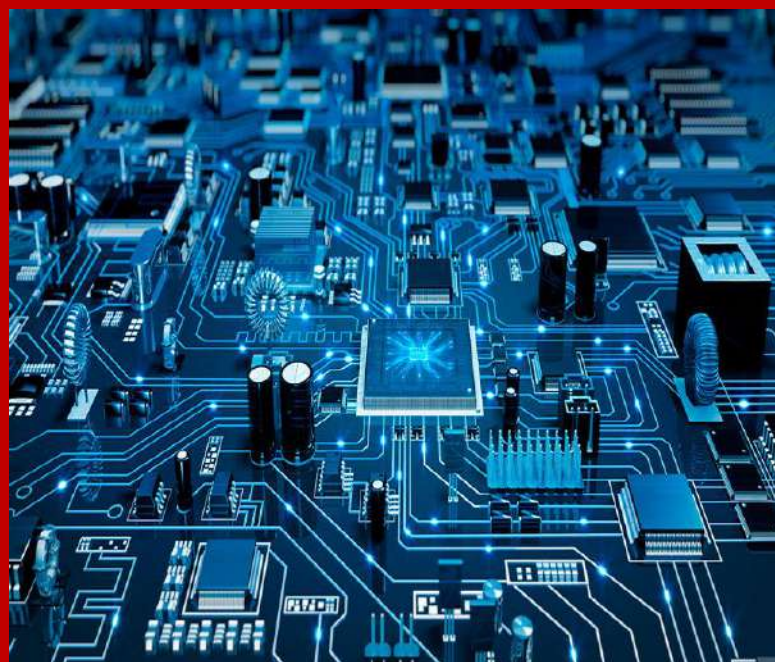




GALGOTIAS COLLEGE OF ENGINEERING & TECHNOLOGY

EC-NEWSLETTER 2024-25

“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. V. Purohit

Faculty Editor

Dr. Ankur Utsav

Student Editor

Ujjwal Singh

MESSAGE FROM HEAD OF THE DEPARTMENT



It is my pleasure and honour to welcome you to the Department of Electronics and Communication Engineering of Galgotias College of Engineering and Technology.

Our department is committed to excellence in teaching, research, and innovation. With a focus on cutting-edge technologies, we aim to prepare our students to meet the challenges of the rapidly evolving field of Electronics and Communication. Our dedicated faculty members bring a wealth of knowledge and experience to the classroom and are actively involved in groundbreaking research that has a significant impact on our world. For our students, this department is your academic home, a place where you will acquire not only knowledge but also the skills, passion, and confidence needed to excel in your careers. We encourage you to actively engage in research projects, internships, and extracurricular activities that will enrich your educational journey.

As we embrace the digital age, the field of Electronics and Communication Engineering is at the forefront of transformative technologies like 5G, Internet of Things (IoT), artificial intelligence, and more. Our department is poised to lead in these areas, and we invite you to join us on this exciting journey. Please explore our website to learn more about our programs, research areas, and the incredible opportunities that await you here.

Thank you for choosing Galgotias College of Engineering and Technology and the Department of Electronics and Communication Engineering. We look forward to embarking on a journey of knowledge, discovery, and innovation together.

Best Wishes,

Dr. Rahul Vivek Purohit

About ECE Department

Electronics and Communication Engineering is headed by Dr. Rahul Vivek Purohit and has 41 faculty members who have received their higher education from top-notch universities. The faculty members of this department are consistently doing well in teaching and research. The department offers B.Tech (Electronics and Communication Engineering) with 180 intake.

Presently, the B.Tech ECE program has been accredited by the National Board of Accreditation.

The B.Tech program attracts the brightest students in the state every year. The placement record of the department has always been impressive. Almost 100% of the students get jobs from the campus placement and many of them are getting it in core companies every year. We encourage the students to do design and research-based projects during their B.Tech degrees.

The department has state-of-the-art laboratories in almost all the areas of Electronics and Communication that has the latest simulation tools to cater to various specializations and are equipped with facilities for measurement, characterization, and synthesis of experimental as well as theoretical results. The department is actively involved in R&D activities and regularly publishes its research in reputed Journals and Conferences. The research areas include Wireless Communication and Networks, Microwave Engineering, Antenna design, VLSI Design, Signal and Image Processing, Communication Engineering, and Embedded Systems.

