

DEPARTMENT OF ECE

NEWSLETTER NOV-DEC 2022

FACULTY MEMBERS:

Dr. V. Jagan Naveen
Professor & HOD



Dr. B. Anil Kumar
Assistant Professor



Mr. M Bala Krishna
Assistant Professor



STUDENT MEMBERS:

Ms. M. Hari Chandana
3rd ECE B



Ms. V. Harika
3rd ECE C



Mr. N. Pavan Kumar
3rd ECE B



Ms. R. Gnanaprasuna
3rd ECE C



GMR Institute of Technology is situated at Rajam, a small industrial town about 100 KMs from the 'city of destiny', Visakhapatnam in Andhra Pradesh. The campus of the institute is spread over sprawling 117 acres of land. The lush sylvan and idyllic surroundings at the heart of the agricultural belt, offer an ideal setting for higher studies. The institute is affiliated to the Jawaharlal Nehru Technological University, Kakinada and is approved by AICTE New Delhi. The institute has been accredited NAAC – 'A' grade of UGC. The institution is also having ISO 9001:2008 Quality Systems. The department of ECE has been accredited by National Board of accreditation (NBA).



GMRIT offers 4-year B.Tech. Programs in seven core disciplines, 2-year M. Tech programs in six specializations.

The approved annual intake of the institute is 1038 students. The institution received the grant extension of autonomous status for a period of ten years w.e.f 2018-19 to 2027-2028.

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1. DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

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 span 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.



Electronics & Communication Engineering

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.

PROGRAMME SPECIFIC OUTCOMES (PSO's)

- 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 Organization
- ❖ 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. FACULTY PUBLICATIONS & ACHIEVEMENTS

Papers Published in Journals

- **Sri. P.V. Murali Krishana** published a Journal, entitle “LOW POWER 4-BIT FLASH ANALOG TO DIGITAL CONVERTER FOR HIGH-SPEED APPLICATIONS” on 10/22/2022, Volume No.9, Issue No.10, Page Nos.61-68, Publisher: Jetir, ISSN No. 2349-5162, Indexing UGC
- **Dr. A. Siva Sangari** published a Journal entitle “Journal of Fundamental & Comparative Research” on 11/3/2022 Volume No. 8, Issue No.2, Page Nos.42-49, Publisher: Journal of Kavikulaguru Kalidas Sanskrit University, Ramtek, ISSN Number: 2277-7067, Indexing: UGC Journal.
- **Dr. T. Prabhakar** published a Journal entitle “IJFANS International Journal of Food and Nutritional Sciences” On 11/4/2022, Volume No. 11, Issue No.1, Page Nos. 267-278, Publisher: Global E Smart Technologies, ISSN Number: 2320-7876, Indexing UGC, Impact factor 1.
- **Sri. B. Anil Babu** published an article in a Journal entitled “AIMS Electronics and Electrical Engineering” on 8/10/2022, Volume No 6, Issue No.4, Page Nos. 385-396, Publisher: AIMS Press ISSN No. 2578-1588, Indexing Scopus
- **Dr. T .Prabhakar** published a Book entitled “Chapter: Deep learning-based automatic detection of breast lesions on ultrasound images Book: Book Intelligent Systems and Machine Learning for Industry” on 12/21/2022, Publisher CRC Press.

3. SEMINARS/CONFERENCES/WORKSHOPS AND WORKSHOPS ATTENDED/CONDUCTED

Online Courses

- **Dr. T. Prabhakar** attended an online course” Python for Data Science” NPTEL Portal, SWAYAM University, Completion on 11/03/2022 (4 Weeks).

- **Sri. B.M.S Sreenivasa Rao** attended an online course “Computer Organization and Architecture” <https://bharatacharyaeducation.com/> portal, Bharat Acharya Education, completion on 31/8/2022 (24 weeks).

Conferences

- **Mrs. P. Revathi** attended a Conference “IEEE ISES 2022” at NIT-Warangal on 20.12.2022.
- **Dr. Ravikumar Palla, Mr.Badisa Anil Babu** presented a Paper entitled “A compact.flexible and multiband antenna for sub 6 GHz wearable applications” in IEEE 2nd International Conference on Mobile Networks and Wireless Communications, at Sri siddhartha Institute of Technology, Tumkur on 3/12/2022.
- **Dr. D.Suresh** presented a Paper entitled “A Novel System Model for Managing Cyber Threat Intelligence” in 2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon), at JSS Science and Technology University (SJCE), Mysuru on 10/16/2022.

4. OTHERS

- Recruitment scenarios by Mr. Mahesh Peri, CEO of Outlook Magazine.