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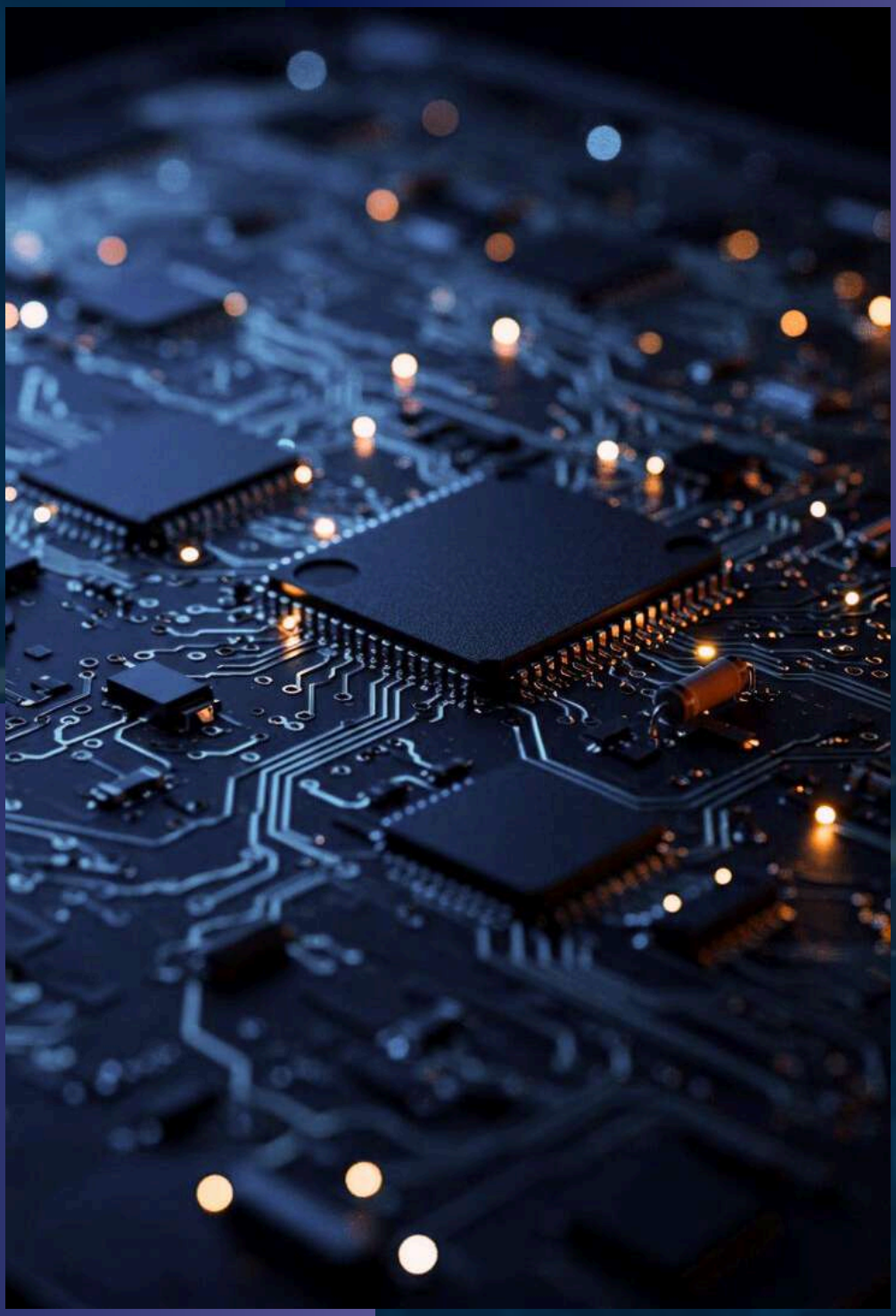


2024-25

ELECTROCOM

ECE DEPARTMENT MAGAZINE

PREFACE

Inspired by the success of previous editions of our departmental magazine 'ELECTROCOM', we proudly present the latest issue. This magazine aims to foster a deeper understanding of the building team, its structure, and the roles and responsibilities that will shape career progression, employment opportunities, or further studies. The unwavering enthusiasm of our learners to study, explore, question, and derive concrete conclusions has led to their remarkable growth, not only as engineers but also as well-rounded individuals.

Inside this edition, you'll find engaging articles, detailed information on departmental societies, and updates on events organized by the Society of Electronics Engineers (SEE), among many other features. Our goal is to provide a comprehensive view of the department’s activities and achievements, reflecting the dynamic spirit of our students and faculty alike. Every section has been carefully crafted to give readers a clear insight into the collaborative efforts and innovations driving our academic community forward.

As we compile this issue for your enjoyment, we are thrilled to share the achievements, contributions, accolades, feats and active participation of our learners across various fields. The works included in this publication were chosen with a specific philosophy in mind: while not every piece may resonate with every reader, together they weave the rich narrative of our department, college and culture. As you browse through this edition, we eagerly anticipate your valuable feedback.

VISION

To be an outstanding department in the country imparting need based, value based technical education, producing socially responsible, self - reliant and technically sound technocrats capable of meeting emerging challenges in ECE and allied areas.

MISSION

- To educate young aspirants in the core and allied areas of Electronics and Communication Engineering by providing state of art resources.
- To imbibe outcome based, value-based education for holistic development of students.
- To create innovative environment leading to solutions of socio-economic and environmental problems.

Program Educational Objectives

- Prepare the students to learn fundamental and advanced concepts of electronics & communication systems so as to serve successfully in their technical and professional career.

- Prepare the students to contribute to society through offering innovative, sustainable and environmentally friendly solutions to real-life problems using knowledge and skills acquired from the program following ethics and human values.

- Prepare the students with professional competence through life-long learning with higher education, research and entrepreneurship activities globally to engineering & society.

The Director's Message

Prof. (Dr.) S.K. Singh
Campus Director

Transforming rough clay into art and forging unrefined metal into priceless creations are indeed impressive achievements. Yet, shaping the younger generation into skilled and visionary engineers is an accomplishment far greater. I extend my heartfelt congratulations to the Department of Electronics and Communication Engineering on the publication of the annual magazine, ELECTROCOM.

Our institute has a proud tradition of producing well-rounded individuals whose education plays a vital role in shaping society's future. With a highly qualified faculty, we are committed to providing top-notch education that empowers students to tackle the latest challenges and trends in electronics and communication engineering, preparing them to contribute meaningfully to the industry and the world.

