DEPARTMENT OF ECE

NEWSLETTER

JULY-AUGUST 2023

Faculty Members:

Dr. V. Jagan Naveen
Professor & HOD

Dr. B. Anil Kumar
Assistant Professor

Mrs. S. Shanmathi
Assistant Professor

Student Members:

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ECE-B

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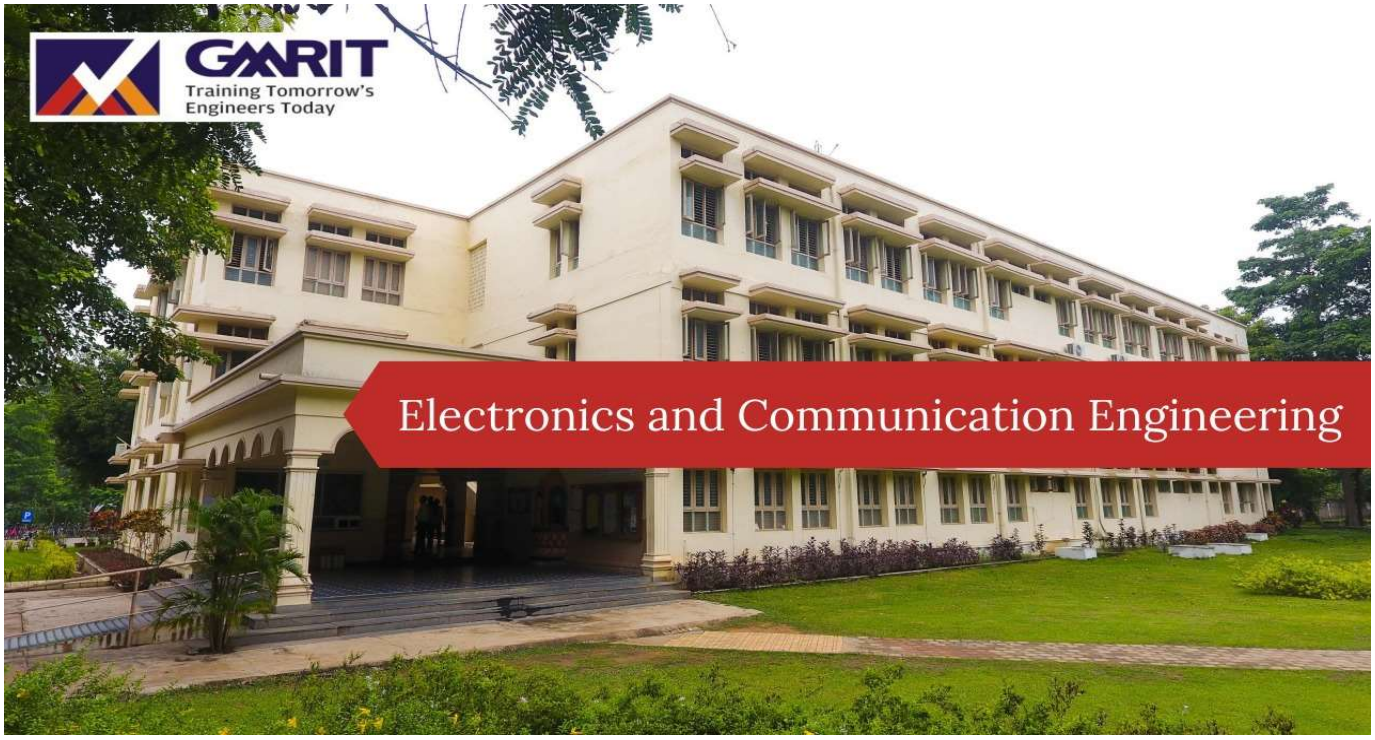
1. ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT

1.1. OVERVIEW

Electronics & Communication Engineering Department provides students with a solid scientific/technical background and research capabilities in the design, development and manufacture of electronic devices and systems used in a wide spectrum of applications. The applications spans from household appliances to sophisticated satellite communication, from electronic ignition to neural networks and signal processing chips. The Department integrates academic discipline with project-based engineering applications, classroom learning and theory with real world experiences. Annual intake of this Department is 180 students.



1.2. VISION

To be a nationally preferred department of learning for students and teachers alike, with dual commitment to research and serving students in an atmosphere of innovation and critical thinking.

1.3. MISSION

To provide high-quality education in Electronics & Communication Engineering to prepare the graduates for a rewarding career in Electronics & Communication Engineering and related industries, in tune with evolving needs of the industry.

To prepare the students to become thinking professionals and good citizens who would apply their knowledge critically and innovatively to solve professional and social problems.

1.4. PROGRAMME EDUCATIONAL OBJECTIVES (PEO'S)

1. Embrace technical and professional skills with the spirit of learning, critical thinking while acquiring the fundamentals in science and technology. (PEO1)
2. Contemplate real life problems, design and develop novel products that are technically viable, economically feasible and socially acceptable. (PEO2)
3. Encompass ethical values, exhibit soft skills in management & teamwork acquiring leadership qualities. (PEO3)

1.5. PROGRAMME OUTCOMES (PO'S)

At the end of the Programme, a graduate will be able to

PO 1. Apply the knowledge of basic sciences and fundamental engineering concepts in solving engineering problems.

