020.
- ❖ Attended ATAL FDP ON "PHOTONICS" organized by Government Model College, Ernakulum from 19th to 23rd October 2020.

Dr.V.Saminathan, ASP/ECE

- ❖ Attended one day online workshop on "Future scope and applications of Artificial Intelligence" organized by Hindustan Institute of Technology, Coimbatore 30th July 2020.
- ❖ Attended Five Days Online FDP on "Intellectual property Rights and effective patent drafting" organized by Kumaraguru College of Technology, Coimbatore from 27th to 31st July 2020.
- ❖ Attended STTP on "To Bridge gap between Industry and Academia" organized by Don Bosco Institute of Technology, Bengaluru from 3rd to 7th August 2020.
- ❖ Attended Five Days Online FDP on "Up skilling for the Future: Technical Innovations & research opportunities in power Engineering" organized by B.N.M Institute of Technology, Bengaluru from 10th to 14th August 2020.
- ❖ Attended Five Days Online FDP on "Next generation Computing: IOT,AI, Blockchain in energy sector" organized by College of Engineering,Roorkee from 21st to 25th September 2020.

Dr.S.Deepa, ASP/ECE

- ❖ Attended AICTE STTP on "Data analytics in Biomedical Signal Processing" organized by Dhiraj Lal Gandhi College of Technology, Salem from 14th to 19th December 2020.

Mr.G.Arun Francis, AP/ECE

- ❖ Attended AICTE Sponsored One Week Online Short-Term Training Program on "Optimal Operation of Power System incorporating Renewable Energy Sources" organized by Sagar Institute of Research and Technology, Bhopal from 27th July to 1st August 2020.
- ❖ Attended AICTE Sponsored Six Days Online Short Term Training Programme-II on "COGNITIVE RADIO-WIRELESS SENSOR NETWORKS APPLICATIONS" organized by Vivekananda College of Engineering for Women, Namakkal from 27th July to 1st August 2020.
- ❖ Attended 3 Day National Level Short Term Training Programme on "Artificial Intelligence and its Application Tools" organized by Karpaga Vinayaga College of Engineering and Technology, Chengalpet from 31st July to 2nd August 2020.
- ❖ Attended 5 STTP on "Recent Trends and Challenges in Smart Grid Technology" organized by Sri Ramakrishna Engineering College, Coimbatore from 17th to 21st August 2020.
- ❖ Attended AICTE Sponsored One week Online STTP on "RECENT ADVANCEMENTS OF COMPUTATIONAL ELECTROMAGNETICS IN MODERN MICROWAVE ANTENNAS" organized by Sri Venkateswara College of Engineering, Sriperumbudur from 24th to 29th August 2020.
- ❖ Attended AICTE Sponsored online Short Term Training Programme on "Hybrid Energy Systems PHASE I" organized by Geethanjali College of Engineering and Technology, Telengana from 3rd to 8th August 2020.
- ❖ Attended AICTE Sponsored online Short Term Training Programme on "Hybrid Energy Systems PHASE II" organized by Geethanjali College of Engineering and Technology, Telengana from 17th to 22nd August 2020.
- ❖ Attended ATAL FDP on Data Science from organized by Velalar College of Engineering and Technology, Erode from 24th to 28th August 2020.
- ❖ Attended AICTE Sponsored One Week Online Short-Term Training Program on "Electric Vehicles - Challenges and Opportunities" organized by Sagar Institute of Research and Technology, Bhopal from 24th to 29th August 2020.
- ❖ Attended AICTE Sponsored online Short Term Training Programme on "Hybrid Energy Systems PHASE III" organized by Geethanjali College of Engineering and Technology, Telengana from 31st August to 5th September 2020.
- ❖ Attended AICTE sponsored Short term Training Programme on "Cyber Physical manufacturing Systems for Future Industries" organized by IFET College of Engineering, VIllupuram from 7th to 12th September 2020.
- ❖ Attended Short Term Course (STC) on "Next Generation Computing: IoT, AI, Blockchain in Energy Sector" organized by College of Engineering Roorkee(COER), Dehradun from 21st to 25th September 2020.

Ms.L.Saranya, AP/ECE

- ❖ Attended one day workshop on "CAE for Product Design - An Insight" organized by Sri Eshwaar Engineering College, Coimbatore on 3rd July 2020.
- ❖ Attended one day workshop on "Your Mind Your Master" organized by Sri Eshwaar Engineering College, Coimbatore on 6th July 2020.