HOD's Message

""Engineering is the art of harnessing nature's immense forces to serve humanity with progress and convenience. The field of Electronics and Communication has been at the forefront of technological evolution, opening countless opportunities for aspiring engineers. Our Department of Electronics and Communication is empowered by a team of dedicated and experienced faculty and staff who remain closely aligned with the latest industry advancements. Students are nurtured through a balanced integration of theoretical foundations and practical training, enabling them to refine their skills and prepare for future challenges. I extend my heartfelt best wishes to all students and faculty in their academic as well as professional journeys. I also look forward with great enthusiasm to the upcoming edition of our departmental magazine, ELECTROCOM, which captures the dynamic spirit and noteworthy achievements of our students in both technical and non-technical domains."

Prof. (Dr.) AK Singh
HOD ECE

Faculty Coordinator's Message

Mr. Praveen Kumar Chakravarti
(Assit. Prof. ECE Department)

Success is achieved through perseverance and maintaining a positive mindset is essential. With strong willpower and determination, no challenge is insurmountable. The 'ELECTROCOM' magazine captures the events and accomplishments of the academic year, showcasing students' innovative, creative and original ideas. It serves as a platform for students to express their talents, creativity, observational skills and aesthetic sense. Acting as a significant milestone, the magazine reflects our progress, inspires creativity and gives shape to our thoughts and ambitions. It has been instrumental in nurturing a diverse set of creative skills in our young engineers, shaping their personalities and empowering them to realize their full potential.

Message from SEE -

Society of Electronics Engineers is not just a society of the Electronics Department, but a family open to everyone who believes in dreams and teamwork. Together, we learn, innovate and build amazing projects whilel creating unforgettable memories along the way. It's a place where we laugh without hesitation, support each other in every challenge and grow stronger with every experience. These college years are precious and pass by so fast, so let's cherish every moment, be there for one another and make this journey full of joy, creativity and lifelong friendships.

Message From Alumni

Anu Sirohi
(2018-19)

The moments we cherish most often seem to fly by, slipping through our fingers when we least expect it. It feels like just yesterday we entered this college, brimming with aspirations and excitement for a new chapter in our lives. Now, as I write this message for the juniors, I'm struck by how swiftly time has passed. My advice to all juniors is to savor this time, for it will never come again. Once you leave the college gates, you'll miss every moment spent on campus. So, make the most of every experience and remember that life gains meaning when you realize you'll never have the same moment twice. However, simply enjoying the present isn't enough; you must also start planning for your future. Follow your heart and discover your passion, that one thing you can do for a lifetime without ever growing bored. Trust me, once you find your passion, you'll live a life filled with immense happiness and satisfaction, which is truly essential.

Life in college is like the melody of a mandolin, with every moment resembling a note. As undergraduates, we had the opposite experience—our campus lives were brimming with exciting moments from dawn till dusk, each offering a unique lesson. From Freshman to Farewell, time flew by like a dream. Advancing from junior to senior and finally becoming alumni, the journey was truly delightful. It's not the race that matters, but the journey that leads us to our destination. The race is merely movement, but the journey is what drives us forward. So, my curious juniors, don't confuse the race with the journey. Savor every moment of your life to the fullest, not because it's good or bad, but because it will never return. Life has its ups and downs and you can either complain about it or cherish it. But time never stops and it's essential to appreciate each day to the fullest.

Prateek Sharma
(2019-20)

Hierarchy Of SEE

Mahi Gupta
President

Vishwajeet Singh
Vice President

Varun Tomar
Senior Coordinator

Vaishnavi
Senior Coordinator

Shivani Bhati
Senior Coordinator

Core Team Of SEE

Sehar Sharma
Secretary

Rohish Kumar
Joint Secretary

Technical Development Managers-

Anshik Jain

Mayank Chauhan

Event Manager -

Shreshtha Rohila

Graphic Design Heads -

Bhoomika Goel

Devansh Arora

Content Heads -

Tanishka Vishnoi

Prabhat Taliyan

Promotions Heads -

Janshi Kaushik

Tanishq

Social Media Heads -

Mani Bhardwaj

Devansh Arora

Photography Heads -

Prince Baliyan

Vashudev Singhwal

The Treasurers -

Abhay Chaudhary

Anmol Singh

Cultural Heads -

Sanskriti Gupta

Vashudev Singhwal

Message From Design & Editorial Board

Devansh Arora
(ECE 2nd Year)

Anmol Singh
(AI 2nd Year)

Shrestha Rohila
(ECE 2nd Year)

Dear Readers,
We are proud to present the latest edition of Electrocom, brought to you by the Design & Editorial Board of the Society of Electronics Engineers, MIET, Meerut, for the 2024-25 session. With dedication and passion, we have combined creative design and thoughtful editorial curation to offer an engaging and visually enriching reading experience. From carefully crafted layouts, harmonious colors and fonts to thought-provoking articles on the latest trends, innovations and technical insights in electronics, every element reflects our effort to blend knowledge with visual elegance. We believe that good design enhances the way content connects with readers and sparks imagination, while well-curated content inspires learning and innovation. We extend our heartfelt gratitude to all contributors, reviewers, and supporters and especially to our readers, whose encouragement and feedback help us improve with each edition. We hope you enjoy this issue of Electrocom and look forward to your reflections as we continue striving to make it more inspiring with every release.

SOCIETY OF ELECTRONICS ENGINEERS (SEE)

The Society of Electronics Engineers (SEE) stands as a cornerstone society within the ECE Department, fostering a welcoming atmosphere for students to cultivate both technical expertise and soft skills. SEE hosts a range of events, including workshops, seminars, guest lectures and quizzes to impart knowledge on the latest technology, trends and industry demands. Additionally, non-technical activities such as writing competitions, singing contests, social quizzes, debates and cultural programs provide a platform for students to demonstrate their diverse talents. These events serve as invaluable learning opportunities, helping members develop and refine their skills such as teamwork, event management and communication. Furthermore, participation in SEE enhances members' presentation skills, contributing to their overall personal growth. The team at SEE is dedicated to achieving tasks with excellence, consistently striving for perfection. SEE also spearheads the design and publication of ELECTROCOM, with the invaluable guidance of our faculty head, Mr. Praveen Chakravarti Sir. His unwavering encouragement and support inspire members to strive for continuous improvement, further learning and cohesive teamwork.

ROBOTICS AND DRONE CLUB

The Robotics and Drone Club, established in 2018, was founded with the vision of bridging the gap between academic knowledge and industry demands in automation and robotics. The club provides students with opportunities to learn the fundamentals of robotics and apply them by designing and developing their own projects. Focusing on interdisciplinary research, it connects cutting-edge autonomous and intelligent robotics with human-robot interaction, driving meaningful advancements in the field while encouraging students from diverse backgrounds to collaborate in teams for the design, fabrication, and operation of robots. These initiatives nurture curiosity and passion for science, technology and engineering, promoting sustainable and affordable robotics solutions. The Robotics Lab also partners with AICRA and Sahasra Electronics Pvt. Ltd. to provide certifications for training programs conducted during semesters as well as summer and winter schools. Key activities include organizing the national-level robotics championship Robochamps, conducting outreach programs for students from other institutions, hosting summer and winter workshops, developing real-time projects, and facilitating Faculty Development Programs (FDPs) for faculty members.