PO 2. Identify and define engineering problems, conduct experiments and investigate to analyze and interpret data to arrive at substantial conclusions.

PO 3. Propose an appropriate solution for engineering problems complying with functional constraints such as economic, environmental, societal, ethical, safety and sustainability.

PO 4. Perform investigations, design and conduct experiments, analyze and interpret the results to provide valid conclusions.

PO 5. Select/develop and apply appropriate techniques and IT tools for the design & analysis of the systems.

PO 6. Give reasoning and assess societal, health, legal and cultural issues with competency in professional engineering practice.

PO 7. Demonstrate professional skills and contextual reasoning to assess environmental/societal issues for sustainable development.

PO 8. Demonstrate Knowledge of professional and ethical practices.

PO 9. Function effectively as an individual, and as a member or leader in diverse teams, and in multi-disciplinary situations.

PO 10. Communicate effectively among engineering community, being able to comprehend and write effectively reports, presentation and give / receive clears instructions.

PO 11. Demonstrate and apply engineering & management principles in their own / team projects in multidisciplinary environment.

PO 12. Recognize the need for, and have the ability to engage in independent and lifelong learning.

PSO 1. Apply the knowledge of technological evolutions, model / characterize devices and design the integrated circuits to build analog and digital systems. (Program Specific)

PSO 2. Understand and apply the fundamentals of communication and signal processing to develop systems wrapped with industry standard protocols and standards. (Program Specific)

1.6. FACILITIES & INFRASTRUCTURE

- ❖ Analog & Digital Communication Lab
- ❖ Integrated Circuit & Pulse Digital Circuits Lab

- Electronic Device Circuits Lab
- Microwave & Optical Communication Lab
- Microprocessor & Micro Controller Lab
- ECAD Lab
- Basic Electronics Lab
- Digital Signal Processing Lab

1.7. MAJOR COURSES

- Digital Signal Processing
- Radar Engineering
- Computer Organisation
- Electronic Devices and Circuits
- Analog and Digital Circuits
- Microwaves
- VLSI
- Satellite Communication
- Cellular Mobile Communication
- Optical Communication
- Management Science
- Pulse & Digital Circuits and Integrated Circuits
- Electromagnetic Waves
- Antennas
- Microprocessors
- Digital Image Processing
- Embedded Systems Design and IoT
- RTL coding Techniques
- ASIC verification using system Verilog
- Electronics for Agriculture

PROFESSIONAL SOCIETY ACTIVITIES

ISTE EVENTS:

- **FUN WITH CIRCUITS:** conducted on 7/08/2023.
- The "Fun with Circuits" event is designed to test participants' knowledge and skills in circuit design and analysis. The event consists of two rounds. Round 1, Circuit Diagram Drawing, requires participants to draw a circuit diagram based on given specifications within 30 minutes. The specifications may include LED flashers, simple alarms, or similar circuits, and judging criteria will be based on accuracy, completeness, and clarity.
- In Round 2, Guess the Circuit and Output, participants will have 30 minutes to predict the output of a mystery circuit and explain their reasoning. The mystery circuits may include simple AND/OR logic gates, basic amplifiers, RC circuits, and more. Judging criteria will be based on accuracy, correctness, and clarity of explanation.
- **Venue:** ECE Seminar Hall from 3:00pm to 5:00pm.
- **Participants**: Event was conducted by 47 participants.
- The event was interactive and lively. The event was conducted successfully.

3. FACULTY PUBLICATIONS & ACHIEVEMENTS

JOURNAL PAPERS

- Dr . B.anil babu, et al. "design and analysis of amc reflector integrated flexible and compact vehicular antenna for communication application." radioelectronics and communications systems 65.8 (2022): 411-419.
- Dr. T. Geetamma ”exploring synergistic applications of electronics and communication engineering in chemical engineering processes: enhancing efficiency, automation, and control”.
- Dr. T. Prabhakar :”deep learning based classification of lung diseases using chest x-ray images”.
- Dr.A.Sudhakar: “Wide Band Circularly Polarized Slot Antenna with Circular Stub for C-Band Applications”.
- Dr. T.V.S. Diwakar:” Slotted PIFA Antenna With Metasurface for Wearable Medical Applications at 5.05 GHz”
- Dr. Ravi Shankar Saxena:” Multi-pattern synthesis in fourth-dimensional antenna arrays using BGM-based quasi-Newton memetic optimization method”
- Dr. Yogesh Mishra;” Applications Of Fuzzy Logic: A Literature Review”