The Department holds MoU's with distinguished Organizations and Industries, mentioning a few include Huawei - ICT Academy, 3ST Technologies Pvt. Ltd., Noida, Maven Silicon, Bengaluru, Department of Electronics - Pattern Recognition and Machine Intelligence Group, Shantou University, China. It prides in having students placed in reputed companies with smart package and also focuses on developing and escalating the skill of analysis, designing and problem solving, amongst students required to extend their career growth.

A Center of Excellence (CoE) in IoT typically aims to establish a specialized and highly proficient team or facility focused on the effective and efficient use of IoT for various engineering and scientific applications. The primary objectives of a IoT Center of Excellence may include:

- Facilitate collaboration with other CoEs, departments, and external entities.
- Host knowledge-sharing sessions, workshops, and seminars on IoT-related topics
- Provide training programs and resources to enhance the IoT skills of team members.

- Encourage innovation in IoT applications for solving complex engineering challenges.

COE-RF Circuits and Antenna Simulation aim to provide students with practical experience and understanding in the design, analysis, and simulation of high frequency circuits. The learning objectives are as follows:

Gain knowledge about the key components used in RF circuits, such as antenna, amplifiers, filters, mixers, and oscillators.

Use simulation tools to model and analyze the performance of antennas in different scenarios. This may include optimizing antenna parameters for specific applications.

Understand the fundamental principles of antennas, including types, radiation patterns, and impedance matching. Explore the design and analysis of basic antenna structures.

Drone Technology and Ham Radio

To encourage the students to gain the knowledge and work for the application in aerial photography, agriculture, plant protection, micro selfie, express transportation, disaster rescue, wildlife observation, monitoring infectious diseases, mapping, news reporting, power inspection. Surveillance in areas and terrains where troops are unable to safely go.

Amateur radio, also known as ham radio, is the use of the radio frequency spectrum for purposes of non-commercial exchange of messages, learning and practicing ham radio skills can be intellectually stimulating. It involves understanding radio equipment, antennas, propagation, and communication protocols. Ham radio provides fast and reliable communication during emergencies

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:

PS01: Design and develop models for analog & digital electronic circuits and systems.

PS02: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.

GUEST LECTURE

1. On Sept. 18, 2024, The Department of Electronics and Communication Engineering, in association with the GNIX Society, organized the guest lecture on " VLSI Insights: Bridging Academia and Industry." With an audience of 25 students and 5 faculty members, at the **D-Block Auditorium** from **10:00 AM to 12:00 PM**.

The session was delivered by **Mr. Pranjal Sharma**, a renowned expert in the VLSI domain, who shared insights into:

- The current state of VLSI technology in academia and industry.
- Challenges and innovations shaping the VLSI landscape.
- The importance of aligning academic curricula with industry needs.
- Career prospects and skill development opportunities in VLSI.



The lecture included interactive Q&A sessions, where students engaged actively with the speaker, gaining clarity on various technical and professional aspects of VLSI technology.

2. On Sept. 30, 2024, **Ms. Sweta Sahu, Director at Times Greater Noida** gave her guest lecture on Career Planning and Pre-Placement Talk on "Digital Design and Implementation on FPGA." This session attracted 114 students and 4 faculty members. The seminar was organized by the Department of Electronics and Communication Engineering in association with the GNIX Society at Galgotias College of Engineering and Technology. It was conducted in **Block B-011** from **10:30 AM to 12:30 PM**.



The session was led by **Ms. Sweta Sahu**, Director at Times Greater Noida, who shared her valuable experience and expertise on career-building strategies. Key topics covered in the seminar included:

- Developing a structured career plan.
- Understanding the expectations of the corporate world.
- Strategies for excelling in pre-placement tests and interviews.
- Importance of soft skills and continuous learning in career advancement.

3. On Oct. 1, 2024 a Guest lecture on Hardware Digital design using Schematics, HDL ,C, Python and its implementation on XILINX FPGA was organized. The guest lecture on **"Hardware Digital Design Using Schematics, HDL, C, Python, and Its Implementation on XILINX FPGA"** provided an overview of modern digital hardware design methodologies. It covers schematic-based design for simple circuits and hardware description languages (HDL) like VHDL/Verilog for complex designs. The lecture also introduced the use of higher-level languages such as C (through High-Level Synthesis) and Python for programming.



Attendees learned about Xilinx FPGA architecture, the development flow using tools like Vivado or ISE, and how to implement and test designs on real hardware. The session includes practical applications of FPGAs and a live demonstration, offering a comprehensive view of digital design from concept to hardware implementation.

4. The Department of Electronics and Communication Engineering organized a guest lecture on **Electric Vehicle Technology** on **29th November 2024** at the D Block Auditorium. The session

featured **Mr. Alok Ranjan**, Senior Executive at Sofcon India Pvt. Ltd., as the esteemed speaker, with **143 participants** in attendance.

Mr. Ranjan provided an insightful overview of the evolving **EV industry**, discussing key advancements, technical innovations, challenges, and career opportunities in the sector. The session was highly interactive, with students actively engaging in discussions and exploring the future of sustainable transportation.



With **143 attendees**, the event concluded with a vote of thanks, acknowledging Mr. Ranjan's expertise and inspiring contribution. The lecture proved to be an **informative and enriching experience**, sparking great enthusiasm among the participants.

5. The Department of Electronics and Communication Engineering organized an **insightful guest lecture on RF and Microwave Circuit** on **December 3, 2024**, at **Auditorium B011**. The session featured **Mr. Amit Tiwari**, Deputy General Manager at **Bharat Electronics Limited, Ghaziabad**, with **47 participants** in attendance.

Mr. Tiwari provided a comprehensive overview of **RF and microwave circuit fundamentals**, their significance in **communication systems, radar technology, and defense applications**, and the latest advancements in **GaN technology and 5G networks**. He also addressed industry challenges, such as **signal integrity, noise reduction, and thermal management**, offering practical insights into circuit design.



The interactive session allowed students to engage in discussions on **career prospects, research opportunities, and industry trends**. The event concluded with a vote of thanks, recognizing **Mr. Tiwari's expertise and valuable contributions**, making it a **highly informative and engaging experience** for all attendees.

IEEE Conference I3CEET-2024

Department of ECE at Galgotias College Hosts International Conference on Communication, Computing, and Energy Efficiency Technologies (I3CEET) 2024



Greater Noida, 20-21 September 2024 – The **Department of Electronics and Communication Engineering (ECE)** at **Galgotias College of Engineering and Technology** successfully organized the **International Conference on Communication, Computing, and Energy Efficiency Technologies (I3CEET)** in collaboration with the **IEEE U.P. Section**. The conference attracted global participation, receiving **1,199 research paper submissions** and was conducted in a **hybrid format** to ensure maximum engagement.

The event featured esteemed guests, including **Prof. (Dr.) S. N. Singh** (Director, ABV-IIITM Gwalior), **Prof. (Dr.) Satish Kr. Singh** (IIIT Allahabad), and **Prof. (Dr.) Asheesh Kr. Singh** (MNNIT Allahabad). **Prof. (Dr.) Vikram Bali**, Director of Galgotias College, delivered the inaugural address, emphasizing the **importance of innovation, collaboration, and knowledge sharing** in the rapidly evolving fields of **communication, computing, and energy efficiency**. He highlighted the **rigorous selection process**, with **329 research papers** chosen for presentation across **eleven specialized tracks**, covering **emerging technologies and energy-efficient solutions**.

With **208 offline and 121 online sessions**, the conference fostered insightful discussions. **Prof. S. N. Singh** spoke on the **ethical implications of AI**, while **Prof. Satish Kr. Singh** encouraged students to explore **entrepreneurial opportunities in energy optimization**.

Dr. R. L. Yadava presented the conference report, acknowledging the overwhelming response and expressing gratitude to the **organizing committee, volunteers, and sponsors**. **Dr. Rahul Vivek Purohit**, Organizing Chair, concluded by reaffirming the **Department of ECE's** commitment to **advancing research and technological innovations**.