Placement Record Session 24-25

AKTU Roll No.	Name of Student	Company Name
2100680310002	AAYUSHI GOYAL	EPACK Prefab Technologies Limited
2100680310003	ABHAY GIRI	JBM
2100680310004	ABHINAV ABBOTT	Provisionally selected for CDIL India Semicon, Congruex LLC
2100680310007	AKARSH TIWARI	Geekay Winding
2100680310009	AKASH TYAGI	Dhoot Transmission Pvt Ltd.
2100680310011	AKSHAT KUMAR	DBRRTS
2100680310013	AMAN TYAGI	Dhoot Transmission Pvt Ltd.
2100680310019	ANSH KAUSHIK	Aviotron Aerospace, Dhoot Transmission Pvt Ltd.
2100680310021	ANUBHAV MORAL	JBM
2100680310023	ARPIT RAJPUT	Airveda
2100680310026	ARYAN GUPTA	G. K. Winding Wires Ltd
2100680310031	BHOOMI NAMDEV	Dhoot Transmission Pvt Ltd., EPACK Prefab Technologies Limited
2100680310032	BHUMIKA CHAUDHARY	EPACK Prefab Technologies Limited
2100680310033	CHARU TYAGI	sopra siteria
2100680310034	CHETANSHI	EPACK Prefab Technologies Limited
2100680310035	DAKSH BHARDWAJ	Aviotron Aerospace
2100680310036	DEEPANSH KUMAR SOAM	Ennoble IP / Movidu
2100680310038	DEVESH KUMAR SOAM	Thermo Feb Engineers/ Congrux
2100680310039	DHIRENDRA PRATAP SINGH	JBM / Thermo Feb Engineers
2100680310040	DIVYAM JAIN	DBRRTS
2100680310043	GARGI SINGH	Newgen
2100680310044	GAURAV JAIN	Aviotron Aerospace / Manikaran Analytics Pvt Ltd
2100680310048	HARSH PARASHAR	Maruti Suzuki Pvt ltd. / singh & singh, DB RRTS Operations India Pvt. Ltd
2100680310051	INSHA	Static Electric
2100680310053	JANVI SOLANKI	HCL
2100680310056	KARTIKEYA TYAGI	Ennoble IP / Movidu
2100680310057	KESHAV	ECE Genone optech
2100680310059	KRISHNA VERMA	JBM
2100680310062	MANSI VERMA	Aviotron Aerospace
2100680310064	NAKSHATRA SINGH	Global Logic, Centilytics
2100680310065	NAVNEET	Airveda / Ennoble IP / Movidu
2100680310066	NEERAJ SAINI	Hi Technext Engg. & Telecom Pvt. Ltd.
2100680310079	SHAIFALI	Dhoot Transmission Pvt Ltd., EPACK Prefab Technologies Limited
2.10068E+12	SIDDHARTH TYAGI	Movidu
2.10068E+12	TUSHAR KANKARWAL	Trinity
2.10068E+12	VAIBHAV TYAGI	Technext Engg. & Telecom Pvt. Ltd.
2.10068E+12	VASU DASS	JBM
2.10068E+12	VISHAL SHARMA	Technext Engg. & Telecom Pvt. Ltd.
2.20068E+12	VISHAL SHARMA	Technext Engg. & Telecom Pvt. Ltd./ G. K. Winding Wires Ltd
2.20068E+12	VIVEK KUMAR	Technext Engg. & Telecom Pvt. Ltd./ G. K. Winding Wires Ltd

ACHIEVEMENTS & EVENTS

"Every success is a step toward greater innovation."

IGNITEX 2.0

The Society of Electronics Engineers (SEE), MIET, successfully organized IGNITEX 2.0, an orientation session held on 25th September 2024 at 3:30 PM in Audi–6, MIET Campus. The event aimed at welcoming new members and igniting their journey in the field of electronics and technology. The session introduced the vision, mission, and goals of the SEE Society while motivating students to actively participate in technical growth opportunities. Key highlights included an overview of the society's initiatives, guidance on career and growth pathways in electronics engineering, and insights into the long-term vision and upcoming projects of SEE. The session was enriched by the valuable mentorship of Dr. Neha Mittal (HOD, ECE Department) and Mr. Praveen Kr. Chakravarti (Assistant Professor & Faculty Coordinator), who encouraged students to engage wholeheartedly. With enthusiastic student participation, the event fostered opportunities to enhance technical expertise, leadership qualities, and collaborative skills. Serving as a platform for young engineers, IGNITEX 2.0 successfully connected students with a community dedicated to knowledge sharing, innovation, and professional growth in electronics and allied technologies.

मातृभाषा महोत्सव

The Society of Electronics Engineers will host “मातृभाषा महोत्सव” (Mother Tongue Festival) on September 16 in AUDI-5, celebrating the intersection of culture and technology. The event invites engineers, students, and thought leaders to highlight the role of language in technical expression. Emphasizing that mother tongue proficiency enhances clarity, it shows how native languages help students grasp complex engineering concepts. With the rise of localization in electronics and communication, multilingual interfaces and devices are becoming essential for accessibility. The festival also explores the role of multilingual code and documentation in making technology user-friendly across diverse regions. Discussions on speech recognition and NLP in Indian languages reflect progress in AI-driven systems. Promoting technical education in regional languages democratizes learning for both rural and urban students. By bridging academia and industry, the festival encourages research and solutions rooted in local relevance. It demonstrates how linguistic diversity inspires engineering innovation and inclusion. As India advances in technology, multilingual engineering strengthens its global leadership. Overall, मातृभाषा महोत्सव fosters creative engagement, knowledge-sharing, and empowerment within the tech community.