CONFERENCE PAPER

- Telagarapu Prabhakar has presented a paper “Design of Real Time Facial Emotion Recognition system wing Convolutional Neural Network” via online/offline at International Conference on Al Powered Technology Integration for Sustainability (AI-PTIS-2024) organized by GMR Institute of Technology, Rajam, Andhra Pradesh, India during 5th - 6th July 2024.
- A .Sudhakar has presented a paper “ Design of Slotted Microstrip Antenna for ISM Band Application” via online/offline at International Conference on Al Powered Technology Integration for Sustainability (AI-PTIS-2024) organized by GMR Institute of Technology, Rajam, Andhra Pradesh, India during 5th - 6th July 2024.
- Dr. J.venkata Suman, et al. "Characterization and Modeling of Gate-All-Around FET (GAA FET) for Low-Power and High-Performance Applications." 2024 International Conference on Advances in Modern Age Technologies for Health and Engineering Science (AMATHE). IEEE, 2024.
- Dr. J.venkata Suman, et al. "Effective Image Reconstruction Using Various Compressed Sensing Techniques." 2024 International Conference on Advances in Modern Age Technologies for Health and Engineering Science (AMATHE). IEEE, 2024.
- T.V.S.Divakar has presented a paper “Triple Slotted Miniaturized PIF Antenna with an Electrongnetke Meta Surface for Medical Applicalias at 5-6643” via online/offline at International Conference on Al Powered Technology Integration for Sustainability (AI-PTIS-2024) organized by GMR Institute of Technology, Rajam, Andhra Pradesh, India during 5th - 6th July 2024.

ONLINE COURSES

- Dr. P. Ravi Kumar successfully completed all courses and received passing grades for a Professional Certificate in COURSERA Introduction to Python Programming
- Sri. P. V .Murali Krishna successfully completed all courses and received passing grades for a Professional Certificate in COURSERA Programming for everybody (getting started with phython)
- Dr. G . Nooka Raju successfully completed all courses and received passing grades for a Professional Certificate in COURSERA Introduction to the Internet of Things and Embedded Systems
- Dr. G . Nooka Raju successfully completed all courses and received passing grades for a Professional Certificate in COURSERA Programming for Everybody (Getting Started with Python)
- Dr. T. Geetamma successfully completed all courses and received passing grades for a Professional Certificate in COURSERA Object Oriented Programming in Java
- Dr. T. Anil Kumar successfully completed all courses and received passing grades for a Professional Certificate in mu.microchip.com PCB Design for Today's High-Speed Protocols

PATENTS

- In Pursuance Of And Subject To The Provision Of Registered Designs Act 1949, The Design Of Which A Representation Or Specimen Is Attached, Had Been Registered As Of The Date Of Registration Shown Above In The Name Of Dr. T. Prabhakar In Respect Of The Application Of Such Design To An Advanced Image Processing System Using A Combination Of Iot And Cloud Computing.
- In Pursuance Of And Subject To The Provision Of Registered Designs Act 1949, The Design Of Which A Representation Or Specimen Is Attached, Had Been Registered As Of The Date Of Registration Shown Above In The Name Of Dr. Ch. Babji Prasad In Respect Of The Application Of Such Design To: Intelligent Transport Locations Display And Management Server Device

4.SEMINARS AND WORKSHOPS ATTENDED

FACULTY DEVELOPMENT PROGRAMME

- This is to certify that Prof/Dr/Mr/ Dr. P. Ravi Kumar has actively participated in "6 DAYS Workshop about Antennas for 5G Communications & Beyond" organized by Aditya Engineering College(A), Surampalem in association with IETE on 03.07.2023 - 08.07.2023.

- This is to certify that Prof/Dr/Mr/ Dr. G. Nooka Raju has actively participated in "6 DAYS Workshop about Antennas for 5G Communications & Beyond" organized by Aditya Engineering College(A), Surampalem in association with IETE on 03.07.2023 - 08.07.2023.

- Dr. Sri. P.V. Murali krishana has attended 6 days workshop on "Antennas for 5g communications and beyond" to 03.07.2023 - 08.07.2023. Organized by Àditya engineering college

- Dr. B. Anil Kumar has attended workshop on "Deep Learning for NLP and Computer Vision" from 10 th July to 18th July-2023. Organized by Chaitanya Bharathi Institute of Technology (CBIT) in Collaboration with ExcelR.

- Dr. T. Anil Kumar has attended One Week International Online FDP on International Workshop on "RaoS Phased Array and Reflector Antenna Design and Analysis" On 22nd July-2023. Organized by organized by IEEE AP-S Student Branch, Raghu Institute of Technology (A) and Raghu Engineering College (A), Dakamarri, Visakhapatnam, Andhra Pradesh
- Dr. T. Geetamma has attended one week online Faculty Development Programme on "Enhancing Faculty Expertise: Communication and Signal/Image Processing(EFECSIP-2023)" from 10th July to 15th July-2023. Organized by Department of Electronics and Communication Engineering, Aditya College of Engineering, Kakinada.

- Dr. A. Siva Sangari has attended workshop on "Enhancing Faculty Expertise: Communication and Signal/Image Processing (EFECSIP- 2023)" from 10 th July to 15th July-2023. Organized by Aditya College of Engineering and Technology, Surampalem, Kakinada.

- Sri. B.M.S Sreenivasa Rao has attended workshop on "Communication and Signal/Image Processing (EFECSIP-2023)" from 10 th July to 15th August-2023. Organized by Aditya College of Engineering and Technology.