



GALGOTIAS COLLEGE OF ENGINEERING & TECHNOLOGY

EC-NEWSLETTER 2022-23

Vol-09 (ISSUE : 2)/ June 2023

“EC-Newsletter” is the Bi-annual newsletter of the Department of ECE, Galgotias College of Engineering and Technology, Greater Noida highlighting the accomplishments of our students, faculty and staff. It mainly focuses on the major events organized, student and faculties research publications, achievements, campus placement, industrial interactions, industrial visits, higher studies details etc.



Department of Electronics & Communication Engineering

Chief Editor : Dr. R Swaminathan

Faculty Editor : Shivam Gupta

Student Editor : Shiven Pandey

MESSAGE FROM HEAD OF THE DEPARTMENT



Welcome to the Department of Electronics and Communication Engineering!

At the heart of technological innovation, our department is dedicated to providing a dynamic and enriching educational experience. We are committed to cultivating a learning environment that blends theoretical knowledge with practical application, preparing our students to excel in the fast-paced and ever-evolving field of Electronics and Communication Engineering.

Our department is equipped with state-of-the-art laboratories and cutting-edge research facilities, enabling both our students and faculty to engage in pioneering research and hands-on projects. Our faculty members are not only passionate educators but also active researchers, leading advancements in key areas such as Wireless Communication, Microwave Engineering, VLSI Design, and Signal Processing.

We believe in the power of collaboration and have forged strong ties with industry partners to ensure our curriculum stays relevant and our students gain valuable real-world experience. Our graduates are part of a vibrant global alumni network, making significant contributions to industry, academia, and research worldwide.

As we continue to grow and evolve, our mission remains steadfast: to nurture the next generation of engineers, drive impactful research, and contribute to the technological progress of society. I invite you to explore our website, learn more about our programs, and join us in our journey towards excellence.

Thank you for visiting, and I look forward to welcoming you to our vibrant ECE community.

Best Wishes,

Dr. R Swaminathan

About ECE Department

The Department of ECE offers B.Tech courses in Electronics and Communication Engineering from Dr. A.P.J. Abdul Kalam Technical University, (formerly Uttar Pradesh Technical University/Gautam Buddha Technical University) Lucknow. Electronics & Communication Engineering deals with the electronic devices, circuits, communication equipments like transmitter, receiver, integrated circuits (IC). Microprocessors, satellite communication, microwave engineering, antenna and wave propagation. The department aims to impart high quality education in ECE and conduct top notch research in ECE related fields.

The department provides state-of-art infrastructure and computing facilities to students and faculty. The faculty members are actively involved in different domains of research with special focus in five thrust areas:

1. Wireless Communication and Networks
2. Microwave and Antennas,
3. VLSI Design
4. Communication Systems
5. Signal and Image Processing.

The department has a regular hardware and software labs as well as the state-of-art research labs in microwave and antennas, where faculty and students are working on funding projects and offering consultancy services. Some of the available softwares in ECE department are Riverbed Academic edition, OrCAD PSPICE, eSim, SCILAB, OR-Tools, Expeyes, etc. The Department follows a well proven pedagogy of sharing knowledge with the young and vibrant minds of the college. As we are affiliated to AKTU University, Lucknow, the curriculum and subjects are prescribed by AKTU University. In addition to instruction in core ECE subjects, we also teach elective subjects in advanced topics such as Voice over Internet Protocol, Filter Design, Digital Image Processing, Digital System Design using VHDL, Speech Processing, Advance Digital Design using Verilog, Microcontroller for Embedded Systems, etc. The department imparts world class training and research besides promoting active industry-institute collaboration by identifying current trends and taking part in sponsored research projects and consultancy services. The department also has a worldwide reach with its vibrant alumni network. Working shoulder with shoulder with the institution, it is constantly aiming towards reaching greater heights to serve the needs of the society and meet the aspirations of the student community.

INSTITUTE VISION & MISSION

Vision

To be a leading educational institution recognized for excellence in engineering education and research producing globally competent and socially responsible technocrats.

Mission

IM1: To provide state of the art infrastructural facilities that support achieving academic excellence.

IM2: To provide a work environment that is conducive for professional growth of faculty and staff.

IM3: To collaborate with industry for achieving excellence in research, consultancy and entrepreneurship development.

DEPARTMENT VISION & MISSION

Vision

To be recognized as a center of excellence in Electronics and Communication Engineering for the quality and global education, interdisciplinary research and innovation, to produce committed graduates who can apply knowledge and skills for the benefit of society.

Mission

DM1: To provide quality education by providing state of the art facility and solutions for global challenges.

DM2: To provide a framework for promoting the industry-institution collaboration and empower the students in interdisciplinary research.