AERO-VISION

The Society of Electronics Engineers (SEE), in collaboration with the Robotic and Drone Club, organized a technical event titled “Aero Vision: The Drone Experience” on 7th December 2024 at B4-208, MIET. The session, which began at 10:00 AM, offered students an exciting glimpse into the rapidly growing field of drone technology. The primary aim of the event was to introduce participants to the core concepts of drones and highlight their wide-ranging applications across industries such as defense, agriculture, logistics, disaster management, and surveillance. Students witnessed hands-on drone demonstrations, learning about aerodynamics, stability, and control systems, while technical sessions provided deeper insights into sensor integration, wireless communication, and AI applications in drones. The program encouraged participants to actively engage with mentors, ask questions, and explore innovative drone-based solutions, thereby fostering a spirit of research and creativity. The event was enriched by the guidance of Mr. Abhishek Kumar and Mrs. Abhilasha Jain as mentors, along with the valuable support of Dr. Neha Mittal (HOD, ECE Department) and Mr. Praveen Kr. Chakravarti (Faculty Coordinator), whose expertise helped strengthen technical learning. By bridging theory with practical exposure, Aero Vision highlighted the immense potential of drones in shaping Industry 4.0 and underlined the importance of interdisciplinary learning and future-ready skills. The session showcased the technical versatility of drones and their applications to create real-world solutions, positioning drones as powerful tools for innovation.

BEGINNER IMAGINER WORKSHOP

The Society of Electronics Engineers (SEE) and IDEA Lab, MIET Meerut, are hosting the Beginners Imaginer Workshop on 12th April 2025, from 09:00 AM to 04:00 PM at the AICTE IDEA Lab, MIET. This free, one-day event is designed for engineering graduates, arts students, and hobbyists who wish to explore the world of Augmented Reality (AR) and Virtual Reality (VR). With no registration fee and a hands-on learning approach, the workshop focuses on two key areas: Unity 3D basics, where participants will learn the foundations of creating interactive applications and immersive environments, and Meta Quest VR setup, offering real-time practice with VR headsets. Participants are required to bring a 10th Gen laptop, and the last date to register is 11th April 2025. By bridging creativity with technology, this initiative opens opportunities in fields like engineering prototyping, creative visualization, immersive training, and entertainment, reflecting MIET's commitment to promoting technological literacy and innovation through practical learning.

ALUMINI MEET 2025

Visted By Vice Chancellor Of Aktu On The Occassion Of Convocation Ceremony on 17th may 2025 -

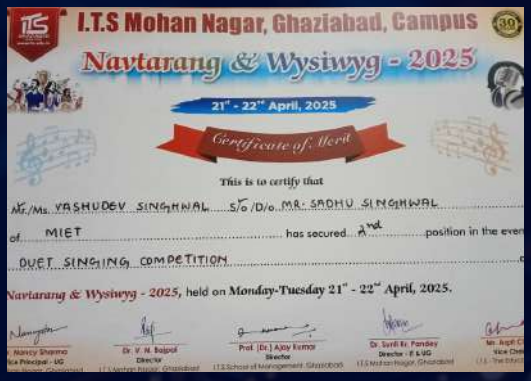
Bharat Shiksha Expo (2024-25)

GOLD MEDALIST-24'
NIKITA SINGH

AKTU StartUp Award Winner
HARSH CHAUHAN

Secured 2nd Position in ROBO SUMO

Musical Achievements Of Vashudev Singhwal



Secured 3rd Position in KOLAHAAL'25 SEHAR SHARMA

Secured 1st Position in ALGOTHON
ANSHIK JAIN

MIET

CERTIFICATE OF ACHIEVEMENT

This is presented to :

Anshik Jain.

For demonstrating exceptional knowledge in coding and Data Structures & Algorithms (DSA) securing the **1st** position in **AlgoThon 2024**, organized by **WebWeavers** at MIET , Meerut.

DR.(PROF.) MUKESH RAWAT
Associate Dean - Projects

DR.(PROF.) SWATI SHARMA
HOD - IT

Secured 3rd Position in AKTU
STATE LEVEL GAMES
NIKHIL DANGI

पेटेंट कार्यालय, भारत सरकार | The Patent Office, Government Of India
डिज़ाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 13-01 in respect of the application of such design to *ELECTROMAGNETIC INDUCTION GENERATOR* in the name of 1.Meerut Institute of Engineering and Technology, Meerut 2. Nikhil Dangi 3.Ansh Bhardwaj 4.Parveen Kumar Chakarvarti 5.Shallender Singh Bhati 6.Anil Kumar.

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

ARTICLES

"WORDS THAT INSPIRE, IDEAS THAT LAST."

"ARTICLES ARE THOUGHTS GIVEN WINGS."

"WRITING TO INFORM, INSPIRE, AND IGNITE."

Shaping the Future: A Career in Electronics

Electronics is more than just a branch of engineering—it is the driving force behind the modern world. From smartphones and satellites to medical equipment, defense systems, and renewable energy solutions, electronics has become the backbone of almost every aspect of human life. Choosing a career in this field not only ensures stability and relevance in the job market but also offers an opportunity to innovate and contribute to the progress of society.

The career avenues in electronics are vast and ever-expanding. Graduates can explore diverse fields such as telecommunications, embedded systems, VLSI and semiconductor design, robotics, automation, aerospace, and consumer electronics. With the rapid growth of cutting-edge technologies like Artificial Intelligence, the Internet of Things (IoT), 5G communication, and smart energy systems, electronics engineers are playing a vital role in building a future that is faster, smarter, and more sustainable.

A career in this discipline is not confined to traditional job roles alone. Students with research aptitude can pursue higher studies and contribute to the development of futuristic technologies. Those inclined toward entrepreneurship can innovate and establish startups in areas like home automation, healthcare devices, or wearable technology. On a global scale, skilled electronics professionals are in high demand, creating opportunities to work with leading industries and research organizations across the world.

At its core, electronics demands curiosity, persistence, and a passion for technology. For young aspirants, it is not just a career option but a pathway to become innovators, problem-solvers, and leaders in shaping tomorrow's digital and connected society. Indeed, a career in electronics is a journey of continuous learning, discovery, and impact.

By Praveen Kr. Chakravarti
Assistant Prof.

Green Communications and Energy Harvesting for Sustainability and Reliability

With the communication technologies growing significantly in the current digital era, their expansion poses a significant challenge—high energy usage and ecological footprint. Green communication focuses on designing and managing communication networks to be energy-efficient and environmentally friendly, with minimized carbon emissions while still performing well. Through resource optimization, the implementation of low-power equipment, and the integration of renewable solutions, green communication enables a more sustainable digital future.

Perhaps the most promising method to enable this vision is energy harvesting. Rather than use power from conventional sources of power, such as batteries or electricity grids, devices can harness energy from ambient sources like solar, wind, thermal, or even radio frequency (RF) fields. This harvested energy can be used to power wireless sensors, IoT devices, and base stations, lowering reliance on batteries and electrical grids. For example, battery-powered sensor networks in smart cities and agriculture avoid the need for constant battery replacements, reducing costs and environmental pollution.

With the integration of energy harvesting and green communication techniques, networks become sustainable and reliable. Sustainable, as the use of renewable and ambient sources minimizes environmental degradation; reliable, since energy harvesting provides sustained performance even in remote or off-grid locations. In addition, smart energy management systems optimize efficiency, providing optimal utilization of harvested power.

