

# DEPARTMENT OF ECE NEWSLETTER

SEP-OCT 2024

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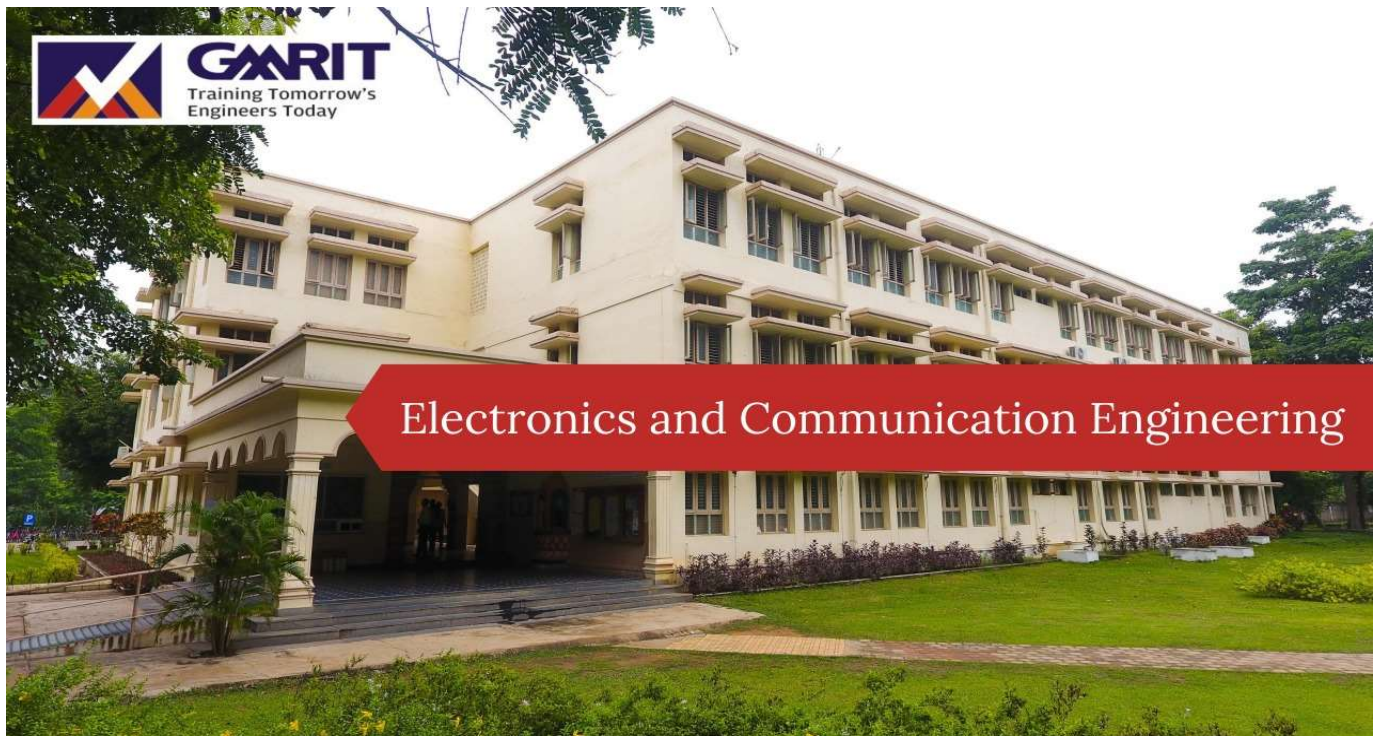
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# 1. ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT

## 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

## PROFESSIONAL SOCIETY ACTIVITIES

### ISTE EVENTS:

- **FUNTRONICS:** conducted on 13/09/2024
- The "FUNTRONICS" event, organized by the Indian Society for Technical Education (ISTE) student chapter on september 13, 2024, was a unique and engaging technical competition.
- First round is a basic round of consisting simple and easy mode questions and the second round consists of questions based on network analysis it means . Finding resistance equivalent by using suitable method.
- **Participants:** Event was conducted by 51 participants.
- **Winners:**

22341A0421 **B.Sasi kiran**

2341A0428 **Ch.Vishnu vardhan**

22341A0432 **D.Chanakya**

- **Runners:**

LATERAL **P.Sravani**

23341A0412 **B.Harsha vardhini**

23341A0433 **T.Dhana Lakshmi**

- The event was interactive and lively. The event was conducted successfully.