DM3: To transform students into socially responsible, ethical and technically proficient engineers with innovative skills and usage of modern tools.

DM4: To make the students corporate ready with spirit and necessary interpersonal skills.

PROGRAM OUTCOMES

- P01 Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- P02 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.
- P03 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.
- P04 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.
- P05 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.
- P06 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.
- P07 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.
- P08 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- P09 Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- P010 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.
- P011 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.
- P012 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.

PROGRAM SPECIFIC OUTCOMES

By the completion of Electronics & Communication Engineering program the student will be able to:

PSO1: Design and develop models for analog & digital electronic circuits and systems.

PSO2:Design, develop and test electronic and communication systems for applications with real Time constraints.

PROGRAM EDUCATIONAL OBJECTIVES

PEO 1	Graduates will excel in their career by acquiring knowledge in the field of Electronics and Communication Engineering with the usage of modern tools and emerging technologies.
PEO 2	Graduates will have the capability to analyze real life problems of the society and produce innovative solutions.
PEO 3	Graduates exhibit professionalism, ethical attitude, communication skills and team work in core engineering, academia and research organizations through professional development and lifelong learning.

Seminar on INDIA'S SEMICONDUCTOR MISSION AND ITS SIGNIFICANCE IN THE IOT PLATFORM

The ECE department in association with GNIX Society organized a seminar on "India's semiconductor mission and its significance in the IoT platform" on May 03, 2023 by the distinguished speaker, Mr. ETB Samuel Jigme Harrison; and it was a huge success!

Department of ECE, GCET was thrilled to host the esteemed speaker who shared his knowledge and insights on this important topic. Attendees gained valuable insights into the latest research and trends related to VLSI and semiconductor industry and establishment of new fab units.



Seminar on "Significance of IPR & strategies to protect your innovations"

Department of ECE organized a seminar on "Significance of IPR & strategies to protect your innovations" on 02 June, 2023 for B.Tech. ECE students. The guest speaker was Ms. Reema Sahni Mediratta Patent Agent, RTTP, MHRD Innovation Ambassador, Incharge & Senior Project Manager, I-TTO, FIIT, IIT Delhi.

In today's fast-paced and competitive world, safeguarding your ideas and inventions has become more crucial than ever. Intellectual Property Rights play a pivotal role in ensuring that your innovative creations are

protected, empowering you to maximize their potential and reap the benefits.

Some key topics discussed in the seminar were nature of intellectual property, benefits of IP to universities, patentee rights, patentability criteria, trademark and copyright.

Seminar on Benefits of Studying in France and About Aura-Lyon

The Department of ECE in association with GNIX Society organized a seminar on "Benefits of Studying in France and About Aura-Lyon" on 14 June, 2023 by the distinguished speaker, Mr. Darren HUNT, President-Aura International School of Management, France. The seminar highlighted the benefits of studying in France, internships offered by AISM, management and business courses that AISM offers and accommodation facilities.

Galgotias College of Engineering & Technology has also signed an MOU with Aura International School of Management following that.



Project Poster Presentation 2023

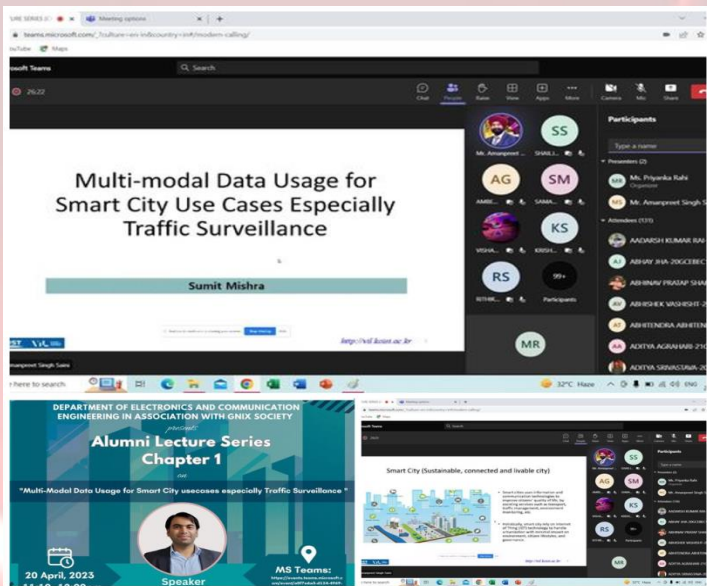
Department of ECE conducted "Project Poster Presentation" for 4th year ECE students on 26 May, 2023 at C-104. Students shared their innovative projects and present cutting-edge solutions in various areas of Electronics and Communication Engineering. From ULSI, blockchain, artificial intelligence and machine learning algorithms to advancements in wireless sensor networks, IoT, antenna designing and sustainable energy solutions in Electric Vehicles, our students have pushed the boundaries of technological innovation. The poster presentation has provided a unique opportunity to interact with the budding engineers, learn about their

projects, and gain insights into the future of ECE.