In summary, the convergence of green communication and energy harvesting provides a route towards greener, smarter, and more sustainable communication systems. As the need for connectivity keeps growing, such technologies will be instrumental in establishing a reliable and sustainable digital infrastructure.

By Ashish Kr. Rao
Assistant Prof.

The Upsurge of Robotics: Revolutionalize the World and drive towards Global Change

In last few decades, the idea of robots walking among us seemed like the stuff of science fiction. Today, it's a rapidly evolving reality and even has become the need of the hour. From self-driving cars to robotic arms performing delicate surgeries or drilling and pick and place heavy objects, the world of robotics is revolutionizing industries and also our lifestyles.

What is Robotics?

Robotics is the intersection of science, engineering, and technology that produces machines—robots—that can perform tasks either autonomously or semi-autonomously. These machines are designed to mimic human actions, respond to environments, and sometimes even learn from experience.

Modern robotics is an interdisciplinary field combining mechanical engineering, electrical engineering, electronics engineering, computer science, and artificial intelligence (AI).

The Current Landscape

Robots are now a part of our everyday lives:

- Healthcare: Surgical robots like the da Vinci system and Robotic exoskeletons helping patients with mobility impairments.
- Industry & Manufacturing: Industrial robots assemble everything with incredible speed and accuracy.
- Service & Hospitality: Robots serve food, deliver room service, and even provide companionship to the elderly.
- Agriculture: Autonomous tractors, drones equipped with AI are monitoring crop health.
- Military & Defence: UAVs and robotic bomb disposal units help reduce risk to human soldiers.

Famous Quotes about Robotics:

1) Robot may not injure human being.
2) Robots must obey orders.
3) Robots must protect its own existence.

Artificial Intelligence: The Brain Behind the Machine

Robots today possess the ability to "think" because of the integration of AI and machine learning. For instance, AI-powered robots in warehouses can learn the most efficient routes for picking items or recognize when a product is misplaced. In homes, smart robotic vacuum cleaners map room layouts to clean more efficiently.

Sidebar: Quick Facts about Robotics

- The word "robot" comes from the Czech word robota, meaning forced labor.
- The global robotics market is expected to surpass $250 billion by 2030.
- Japan has one of the highest robot-to-human ratios in the workplace.
- Soft robotics is a new field using flexible materials to mimic living tissue.
- BRABO was the first Indian robot developed by TAL manufacturing solution.
- AcYut and Manav were humanoid robots developed in 2008.
- Joseph F. Engelberger is referred as Father of Robotics.
- The crown of Mother of Robotics is worn by Carol Reiley.

By Abhilasha Jain
Assistant Prof.

AI - Powered Compact Dielectric Reasonator Antennas For Broadband Communication

The swift advancement of wireless communication has led to a need for antennas that are small, efficient, and able to operate over a wide bandwidth. Dielectric Resonator Antennas (DRAs) have become appealing options because of their minimal losses, excellent radiation efficiency, and adaptable shapes. Their small size, facilitated by high-permittivity materials, makes them perfect for contemporary uses like 5G, satellite communications, IoT gadgets, and vehicle communication networks.

Historically, the design of antennas has depended on repetitive, manual methods that necessitate comprehensive simulations and specialized knowledge. Nonetheless, as complexity increases—like in multi-band, UWB, and miniaturized systems—traditional approaches frequently struggle to deliver optimal solutions promptly. Artificial Intelligence (AI) has transformed this domain through automated design, facilitating smart optimization, and precisely forecasting performance metrics.

AI methods including Artificial Neural Networks (ANNs), Genetic Algorithms (GAs), Particle Swarm Optimization (PSO), Support Vector Machines (SVMs), and Convolutional Neural Networks (CNNs) have shown effectiveness in DRA design. These tools aid in optimizing parameters, configuring structures, adjusting adaptively, and modeling surrogates, greatly lowering computational expenses. Deep learning specifically allows for quick assessment of essential parameters such as bandwidth, gain and directivity, thus hastening the design procedure.

Through the use of AI, engineers can attain wideband functionality in DRAs without complicated feeding designs, maintaining a balance between size and broad operational capability. Additionally, hybrid AI-electromagnetic models improve design efficiency and practical implementability.

This AI-focused method corresponds with Industry 4.0 trends, where automation, real-time simulation, and digital twin modeling are changing engineering processes. In academia, integrating AI into antenna design promotes interdisciplinary education, preparing upcoming researchers to innovate in smart communications, intelligent RF systems, and future wireless technologies

By Ragib Khan
Assistant Prof.

Is the AI Boom Turning into a Bubble?

Artificial Intelligence (AI) is one of the fastest-growing and most talked-about technologies of our time. From advanced language models that can write essays and code, to powerful computer vision systems and autonomous machines, AI is positioned as the next big revolution. Investors, tech companies, and governments are pouring billions of dollars into AI research and startups, eager to capture its immense potential. With constant media coverage promising that AI will solve climate change, eliminate mundane jobs, and even create sentient machines, the excitement around this technology has reached unprecedented heights. However, many industry experts now wonder whether we are heading toward an AI bubble—one driven more by speculation and hype than by real-world progress and value.

Several warning signs suggest that the current frenzy may not last forever. Many AI startups are receiving sky-high valuations despite lacking proven business models or practical products. Bold promises of fully autonomous cars, perfect language translators, or universal problem-solving AI remain far from reality. Additionally, the industry faces a shortage of experienced researchers, causing rushed projects, burnout, and questionable development practices. Governments are also struggling to create effective regulations, leading to concerns about biased algorithms, data privacy violations, and the ethical use of AI. If the bubble bursts, it could result from unmet expectations, tighter regulations following scandals, or widespread public backlash against fears of job loss, surveillance, and loss of control.

Nevertheless, a market correction might not be a catastrophe. History shows that many tech bubbles—like the dot-com crash—cleared out unsustainable players and refocused the industry on genuine innovation. In the case of AI, this correction could lead to more responsible development practices, realistic product goals, and solutions that address actual problems in healthcare, energy management, smart automation, and more. The key lies in focusing on practical applications rather than chasing sensational headlines or unrealistic visions of the future.

By Anmol
2nd yr, AI

Emerging Trends in Semiconductor Technologies

Semiconductors are the tiny powerhouses behind all modern electronics, from smartphones to supercomputers. In 2025, this industry is experiencing exciting changes that promise to reshape technology as we know it.

One of the biggest trends is how artificial intelligence (AI) is driving the demand for specialized chips. Instead of one-size-fits-all processors, companies are designing custom chips made just for AI tasks. These chips are faster and more efficient at handling complex calculations, powering everything from voice assistants to self-driving cars.

Another major development is in advanced materials. Traditional silicon chips are reaching their physical limits, so researchers are exploring new materials like gallium nitride (GaN) and silicon carbide (SiC). These materials handle heat better and use less power, making them ideal for electric vehicles, 5G networks, and renewable energy systems.

Chips are also becoming more compact and powerful thanks to 3D integration.We're also seeing breakthroughs in photonic and quantum technologies, which could push computing speeds to levels once thought impossible.

Supply chain and manufacturing changes are shaping the industry too. Countries are investing heavily to build semiconductor plants locally, reducing dependence on global supply chains disrupted in recent years.

Overall, the semiconductor landscape in 2025 is defined by faster, smarter, and more energy-efficient chips designed for a connected world. The Society for Electronics Engineers encourages its members to follow these trends closely, as semiconductors will continue to power innovation in areas like AI, IoT, electric mobility, and beyond.

By Mani
2nd yr, ECE

ECE: The Backbone of Modern Technology

Every branch of engineering has its own pride and place. Mechanical engineers often say that without machines, progress is impossible. Civil engineers claim that without buildings and infrastructure, life cannot function. Computer science specialists proudly declare that they run the digital world. But amidst these claims, Electronics and Communication Engineering (ECE) stands apart as the true backbone of modern technology. Without electronics, the other branches cannot even begin their work.

ECE is unique because it seamlessly connects hardware, software, and communication. While computer engineers may write brilliant code, it runs only because of the processors and systems built by ECE. Mechanical engineers can design powerful robots, but those robots only come to life through sensors, controllers, and embedded systems designed by ECE. Even smart cities, often showcased by civil engineering, depend on IoT networks and communication systems to truly become “smart.”

What makes ECE powerful is its presence in our daily lives. From the smartphones in our pockets to the satellites orbiting above, ECE is everywhere. The internet we browse, the communication towers that keep us connected, the medical equipment that saves lives, and the defense systems that protect nations—all carry the signature of ECE engineers. Unlike many fields that focus on a single path, ECE provides a wide spectrum of opportunities, allowing its students to adapt and thrive in industries ranging from IT and telecom to healthcare, renewable energy, and space technology.

Ultimately, ECE is more than just another engineering branch—it is the nervous system of our modern world. It doesn’t boast loudly, but it quietly powers progress in every field. Whether it is 5G networks, smart automation, or future innovations we have not even imagined yet, ECE will continue to play the central role. So, when asked which branch is the best, the answer is simple: without ECE, modern life simply stops.

By Prince
2nd yr, ECE

The Impact of 5G and IoT on Electronics Engineering

The arrival of 5G technology and the explosive growth of the Internet of Things (IoT) are reshaping the world of electronics engineering. Together, these technologies are driving innovations that make devices smarter, faster, and more connected than ever before.

5G, the fifth generation of wireless networks, offers incredibly fast data speeds, ultra-low latency, and the ability to connect millions of devices simultaneously. This means that electronics engineers can design systems that respond almost in real-time, enabling applications that were once considered science fiction. For instance, remote surgeries, autonomous vehicles, and real-time industrial automation are becoming practical because of 5G's speed and reliability.

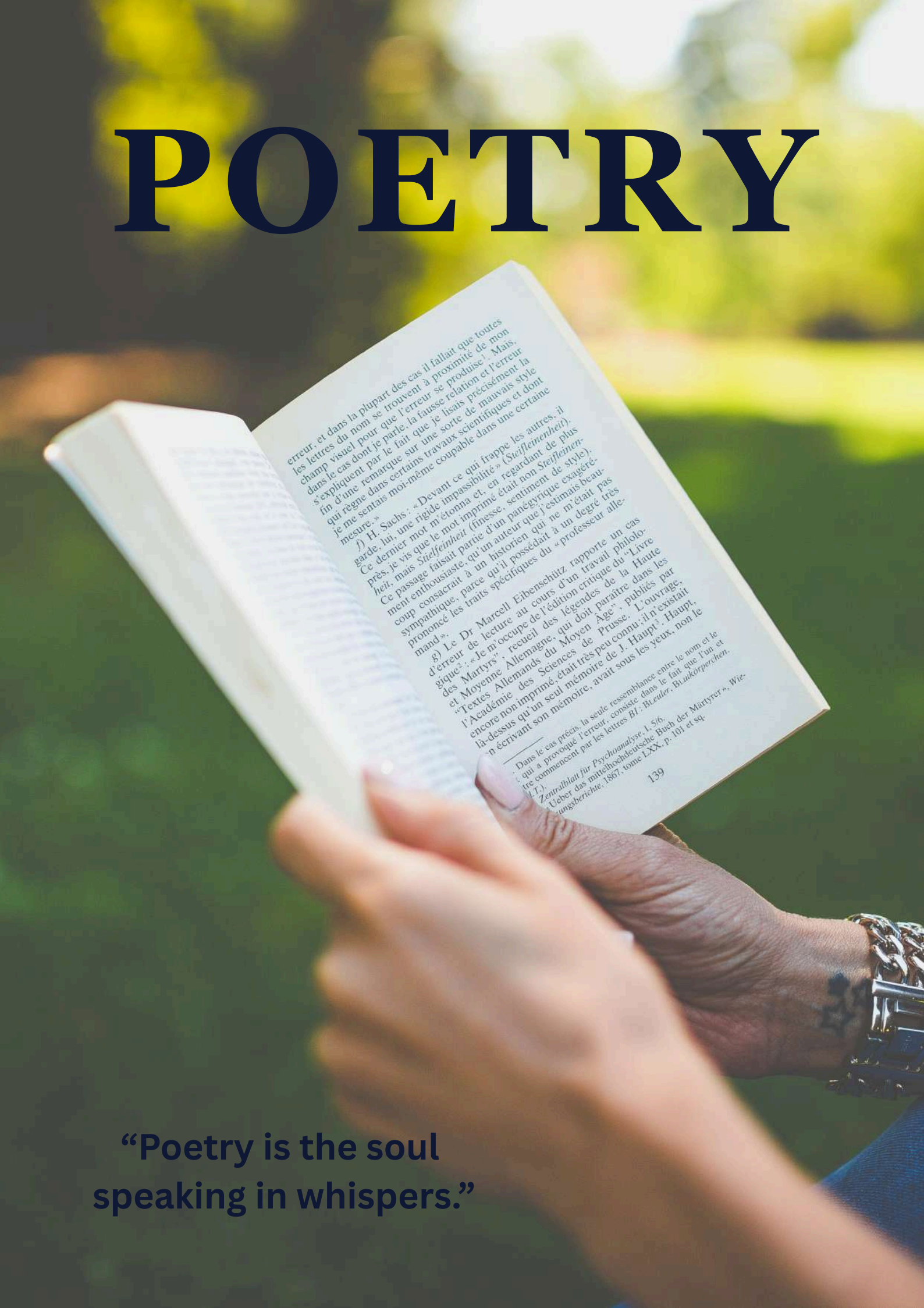
IoT connects everyday objects—from home appliances to factory machines—embedding them with sensors and communication capabilities. The data these devices generate can be processed to optimize performance, predict maintenance needs, and improve user experiences. The scale of IoT means engineers must create compact, energy-efficient, and highly reliable electronic components to support this massive network of devices.

According to industry insights, 5G enhances IoT by providing faster, more reliable connections with lower power consumption, extending device battery life and reducing operational costs. This is crucial for sectors like healthcare, agriculture, and smart cities where real-time data is essential.

For electronics engineers, this convergence means more complex and exciting challenges. Designing electronics for 5G and IoT requires new skills in high-frequency circuits, low-power design, and advanced materials. It also opens doors for innovations such as intelligent sensors, edge computing, and AI integration right at the device level.

By Vashudev
2nd yr, ECE

POETRY



“Poetry is the soul speaking in whispers.”

Lost in the Reflection

When you don't know yourself
people will so easily turn you
into someone you're not
They'll use you according to
their needs and wants
You'll be left with nothing
but false hope that
they care for you,
they love you
When actually, they don't!

By Sanskriti Gupta
ECE
2nd Year

From Crayons to Courage

~ An Iridescent Journey of Her Becoming ~

A little girl, with crayons in hand —
Red, yellow, blue, her own dreamy land.
She'd paint her world across every wall,
And laugh at things so sweet, so small.

But time took out a different brush,
From peachy giggles to purple hush.
The world began to weigh her smile,
And every tear dyed her soul for a while.

She faced heartbreak in charcoal grey,
But found sunlit saffron along the way.
Slowly, gently, she turned butterfly —
With wings that whispered stories sky-high.

The dreams she once drew on empty air,
She now lived loud, bold, and rare.
Her eyes now held a rainbow's gleam,
Her silence burned with a hidden dream...
From crayons that coloured her walls...
To courage that coloured her soul —
She didn't just grow up...
She became iridescent. ✨

By Aditi Kaushik
ECE
2nd Year

This Place and You All

I learnt a lot in halls and haze,
Through golden nights and sunlit days.
This college—etched in time and space,
Will always hold a sacred place.

A little hate, a few regrets,
But joy is what my soul begets.
For every tear and every smile,
Is worth the walk, is worth the mile.

Am I hoping way too high?
Dreams like stars across the sky.
But hope is home—I'll let it fly,
Even if it says goodbye.

People came and some moved on,
Like fleeting dusk before the dawn.
Yet in my heart, they're never gone
They sang their verse, and I moved on.

Some were chapters, some were lines,
Some lit up like hidden signs.
And those who left a silent scar,
Still shine within me, like a star.

I can’t hate, I won’t shut doors,
They walked with me through inner wars.
They may return, or stay away—
But I’ll be stronger, come what may.

For now I build, with quiet grace,
My walls of peace, my sacred place.
With dreams that stretch beyond the skies,
And fire that never truly dies.

So here’s to life, to love, to flight,
To battles lost and dreams made right.
This college gave me more than days—
It shaped my soul in quiet ways.

By Sehar Sharma
ECE
2nd Year

माँ – सबसे अनमोल रिश्ता 🌸

माँ, तू ही है मेरी सुबह की पहली किरण,
तेरे बिना अधूरा है मेरा हर क्षण।

तेरे आँचल में छिपा है सुकून का संसार,
तेरी ममता से ही रोशन है मेरा घर-आँगन अपार।

तूने त्याग कर हमें सपनों से सजाया,
अपने दर्द छुपाकर हमें मुस्काना सिखाया।

तेरी गोद में मिले हर दुख से राहत,
तेरे आशीष से मिटे हर आहट।

तेरी डाँट में भी छिपा है अपनापन,
तेरे बिना सूना है मेरा जीवन।

माँ, तू ही है मेरी शक्ति, तू ही है मेरी राह,
तेरे बिना अधूरा है मेरा हर चाह।

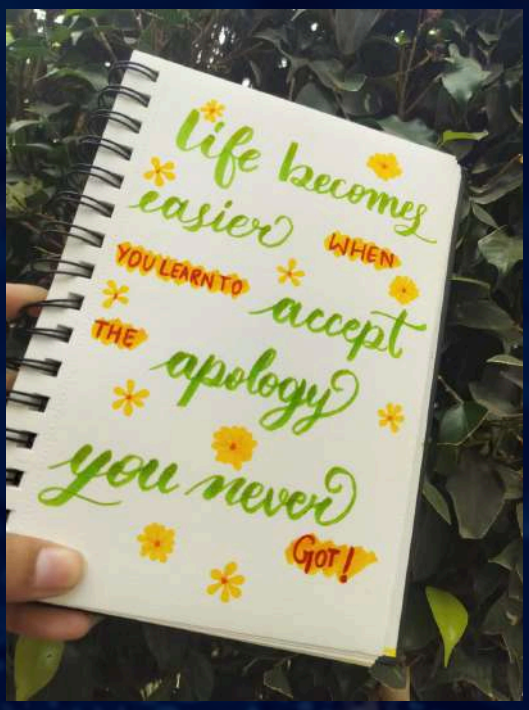
ईश्वर से बढ़कर है तेरा दरबार,
तेरे चरणों में है सारा संसार।

माँ, तेरा एहसान मैं चुका न पाऊँगा,
तेरे बिना इस दुनिया में मुस्कुरा न पाऊँगा।

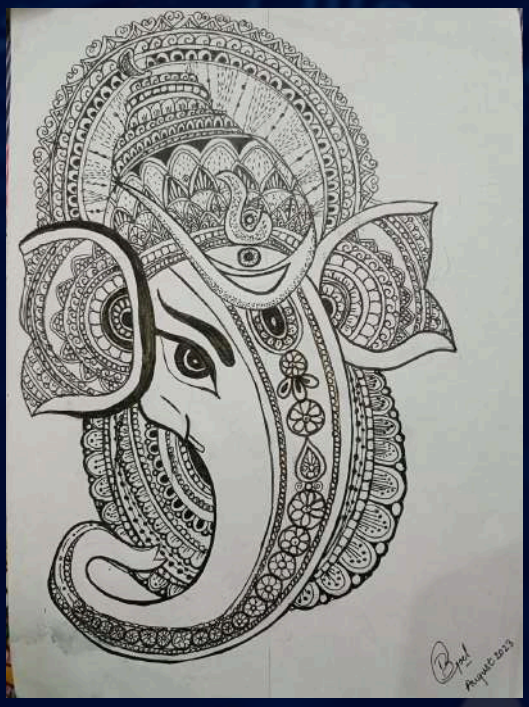
By Devansh Arora
ECE
2nd Year

ART&CRAFTS

"ART SPEAKS, CRAFT SHOWS"