- ❖ Attended INTERNATIONAL WEBINAR 2020 SERIES 1 ON "CYBER SECURITY" organized by Pantech Solutions, Chennai on 9th July 2020.
- ❖ Attended one day online workshop on "Industrial IoT" on 25th organized by Avinashilingam Institute for Home Science & Higher Education July 2020.
- ❖ Attended one day FDP on "FUTURE OF DATA TRANSMISION LIFI" organized by Sri Eshwaar Engineering College, Coimbatore on 25th July 2020.
- ❖ Attended one day FDP on "Digital Transformation" organized by Sri Eshwaar Engineering College, Coimbatore on 29th July 2020.
- ❖ Attended 5 DAYS STTP "BRIDGE GAP BETWEEN INDUSTY AND ACADEMIA" organized by Don Bosco Institute of Technology, Bengaluru from 3rd to 7th August 2020.
- ❖ Attended 5 DAYS FDP on "Remote Sensing Applications in Agricultural Water Management" organized by Indian Institute of Remote Sensing, Uttarakhand from 3rd to 7th August 2020.
- ❖ Attended Faculty Development Program "WISSEM 2020" organized by PSG College of Technology, Coimbatore from 15th to 19th September 2020.
- ❖ Attended ATAL Online FDP on "Biomedical Instrumentation & IoT" organized by Sri Krishna College of Technology, Coimbatore from 21st to 25th September 2020.

NPTEL

- ❖ Mr.G.Rajarathinam has successfully completed an NPTEL course entitled INTRODUCTION TO EMBEDDED SYSTEM DESIGN and awarded with ELITE + SILVER.
- ❖ Mr.N.M.Jayadevan has successfully completed an NPTEL course entitled INTRODUCTION TO EMBEDDED SYSTEM DESIGN and awarded with ELITE + SILVER.
- ❖ Ms.Rani Reegana Sulthana has successfully completed an NPTEL course entitled INTRODUCTION TO EMBEDDED SYSTEM DESIGN and awarded with ELITE + SILVER.
- ❖ Dr.A.Rajendran has successfully completed an NPTEL course entitled DIGITAL IMAGE PROCESSING and awarded with ELITE.
- ❖ Dr.P.Karthigaikumar has successfully completed an NPTEL course entitled CONTROL ENGINEERING.
- ❖ Ms.P.Archana has successfully completed an NPTEL course entitled MICROWAVE ENGINEERING.

Journal Publication – International/National

Dr.P.Karthigaikumar, Professor and Head / ECE
- ❖ Dr.P.Karthigaikumar., published a paper titled "FPGA implementation of hardware architecture with AES encryptor using sub-pipelined S-box techniques for compact applications",Automatika: Journal for Control, Measurement, Electronics, Computing and Communications, Vol.61 ,No.4, pp.682-693, 2020.
- ❖ Dr.P.Karthigaikumar.,published a paper titled "Fault diagnosis architecture for SKINNY family of block ciphers",Microprocessors and Microsystems, Vol.77, 2020.

Dr.A.Rajendran, Professor / ECE
- ❖ Dr.A.Rajendran.,published a paper titled "Capacity Enhancement in Mobile Cellular Communications",Bioscience Biotechnology Research Communications, Vol.13, No.6, pp.136-141, 2020.
- ❖ Dr.A.Rajendran .,published a paper titled "Design of High Performance Binary Circuits for Low Power Applications",Bioscience Biotechnology Research Communications, Vol.13, No.6, pp.131-135, 2020.

Mr.G.Arun Francis, AP/ECE
- ❖ Mr.G.Arun Francis.,published a paper titled "Face recognition system for visually impaired People", Journal of critical reviews, Vol.7, No.17, pp.2760-2764, 2020.

Ms.L.Saranya, AP/ECE
- ❖ Ms.L.Saranya.,published a paper titled "A 4x4 Modified 8T SRAM Cell Array Using Power Gating Technique",Materials Today: Proceedings, Vol.45, No.2, pp.1820-1826, 2020.

Dr.V.Saminathan, ASP/ECE
- ❖ Dr.V.Saminathan.,published a paper titled "Analysis of Sneak path issues in CMOS-memristor based 4x4 and 8x8 crossbar non-volatile Random access memory array", Solid State Technology , Vol.63, No.5, pp.1820-1836, 2020.

