

DEPARTMENT OF ECE NEWSLETTER

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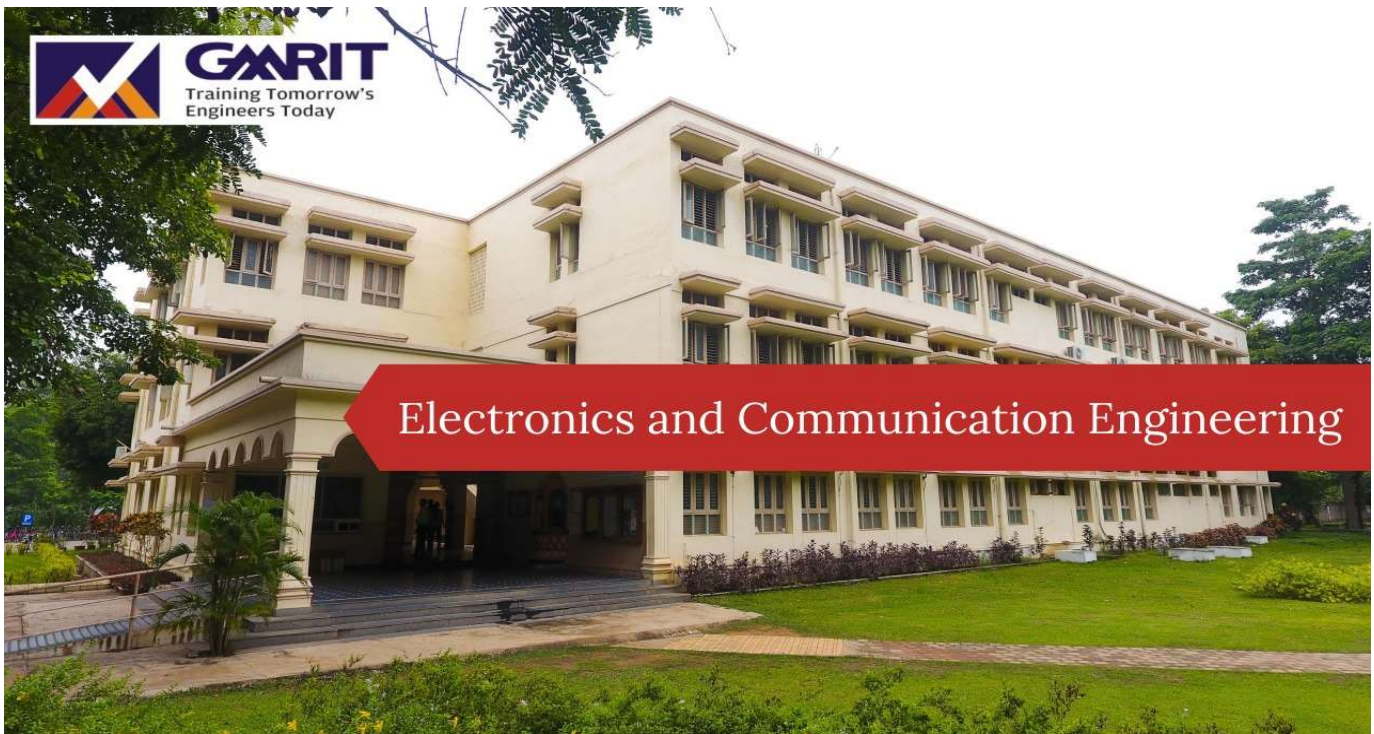
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1. ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT

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 clear 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

2.STUDENT ACTIVITIES

PROFESSIONAL SOCIETY ACTIVITIES

IETE EVENTS:

- **CIRCUIT BLAZE:** conducted on 15/11/2024
- This Creative Quest features 2 rounds that challenge participant's creativity. In Round 1, teams brainstormed there subjects related to electronics and answer it and score the points. In Round 2, teams guess the outputs of a digital electronic circuit. The event was held at ECE Block ECE SEMINAR HALL, with a total no of participants day wise given below.
- **Participants:** The event was attended by **45 participants**.
- The event was engaging and vibrant, successfully achieving its objectives.



IE(I) EVENTS:

- **WORDPLAY WIZARD:** Conducted on 11/11/24
- This event is all about Puzzle solving.
It was a unique and engaging technical competition. In this event, featured two engaging rounds. In the initial challenge, participants unraveled jumbled words, showcasing linguistic prowess. The second round presented blank puzzles accompanied by dynamic presentations with clues, testing both vocabulary and problem-solving skills. Winners were determined by the total number of correctly answered words, recognizing participants' linguistic agility. Prizes were awarded to top performers. Wordplay wizard a blend of wordplay and puzzles, provided a captivating experience, promising future challenges in the realm of intellect and entertainment.
- **Participants:** Event was conducted by 32 participants.
- This event was conducted successfully.



3. FACULTY PUBLICATIONS & ACHIEVEMENTS

PAPER PUBLICATIONS AND PRESENTATIONS

- Dr. T.V.S. Divakar entitled book on “Digital Marketing: Strategies for the Social Media Era” No:42667400, Date of Publication: 10/10/2024, Publisher JSR PUBLICATIONS.
- Dr. Dr. Ravi Shankar Saxena [et al.] paper presented titled on “AUTOMATED DUAL AXIS SOLAR TRACKING SYSTEM USING IOT FOR OPTIMAL ENERGY HARVESTING” title on Journal ANVESAK Publication: 08-12-2024, Publisher ANVESAK, Volume No. 54, Issue No. 2, . ISSN No: 0378 – 4568. Indexing: UGC Care
- Dr. Dr. Ravi Shankar Saxena [et al.] paper presented titled on “Leaf-Shaped Nanostrip Fed Graphene Plasmonic Nano-Antenna for Optical Near-Field Applications Leaf-Shaped Nanostrip Fed Graphene Plasmonic Nano-Antenna for Optical Near-Field Applications Leaf-Shaped Nanostrip Fed Graphene Plasmonic Nano-Antenna for Optical Near-Field Applications -Shaped Nanostrip Fed Graphene Plasmonic Nano-” , title on Journal Key engineering materials Publication: 03-12-2024, Publisher ANVESAK, Volume No. 995, Issue No. 2, . ISSN No: 1662-9795. Indexing: scopus.

SEMINARS AND WORKSHOPS

- Dr.G.B.S.R. Naidu [et..Al.] attend a Conference entitled on “Pedestrian Detection for Autonomous Driving within Cooperative Communication System Based on CNN-ELM Approach” 2024 2nd World Conference on Communication & Computing (WCONF) Conference date 7/12/2024, Organized Alliance College of Engineering and Design Bangalore.
- Dr. Yogesh Mishra [et..al.] attend a Conference entitled on “A NodeMCU-based programmable Reconfigurable Intelligent Surface for mm-Wave 5G Applications” Conference 2024 First International Conference on Electronics, Communication and Signal Processing (ICECSP) date: 8/8/2024 organized by New Delhi, India

FACULTY DEVELOPMENT PROGRAMME

- Dr. Ravi Shankar Saxena attend a 6days FDP title on “VLSI Design Innovations for defence. Applications” Starting date 09-12-2024 Ending date:14-12-2024. Organized by GMR Institute of Technology, Rajam.
- Dr. Ch. Babji Prasad attend a 6days FDP title on “VLSI Design Innovations for defence. Applications” Starting date 09-12-2024 Ending date:14-12-2024. Organized by GMR Institute of Technology, Rajam.
- Dr. T. Anil Kumar attend a 6days FDP title on “VLSI Design Innovations for defence. Applications” Starting date 09-12-2024 Ending date:14-12-2024. Organized by GMR Institute of Technology, Rajam.
- Dr. J.V. Suman attend a 6days FDP title on “Ethical Issues in Research Writing” Starting date 9/11/2024 Ending date:9/16/2024. organized by University of Technology, Jaipur in association with Scientific and Humanities Research Society, Jaipur, Rajasthan, India.

- Dr. Ch. Babji Prasad attend a 6days FDP title on “Ethical Issues in Research Writing” Starting date 09/11/2024 Ending date:9/16/2024. organized by University of Technology, Jaipur in association with Scientific and Humanities Research Society, Jaipur, Rajasthan, India.

VISITORS –GUEST FACULTY- GUEST LECTURES

- Digital Processing Applications in Medicine – Srinivas Kota Date:24.12.24