The conference served as an **international platform for researchers, academicians, and industry experts** to exchange ideas, fostering collaborations with participants from **the USA, UAE, Malaysia, and Saudi Arabia**.

NBA ACCREDITATION

ECE Department Secures NBA Accreditation for Three Years.

The **Department of ECE** has achieved a significant milestone by securing **NBA (National Board of Accreditation) accreditation for three years in November 2024**. This prestigious recognition reaffirms the department's commitment to **academic excellence, quality education, and continuous improvement** in engineering education.

The accreditation reflects the department's **rigorous curriculum, state-of-the-art infrastructure, research contributions, and strong industry collaborations**. It also highlights the dedication of **faculty members, students, and stakeholders** in maintaining high educational standards.

This achievement not only enhances the department's credibility but also opens new avenues for **placements, research collaborations, and higher studies** for students. The ECE department remains committed to fostering innovation and shaping skilled professionals for the evolving technological landscape.

Faculty Publications:

Faculty Publications in Journals

S. No.	Author(s), in sequence as mentioned in the paper	Title	Journal and Publisher Name	Volume, Issue, ISSN, Page No., Year of Publication
1	Ranjana Kumari, V.K. Tomar	Mutual Coupling Reduction of Super Wide Band MIMO Antenna Using Metamaterial Periodic Defected Ground Structures for THz Applications	International journal of integrated engineering	Vol. 16 No. 5 (2024) 311-323,ISSN: 2229-838X e-ISSN: 2600-7916
2	Arun Kumar Rana	Analysis and performance evaluation of computation models for node localization in deep sea using UWSN	International Journal of Communication Systems	

3	Arun Kumar Rana	Historical development of passive optical network (PON): a review	Journal of Optical Communications	
4	Arun Kumar Rana	IoT based Efficient and Secure Building Architecture with Constrained Application Protocol (CoAP)	Journal of Electrical Systems	Vol. 20, Iss. 7
5	Arun Kumar Rana	A Comprehensive Analysis of various Covid-19 Detection and Pandemic Prevention Systems and Methods Using Data Science	International Journal for Research in Applied Science and Engineering Technology	12(5):858-867
6	Sachin Kumar	A Compact Wearable Textile Antenna for NB-IoT and ISM Band Patient Tracking Applications	Sensors, MDPI	vol. 24, no. 15, Article ID 5077, 2024
7	Sachin Kumar	Design of a High Gain Self-Triplexing Directive Antenna Using SIW Leaky Wave Technique	International Journal of Communication Systems, Wiley	DOI: 10.1002/dac.5972
8	Sachin Kumar	Thirty Two Port Super Wideband Diversity Antenna for Indoor Communications	Scientific Reports, Nature	vol. 14, Article ID 25104, 2024
9	Sachin Kumar	An Improved Gain Antenna Array for Telehealth Monitoring on the Internet of Things Platform	IEEE Internet of Things Journal	DOI: 10.1109/JIOT.2024.3476686
10	Anil Kumar Pandey	Antenna Optimization using Machine Learning Algorithms and their Applications: A Review	Journal of Engineering Science & Technology Review	Vol. 17 (2) (2024) 128 - 144

11	Urvashi Chauhan, Himanshu Chhabra, Asha Rani, Bhavnesh Kumar, Vijander Singh	An Adaptive Fractional Order MPPT Control for Maximum Power Extraction From Solar Photovoltaic System	International Journal of Adaptive Control and Signal Processing	
12	Richa Sharma, Asok De, N.S.Raghava	Circular RFID Antenna for White Space TV Band	SCIE, Wireless Personal Communication, Q2, Non Open Access	Vol. 139, 1103- 1118(2024)