GUEST LECTURE

The Department of ECE celebrates "55th World Telecommunication Day 2023" on 17 May, 2023. The guest speaker was "Mr. Sonu Prakash", CEO & Founder of APPWARS Technologies Pvt Ltd. This year's World Telecommunication Day theme is "Empowering the Least Developed Countries through Information and Communication Technologies".





Alumni Lecture Series- Multi-Modal Data Usage for Smart City usecases especially Traffic Surveillance

As a part of its "Alumni Lecture Series", the Department of ECE, GCET organized its first chapter and an insightful session on 20 April, 2023 with Mr. Sumit Mishra, Computer Vision and Robotic Perception Researcher, Alumni- ECE (2016 batch) on the topic: "Multi-Modal Data Usage for Smart City use cases especially Traffic Surveillance". We express our heartfelt gratitude to Mr. Sumit Mishra, for sparing his valuable time and delivering an informative lecture to the students.

Industrial Visit

Students of 3rd year of Electronics and Communication Engineering, GCET had an industrial visit on 16 March 2023 at Aujus Technology Private Limited where they get the practical insights about the FPGA, PCB and firmware designing as well as simulation of modulators. They learnt about several new and advanced tools and technologies in the field of Embedded Systems and VLSI, and the career opportunities in both these areas.



It was quite an informative experience for the students and we would like to thank Aujus Technology Private Limited for giving our students this opportunity to learn and grow.

Faculty Publications:

Faculty Publications in Journals

S. No.	Name of Author	Title of Paper	Type	Category	Name of Journal	Publication Month/Year
1	Alka Verma, Shilpee Patil, Anil Kumar Singh, Anil Kumar Pandey	Notched Circular EBG based Circularly Polarized Antenna for Performance Enhancement	Journal	International	Journal of Microwaves, Optoelectronics and Electromagnetic Applications, Brazilian Microwave and	March-23

					Optoelectronics Society	
2	Agarwal, Ruchi, Ram Lal Yadava	Miniaturized Slow-Wave SIW-Based Circularly Polarized CRLH Leaky Wave Antenna Array Supporting Wide Angle Beam Scanning for Radar Applications	Journal	International	Arabian Journal for Science and Engineering	May-23

Faculty Publications in Conferences

S. No.	Name of Author	Title of Paper	Type	Category	Name of Conference	Publication Date/ Year
1	Ranjana Kumari, Vinay Tomar, Ankit Sharma	Integrated Frequency Reconfigurable Elliptical Slot Antenna and Inverted-L Slot MIMO Antenna for 4G and 5G Wireless Handheld Devices	Conference	International	International Conference on Signals, Machines, and Automation (SIGMA 2022)	23-May-23
2	Nitin Garg, Adarsh Singh Tomar, Abhyuday Dubey and Anurag Kumar	Evaluation of the WDM-FSO System's Effectiveness Under Chronic Weather Conditions	Conference	International	ICISSI 2022	16 February 2023

GNIX (An official club of Department of ECE, GCET)

G-care

Caring by our seniors is the greatest responsibility they have. Those who walked before us have given so much and made possible the life we all enjoy. Without a sense of caring, there can be no sense of community

IETE Students' Chapter

IETE STUDENTS' CHAPTER was started in October 2018. This society is chaired by Dr. Swaminathan and co-chair by Mr. Dhinakaran M.; Students from first year to final year are members of this society and till now there are 106 students. Apart from student members there are faculty members also.

Students (ISF Members) and Faculty of the ECE department of Galgotias College of Engineering and Technology visited at Delton Hall, IETE Headquarters, Delhi and attended the 55th World Telecommunication Day 2023 on 17 May, 2023. that was organized by IETE.

Prof. Dr .V. Gunasekhar Reddy, President IETE and "Prof Baswaraj Gadgay", Vice President and Zonal Member (South), welcomed all the dignitaries to the event and spoke on this year's WTC theme of "Empowering the least developed countries through information and communication technologies". The Chief Guests of the event were "Dr. G Satheesh Reddy", Scientific Advisor to

Raksha Mantri, Ministry of Defence, Govt of India, and "Shri G Laxman", National Joint Organizing Secretary, Akhil Bhartiya Rashtriya Shaikshik Mahasangh.

The event was graced with the address of eminent dignitaries, "Lt. Gen. (Dr.) Rajesh Pant", National Cyber Security Coordinator & Special Secretary to Govt of India, "Prof Pranati Panda", Professor and Head, School Standards & Evaluation, NIEPA and "Prof Sanjeev Singh", University of Delhi.



Eminent Recruiters:

