

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ELECTRONICA 2023-24

VOLUME 9

(NEWSLETTER)



CONTENT

- About ECE
- From The Desk of H.O.D. (ECE Department)
- Vision, Mission, PEO, PSO and PO
- Workshops and Industrial Visits
- Book/Chapters published by faculty and students
- Editors

ABOUT ECE

The Department of Electronics and Communication Engineering, under School of Engineering and Technology of I.T.S Engineering College was established in the year 2006 with an aim to produce globally competitive and socially sensitized engineering graduates along with a passion to bring out quality research in the frontier areas of Electronics and Communication Engineering.

The Department offers four years Bachelor of Technology (B.Tech.) programme (comprising eight semesters) in Electronics & Communication Engineering, affiliated to Dr. A. P. J. Abdul Kalam Technical University, Lucknow (formerly UPTU) and has been accredited by NBA (National Board of Accreditation), New Delhi. The Department has established two centre of excellence named as e-Yantra (in collaboration with IIT Bombay) focuses on hands-on training in the field of Embedded Systems & Robotics.

The NI Innovation Centre focuses on the Virtual Instrumentation & Automation and is in collaboration with renowned MNC, National Instruments. The student activity club "Envision" and students technical society "(IEEE student Branch)" of the departments also includes ethical and professional skill development programs which includes workshop, webinar, technical quiz, technical rangoli, poster presentation etc. The NI Innovation Centre focuses on the Virtual Instrumentation & Automation and is in collaboration with renowned MNC, National Instruments. The student activity club "Envision" and students technical society "(IEEE student Branch)" of the departments also includes ethical and professional skill development programs which includes workshop, webinar, technical quiz, technical rangoli, poster presentation etc. that helps students to grow their overall personality along with technical skills.

From The Desk of H.O.D. (ECE Department)



Dr Monica Jain (H.O.D. ECE)

Dear Readers,

Last three decades have been very significant as far as the impact of Technology on Society is concerned. Ability to send information of any type, anywhere, and anytime has altered the way societies live and transact their businesses, be it education, production of goods, selling of goods, entertainment, managing house hold, education, information transaction between individuals, individual to masses, health care, governance etc. Every aspect of social order is getting affected, this is only the beginning of changes in a Technology driven Society. Some of the scientists and thinkers have tried to predict what science and technology holds for us, say by 2030. Michio Kaku (Great Physicist of our time) expresses in his book 'Physics of the Future' and video lecture 'The world in 2030' (You Tube), a glimpse of technology driven society and our role in it. This is just decade plus away.

Vision And Mission

Vision of Institute

“To be a leading educational institution that provides a transformative education to create technically competent and socially responsible professionals and innovators”.

Mission of Institute

- To accomplish excellence in the field of Technical Education through rigorous coursework and by providing an understanding of the needs of society and industry.
- To impart advanced and contemporary technical skills to turn students into potential professionals.
- To develop potential Engineers and Managers by enhancing their technical skills and research capabilities to become successful innovators and entrepreneurs.
- To inculcate professionalism, leadership and business acumen amongst students in a dynamic business environment.
- To induce high ethical standards and moral values to our make students socially responsible professionals.
- To promote our students to learn technological advancements and encourage them to keep updating their knowledge and skills by inculcating their habit of continuous learning.

Vision of Department

“To become a department of academic excellence that would produce technically competent and socially responsible professionals in the field of Electronics, Communication and related domains”.

Mission of Department

- M1: To achieve an educational excellence through effective teaching-learning processes.
- M2: To create a conducive atmosphere for self learning to face contemporary challenges.
- M3: To foster an environment for nurturing the spirit of creativity, innovation and entrepreneurship with industry participation.
- M4: To imbibe professional ethics, social responsibilities and moral values in students and faculty members.

PEO, PSO And PO

Program Specific Outcomes (PSO)

PSO1: An Ability to apply the knowledge of Analog and Digital electronics to solve, analyze and design electronic circuits and systems.

PSO2: An Ability to synthesize, evaluate and analyze communication systems and networks for multidisciplinary tasks.

Program Educational Objectives (PEO)

- PEO1: Graduates of the program will have multifaceted competency for greater employability and accomplished professional career.
- PEO2: Graduates of the program will emerge as leaders and entrepreneurs and will be able to pursue higher education.
- PEO3: Graduates of the program will have thorough knowledge and skill set to deal with real-time complex problems.
- PEO4: Graduates of the program will be able to adjust to a fast changing world with socially responsible and ethical mindset.

Program Outcomes

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. 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.

3. 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.

4. 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.

PEO, PSO And PO

Program Outcomes

5. 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.
6. 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.
7. 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.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. 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.
11. 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.
12. 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.

WORKSHOPS AND INDUSTRIAL VISITS



TRAINING PROGRAMME ON EMBEDDED SYSTEMS, ROBOTICS WITH IOT & PCB DESIGN TECHNIQUES- INDUSTRIAL TRAINING

On the occasion of IEEE Day, IEEE student branch- STB 16051, ECE Department, ITS Engineering College has organised a training programme on " Embedded Systems, Robotics with IoT & PCB Design Techniques " by senior embedded engineer Mr. Prateek Mishra. The workshop was organized with the objective to make students collectively aim to equip participants with a robust skill set, enabling them to design, develop, and implement embedded systems and IoT solutions in various practical scenarios.

EXPERT TALK ON "HOW TO ENTER IN VLSI & EMBEDDED INDUSTRIES"

Department of Electronics & Communication Engineering at ITS Engineering college, Gr. Noida has organized an industry expert talk on "How to enter in VLSI & Embedded Industries" in collaboration with Pine Training Academy, Noida. The speaker Mr. Vaibhav Mishra, Founder & Mentor - Pine Training Academy, talked about the future scope of semiconductor Industry in India and how students can make their career in this industry by learning VLSI Technology



ONE DAY WORKSHOP ON SMART SOLUTIONS: IOT DEVELOPMENT WITH RASPBERRY PI

A One day workshop on "Smart Solutions: IOT Development with Raspberry Pi" was organized by the Department of ECE in collaboration with Cetpa Infotech Pvt. Ltd. on 14th December. The workshop provided participants with a comprehensive understanding of Internet of Things (IOT) concepts and practical hands-on experience with Raspberry Pi. The workshop aimed to empower attendees to implement IoT solutions using this versatile microcomputer.

A VISIT TO "IRSE INTERNATIONAL RAILWAY CONVENTION AND EXHIBITION FOR B. TECH. 2ND, 3RD & 4TH YEAR ECE STUDENTS AT MANEKSHAW CENTRE, DELHI CANTT

ECE Department organized visit to IRSE International Railway Convention and Exhibition is scheduled on 11-12 December 2023. The inauguration ceremony was graced by the presence of Union Minister of State for Railways & Textiles Smt. Darshana Jardosh, Chairman & CEO Railway Board Smt. Jaya Varma Sinha. Visit is coordinated by Ms. Pragati Tripathi and Mr. Shahid Khan, Assistant Professor, ECE Department.



WORKSHOPS AND INDUSTRIAL VISITS



INTER-COLLEGE TECH-VISION PROJECT EXHIBITION

The Department of ECE (NBA accredited) at I.T.S Engineering College organized an “Inter-College Tech-Vision Project Exhibition Competition” on 22nd December, 2023 in association with IEEE Student Branch and COE e-Yantra IITB at I.T.S. Engineering College, Greater Noida. The workshop was organized with the objective of promoting the awareness and skills among students about Python Programming and its applications in Data Analytics. This event is coordinated by Assistant Professor Ms. Pragati Tripathi.

TRAINING PROGRAM ON: “ADVANCED C PROGRAMMING”

Training Program on “Advanced C Programming” organized by Department of Electronics and Communication Engineering, I.T.S Engineering College, Greater Noida, From January 10, 2024 to January 24, 2024, (11 Days, 66 hours) for ECE students. : The training was organized with the objective to equip students with programming basics and fundamental of C, to give a holistic view of C programming language, detailing all the aspects of the c language from data types, operator and expression, if statements, loops, arrays, string and pointers with file handling and dynamic memory allocation.



INAUGURATION OF WOMEN IN ENGINEERING (WIE) ON THE OCCASION OF INTERNATIONAL WOMEN’S DAY.

Department of Electronics & Communication Engineering and Internal Complaint Committee, ITS Engineering College, Greater Noida celebrate one day seminar on the occasion of International Women’s Day. The women’s day celebration began with an insightful presentation by Dr. A. Ambikapathy, Chairperson of IEEE Women in Engineering (WIE) Affinity Group UP Section on the topic Diversity, Inclusion and Allyship: Women Leaders in Engineering. The main objective of this program was to celebrate the progress made towards achieving gender equality and women's empowerment and critically reflect accomplishments and strive for a greater momentum towards gender equality worldwide.

A TRAINING PROGRAM ON: OOPS WITH C++ PROGRAMMING

The Department of Electronics and Communication Engineering of ITS Engineering College, Gr. Noida, organized 15-days Training Program on: OOPS with C++ Programming from 19 Feb, 2024 - 9 March, 2024, (15 Days, 90 hours). The training was organized with the objective to equip students with programming basics and fundamental of C++, to give a holistic view of C++ programming language, detailing all the aspects of the C++ language from data types, operator and expression, if statements, loops, arrays, string and pointers with file handling and dynamic memory allocation.



WORKSHOPS AND INDUSTRIAL VISITS



WORKSHOP ON ENTREPRENEURSHIP AWARENESS PROGRAM (EAP) BY MSME

The Institution's Innovation Council (IIC) of ITS Engineering College, in collaboration with the Ministry of Micro, Small & Medium Enterprises (MSME), Government of India, and the MSME-Development & Facilitation Office (MSME-DFO), Okhla, New Delhi, organized an Entrepreneurship Awareness Program (EAP) on July 10, 2024. The inaugural address on entrepreneurship promotion was delivered by Dr. R.K. Bharti, Joint Director & HOO, MSME-DFO, New Delhi. Sh. D.S. Tomer, Assistant Director, MSME-DFO, New Delhi, provided insights into the activities and schemes available for the promotion of MSMEs.

SEMINAR ON ACCELERATORS/INCUBATION - OPPORTUNITIES FOR STUDENTS & FACULTIES - EARLY-STAGE ENTREPRENEURS

The Institution's Incubation Council, ITS organized Seminar on "Accelerators/Incubation-Opportunities for Students & Faculties- Early Stage Entrepreneurs" on 27th June 2024. The event featured Mr. Arunabh Singh, Co-founder of BIOCRUST PRIVATE Ltd. and Head of QHSE at PIPECARE Group, as the keynote speaker. This seminar was highly informative and inspiring. Mr. Arunabh Singh's expertise and insights into the world of accelerators and incubators provided valuable guidance to participants, empowering them to explore and leverage these programs for their entrepreneurial endeavors.

INSTITUTION'S INNOVATION COUNCIL
ITS ENGINEERING COLLEGE
GREATER NOIDA
(IIC ID : IC201810625, Mentor Institute)
organizes
SEMINAR
on
*Accelerators/Incubation - Opportunities for
Students & Faculties - Early-Stage Entrepreneurs*

Mr. Arunabh Singh
Co-Founder
BIOCRUST PRIVATE Ltd.
Head, QHSE-PIPECARE Group

Date: 27th June 2024
Time: 11:00 A.M
Naidu Hall



A FAREWELL OF ECE DEPARTMENT " DESPEDIDA -2K24"

Despedida-2K24"- Farewell program for batch 2020-24, engineering graduate of Electronics & Communication Engineering Department of I.T.S. Engineering College, Greater Noida. This event was organized by ECE-3rd year students to pay respect and best wishes to their seniors, under Envision Club on 6th June 2024. The event was well organized in the Naidu hall and was inaugurated by Dr. A. Ambika Pathy, the HOD of the ECE department. This event is coordinated by Ms. Pragati Tripathi, Assistant Professor- ECE department, Mr. Prabhakar Sharma, Assistant Professor-ECE Department.

BOOK / CHAPTER PUBLISHED BY FACULTY



Dr. Setu Garg, Associate Professor, Department of ECE, Published Book Chapter on “Approximated Sparsity Regularization Factor for Monaural Speech Separation” under publication of LNNS, Vol. 787, DOI is https://link.springer.com/chapter/10.1007/978-981-99-6550-2_20.



Dr. Monika Jain, Professor, Department of ECE, Published Book Chapter on “Machine Learning - Based Smart Waste Management in Urban Area ” under publication of LNEE, Vol. 1078, DOI is https://link.springer.com/chapter/10.1007/978-981-99-5974-7_39.



Mr. Prabhakar Sharma, Assistant Professor, Department of ECE, Published Book on “Mobile & Wireless Communication” under publication Notion Press, ISBN is 9798890673893.

PAPER PUBLISHED BY STUDENTS

Anushree Bui, Avinash Singh and Piyush Bhardwai (4th Year -ECE) published research article on “IoT Virtual Doctor: Revolutionizing Healthcare with Connected Technologies”, in International Scientific Journal of Engineering and Management Paper Published By Students, DOI: 10.55041/ISJEM01038, ISSN: 2583-6129



Ainul Hasan, Muddasir and Kshitij Upmanyu (4th Year-ECE) Published review paper on “A Comprehensive Study on Near-Infrared (NIR) Sensor , ECG Sensor and Electromyography (EMG) Sensor for Biomedical Applications: A Review” in International Scientific Journal of Engineering and Management Paper Published By Students DOI: 10.55041/ISJEM01037, ISSN: 2583-6129



FACULTY EDITORS



Ms. Manju Singh

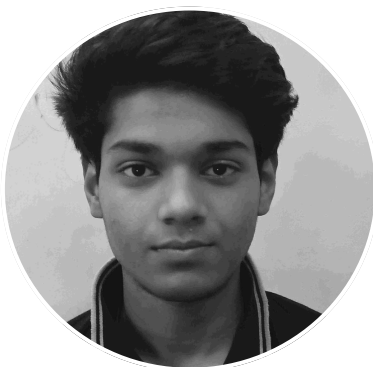
Assistant Professor
ECE Department



Mr. Prabhakar Sharma

Assistant Professor
ECE Department

STUDENT EDITORS



Mr. Aditya Yadav

2nd year B.Tech
ECE Department



Ms. Archi Mishra

2nd year B.Tech
ECE Department