## IETE EVENTS:

- **MIND MASTERS** : conducted on 23/11/2024
- This event was aimed to enhance their cognitive abilities and technical skills. 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 **57 participants**.
- **Winners:**
  - 23341A04A1-M.Jagadesh
  - 23341A04B3- P.Madhu
  - 23341A0465-I.Jagadesh
- **Runners:**
  - 23341A0494-M.Manikanta
  - 23341A04F5-S.Teja
  - 23341A0421-B.Sasi kiran
- The event was engaging and vibrant, successfully achieving its objectives.





## IE(I) EVENTS:

- **PIXEL PERFECT** : conducted on 09/10/2024
- can take pictures where ever & what ever you like you can just select one picture you captured and upload that picture.
- **Participants:** The event was attended by **30 participants**.



## **SILVER JUBLEE:**

### **INAUGURATION:**

We are thrilled to celebrate the Silver Jubilee of the ECE block, marking 25 years of excellence in engineering education! To commemorate this special milestone, we have invited esteemed alumni to join us in a grand gathering at the auditorium. The program will be filled with nostalgia, reconnecting with friends, and lively cultural performances that showcase the spirit and talent of our community. It's a wonderful occasion to honor the past, celebrate the present, and look forward to a bright future together



## PRE-DIWALI CELEBRATIONS:

The ECE block came alive with vibrant colors and festive cheer as we celebrated a pre-Diwali gathering! The entire block was beautifully decorated with lights, flowers, and stunning rangolis that showcased intricate designs and added a traditional touch to the space. Students and faculty came together to adorn every corner, creating a warm and joyous atmosphere that embodied the spirit of Diwali. The celebrations included music, dance, and laughter, as everyone enjoyed the festivities, shared sweets, and participated in fun activities. It was a memorable event that brought our ECE family closer, filling the block with light and positivity.



# 2. FACULTY PUBLICATIONS & ACHIEVEMENTS

## FACULTY DEVELOPMENT PROGRAMME

1. Rajender Daggula, Vasudeva Bevara Paper entitled “e-Prime - Advances in Electrical Engineering, Electronics and Energy”, Journal of Publisher Elsevier, date of Publication 9/1/2024, Volume:9, Page No. 100695, ISSN No:2772-6711, Indexing Scopus, Impact factor: 0.649.
2. Dr. T.V.S. Divakar Paper entitled “Integration of Fuzzy Logic and Machine Learning for Medical Image Analysis in Neuroimaging”, Journal of Publisher South Eastern European journal of Public Health, SSEJPH date of Publication 9/18/2024, Volume:24, Issue No S1 Page No. 24-34 , ISSN No:2197-5248 , Indexing Scopus.
3. Dr. J.V.Suman [et al.] Paper entitled “Scrambled UFMC and OFDM Techniques With APSK Modulation in 5G Networks Using Particle Swarm Optimization”, Journal of Publisher IEEE ACCESS date of Publication
4. Dr. N. Chandra Sekhar [et..al.] Paper entitled “Emergency Vehicle Classification Using Combined Temporal and Spectral Audio Features with Machine Learning Algorithms”, Journal of Electronics, date of Publication 9/30/2024, Volume:13 , Issue No:19 Page No. 3873, ISSN No:2079-9292, Indexing SCI, Impact factor: 2.6.
5. Dr. T.V.S.Diwakar Paper entitled “Optimised PIFA with Improved Bandwidth and Gain for Bluetooth Devices and Wearable Applications” journal of IJSET, date of Publication 10/14/2024, Volume:12 , Issue No:5 Page No. 1-17, ISSN No:2348-4098 Indexing , UGC CARE SCI, Impact factor:0.
6. Dr. G.B.S.R. Naidu [et..al.] entitled book on “Study-on-Environmental-and-Social-Impacts-Through-Electric- Vehicles” No:42667400, Date of Publication: 9/30/2024, Publisher name IGI Global.
7. Dr. J.V. Suman attend a 6days FDP titled on “Ethical Issues in Research Writing”, Starting date:9/11/2024 ending date9/16/2024. Organized by University of Technology, Jaipur in association with Scientific And Humanities Research Society, Jaipur, Rajasthan, India
8. Dr. Ch. BabjiPrasad attend a 6days FDP titled on “Ethical Issues in Research Writing”, Starting date:9/11/2024 ending date9/16/2024. Organized by University of Technology, Jaipur in association with Scientific And Humanities Research Society, Jaipur, Rajasthan, India.

## SEMINARS AND WORKSHOPS

1. Dr.G.B.S.R. Naidu [et..Al.] attend a Conference entitled on “2024 2nd World Conference on Communication & Computing (WCONFT, Conference date 10/14/2024, Organized Alliance College of Engineering and Design Bangalore.
2. Dr. Yogesh Mishra [et..al.] attend a Conference entitled on “NodeMCU-based programmable Reconfigurable Intelligent Surface for mm-Wave 5G Applications” 2024 First International Conference on Electronics, Communication and Signal Processing (ICECSP), New Delhi, Conference date 8/8/2024, Organized Alliance College of Engineering and Design Bangalore.
3. Dr.J.V.Suman [et...al.] attend a Conference entitled on “Stock Market Price Prediction using Machine Learning”, 2024 Second International Conference on Advances in Information Technology (ICAIT-2024) Conference date:7/24/2024, Organized Adichunchanagiri Institute of Technology. Chikkamagaluru, Karnataka
4. Dr.J.V.Suman [et..Al.] attend a Conference entitled on “Morphed Picture Recognition using Machine Learning Algorithms” 2024 Second International Conference on Advance in Information

Technology (ICAIT-2024) Conference date:7/24/2024, Organized Adichunchanagiri Institute of Technology. Chikkamagaluru, Karnataka

5. Dr.J.V.Suman, G.M.Anitha Priyadarshini, Chandra Sekhar Rao Tekuru attend a Conference entitled on “Reliability Assessment and Life Time Prediction of FinFET Devices for Future Electronic Applications” 2024 Second International Conference on Advance in Information Technology (ICAIT-2024) Conference date:7/24/2024, Organized Adichunchanagiri Institute of Technology. Chikkamagaluru, Karnataka
6. Dr.J.V.Suman, Yarnagula Swathi, R. Santhi Kumar attend a Conference entitled on “Fabrication Techniques and Material Selection for Gate-All-Around FET (GAAFET) in Advanced Nanoelectronics” 2024 Second International Conference on Advance in Information Technology (ICAIT-2024) Conference date:7/24/2024, Organized Adichunchanagiri Institute of Technology. Chikkamagaluru, Karnataka

## **PATENTS:**

- 1.Dr. A. Siva Sangari granted patent titled “Smart Cradle -The Next Generation Monitoring System” Agency name Technology Innovation Hub (TIH) for Devices Materials and Technology Foundation, IIT Roorkee date of Submission : 9/3/2024.
2. Dr. J.V. Suman granted patent titled “Air Pollution Monitoring Device using IOT and ML” Agency name Intellectual Property Patent Office Govt. of India Design NoI419239-001 date : 06/06/2024
- 3.Dr. G.B.S.R. Naidu patent granted titled on “Artificial Intelligence Based Cloud Security Detecting device” No:42667400, Date of Publication: 9/27/2024, Agency name indian patent

## **GUEST LECTURES:**

1. Guest lecture on “Thriving in an AI-Driven World: Preparing for the Future of Engineering” by Mr. Guduru Sunil Kumar, Product Manager at Cisco Systems, Bengaluru dated on 19.10.24 for all the 3rd year B.Tech ECE students

## OTHERS:

Dr. Anil Kumar recently participated in Phase 1 of the offline classes for the AICTE Quality Improvement Program (QIP) PG Program at IIIT Lucknow. The program, held from October 7 to October 21, 2024, brought together professionals and educators to advance their expertise in various fields. Dr. Anil Kumar's engagement in this program reflects his commitment to continuous learning and contributing to academic excellence.