Faculty Publications in Conferences

S. No.	Author(s), in sequence as mentioned in the paper	Title	Conference Name and Details	ISSN/ISBN, Page No., Year of Publication
1	Arun Kumar Rana	Data Security in Cloud Computing Using Polynomial Encryption and Deep Learning: An Overview	Artificial Intelligence and Quantum Computation-Based Sensor Applications	Dec, 2024
2	Arun Kumar Rana	Determining an Optimal Small Subset of Training Data for Deep Learning Models in Computer Vision	Artificial Intelligence and Quantum Computation-Based Sensor Applications	December, 2024
3	Arun Kumar Rana	Obstacles in Generalizing Machine Learning Models in Healthcare	Artificial Intelligence and Quantum Computation-Based Sensor Applications	December, 2024

FACULTY ACHIEVEMENTS

Name of the Faculty	Achievements	Year	Pics
1.Dr. Sachin Gupta	<p>1. Recognized in the list of "world's Top 2% Scientists" released by the Stanford University USA, (2024).</p> <p>2. Co-PI for the project entitled “Design and Development of Flexible Smart Textiles Integrated with Antenna for Wearable Applications” sponsored by the National Technical Textiles Mission, Ministry of Textiles, Govt. of India (Amount: 49.94 Lakh).</p>	2024	
2. Dr. Vijay Shanker Chaudhary	Recognized in the list of "world's Top 2% Scientists" released by the Stanford University USA, (2024).	2024	
3. Dr. Richa	Research Excellence Award by GCET	2024	

ECE Department in Faculty Sports Meet

- The **Department of Electronics and Communication Engineering (ECE)** proudly celebrates the **outstanding achievements** of its faculty members in the **GCET Faculty Sports Meet** held on **14th February 2025**.
- 🏆 The **ECE Faculty Volleyball Team** secured the **Runner-up** position, showcasing excellent teamwork, resilience, and sportsmanship.
- 🏸 **Dr. Ankur Utsav**, Assistant Professor, demonstrated exceptional skill and determination by securing **Winner positions** in both **Table Tennis** and **Badminton** competitions.
- The department extends heartfelt **congratulations** to all the participants for their dedication and sporting spirit, further strengthening the **camaraderie and enthusiasm** within the faculty community!

Placement Highlights 2024: A Stellar Year of Success

Department of ECE Achieves Remarkable Placement Success

The **Department of Electronics and Communication Engineering (ECE)** at **Galgotias College of Engineering and Technology** continues to excel in **placements**, with students securing opportunities in **top companies across diverse industries**. The **placement drive for 2024** witnessed an impressive number of students being recruited by **leading organizations** such as **Cadence, LT Technology Services, Vivo India, Bosch Ltd, Infosys, Rockwell Automation, and many more**.

A total of **69 students** from the ECE department successfully secured placements, with several students receiving **multiple job offers**. Companies spanning various domains, including **telecommunications, automation, semiconductor design, software development, and aerospace**, actively recruited talented students, reinforcing the **college's strong industry-academic collaborations**.

Among the top recruiters were:

- ✓ **Cadence**
- ✓ **SpiceJet Ltd**
- ✓ **LT Technology Services**
- ✓ **Vivo India**
- ✓ **Bosch Ltd**
- ✓ **Unominda**
- ✓ **Infosys**
- ✓ **Rockwell Automation**
- ✓ **Raamtel Solutions Pvt. Ltd**

The department takes pride in its students' **outstanding achievements** and remains committed to **nurturing technical expertise, fostering innovation, and preparing students for dynamic industry roles**. Congratulations to all the placed students for their **hard work and dedication**!

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Congratulations



KRATIKA AGARWAL
B.TECH (ECE), 2025 BATCH

For Being Selected At: **ERICSSON**

Package (CTC): **₹ 3.75 LPA**

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Congratulations



DEEPAK SINGH BORA
B.TECH (ECE), 2025 BATCH

For Being Selected At: **codingninjas**

Package (CTC): **₹ 8 LPA**

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Congratulations



SAKSHAM YADAV
B.TECH (ECE), 2025 BATCH


For Being Selected At: **YAZAKI**

Package (CTC): **₹ 4 LPA**

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Congratulations



AMIT VERMA
B.TECH (ECE), 2025 BATCH

For Being Selected At: **Infocore Solutions Pvt. Ltd.**

Package (CTC): **₹ 3.60 LPA**

Eminent Recruiters