Dr.C.Priya, ASP/ECE

- ❖ Dr.C.Priya.,published a paper titled "Robust and Secure Video Watermarking Based on Cellular Automata and Singular Value Decomposition for Copyright Protection",Circuits, Systems, and Signal Processing , vol.40, No.1, pp.2464-2493, 2020.
- ❖ Dr.C.Priya.,published a paper titled "An ultra-low power static random access memory cell using tunnelling field effect transistor",International Journal of Engineering, Vol.33, No.11, pp.2215-2221, 2020.

Dr.A.Mohan Babu, AP/ECE

- ❖ A Mohanbabu.,published a paper titled " Investigation of Quaternary Barrier InAlGaN/GaN/AlGaN Double-Heterojunction High-Electron-Mobility Transistors (HEMTs) for High-Speed and High-Power Applications",Journal of Electronic Materials, Vol.49, No.1, pp.524-529, 2020.

Ms.P.Archana, AP/ECE

- ❖ P.Archana.,published a paper titled "Accident avoidance system for vehicles at hair-pin bends",Journal of Critical Reviews ,Vol.7, No.17, pp.2754-2759, 2020.

Ms.T.Happila, AP/ECE

- ❖ Happila T .,published a paper titled "Machine learning based predictive modelling to analyses the moisture level of soil followed for effective drought control", International Journal of Advanced Research in Engineering and Technology, Vol.11, No.9, pp.116-125, 2020.

STUDENT ACHIEVEMENTS IN COCURRICULAR / EXTRACURRICULAR ACTIVITIES

- ❖ Shairam R,Jayalekshmi I,Surya S has participated in Sri Eashwar Innovation Challenge 2020 – Mobile App Development and Secured First Prize at Sri Eashwar College of Engineering on 11th October 2020.
- ❖ Anusri A has successfully completed an NPTEL course entitled INTRODUCTION TO EMBEDDED SYSTEM DESIGN and awarded with ELITE.
- ❖ Anusri A has successfully completed an NPTEL course entitled PROGRAMMING IN JAVA and awarded with ELITE.
- ❖ Deepika.T.S has successfully completed an NPTEL course entitled INTERNET OF THINGS and awarded with ELITE.
- ❖ Sivaraman P has successfully completed an NPTEL course entitled PYTHON FOR DATA SCIENCE and awarded with ELITE.
- ❖ Sivaraman P has successfully completed an NPTEL course entitled PROGRAMMING IN JAVA and awarded with ELITE.
- ❖ Sindhuja M has successfully completed an NPTEL course entitled PROGRAMMING IN JAVA and awarded with ELITE + SILVER.
- ❖ Sindhuja M has successfully completed an NPTEL course entitled and awarded with ELITE + SILVER.
- ❖ Surya.S has successfully completed an NPTEL course entitled PROGRAMMING IN JAVA and awarded with ELITE + SILVER.
- ❖ Jaya Lekshmi I has successfully completed an NPTEL course entitled PROGRAMMING IN JAVA and awarded with ELITE + SILVER.
- ❖ Swetha R D has successfully completed an NPTEL course entitled PROGRAMMING IN JAVA and awarded with ELITE + SILVER.
- ❖ Laxmanan P has successfully completed an NPTEL course entitled PROGRAMMING IN JAVA and awarded with ELITE + SILVER.

Chief Editor(s):

Mr. G.ARUN FRANCIS,
ASSISTANT PROFESSOR, DEPARTMENT OF ECE.
Mr.C.MUKUNTHARAJ,
ASSISTANT PROFESSOR, DEPARTMENT OF ECE.

Students Editorial Member(s)

17L216 INFANT NISHANTH J
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19L601 PRAVIN SUNDHAR K
19L219 KARTHIKEYAN S
19L241 SINDHUJA B

Programme Outcomes:

The following are the program outcomes of the department of Electronics and Communication engineering At the end of the program the students will have

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.
PO11:	**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.

The Program Specific Outcomes :

The program specific outcomes are defined as

PSO1:	Good knowledge and hands-on competence to solve emerging real-world problems related to Electronic Devices and Circuits, Communication Systems, Digital Systems, and Electro-magnetics.
PSO2:	Demonstrate proficiency in specialized software packages and computer programming useful for the analysis/design of electronic engineering systems and profession.