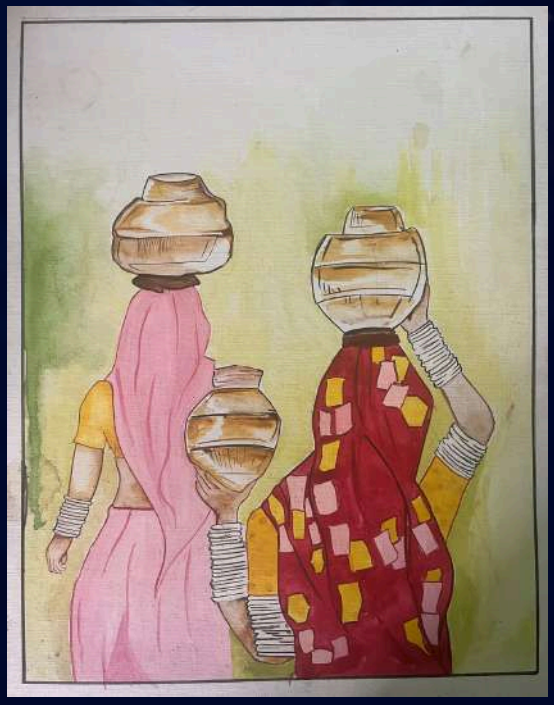


By Sehar Sharma
ECE
2nd Year



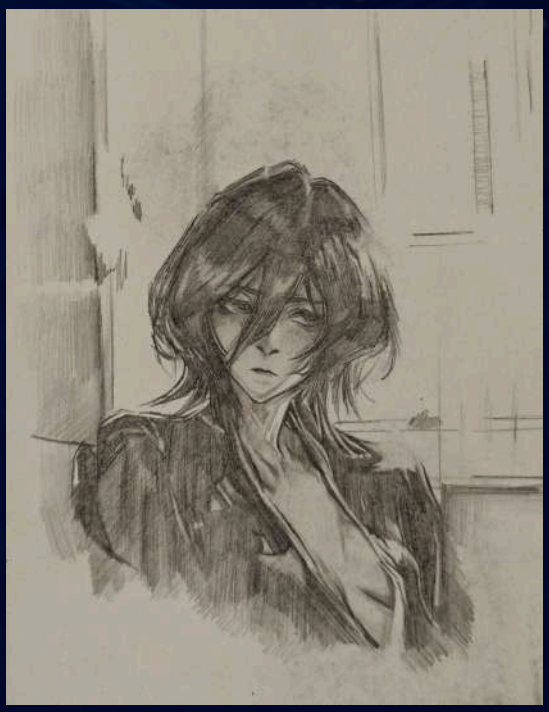
By Bhoomika Goel
CSE
2nd Year

By Rohish Kumar
ECE
2nd Year



By Mani Bhardwaj
ECE
2nd Year

By Vaishnavi
ECE
3rd Year

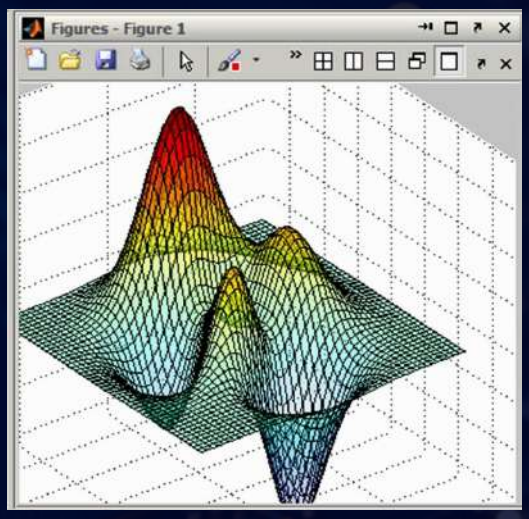


By Shreshtha Rohilla
ECE
2nd Year

Softwares in ECE

MATLAB (Matrix Laboratory)

A dedicated MATLAB laboratory has been established in the department to empower students and faculty with advanced technical computing resources for engineering education and research. This facility is equipped with the latest licensed versions of MATLAB software, enabling hands-on experience in computational analysis, simulation, and modeling across various engineering domains.



The lab supports a wide range of experiments and projects, including circuit analysis, control system studies, signal processing, and data visualization, fostering a practical learning environment.
Access to the MATLAB lab allows students to apply theoretical concepts to real-world scenarios using industry-standard tools essential for modern engineering.
The lab is integrated with the curriculum to enhance technical competence, promote research activities, and prepare students for competitive professional roles in academia and industry

CADENCE

The Cadence lab supports design and analysis of analog, digital, and mixed-signal circuits, preparing students for careers in VLSI design, embedded systems, and hardware verification. Through practical training in Cadence Virtuoso and related tools, students learn critical skills such as schematic editing, simulation of circuit behavior, layout editing, design rule checking (DRC), and post-layout verification. This comprehensive environment empowers learners to bridge theoretical knowledge with practical hardware design challenges.

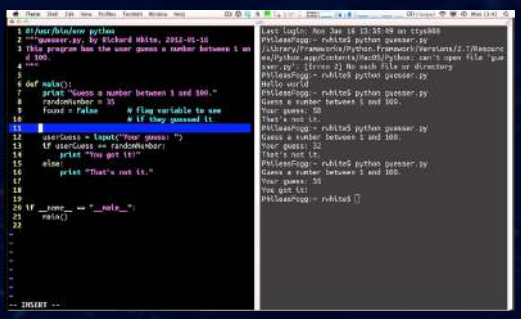
By integrating the Cadence lab into the curriculum, the department enhances its commitment to providing state-of-the-art infrastructure for electronics education and research. This facility equips students with the expertise demanded by the microelectronics industry and fosters innovation in semiconductor circuit design.

Softwares in ECE

PYTHON

The department proudly offers a fully equipped Python programming lab where students actively practice coding through a wide range of exercises. These practical sessions include fundamental programming constructs like loops, decision making, functions, recursion, string manipulation, and data structures (lists, tuples, dictionaries). Students also work on advanced topics such as exception handling, file operations, and using popular Python libraries like NumPy and Pandas for data analysis.

The lab provides hands-on experience with real coding problems, fostering logical thinking, problem-solving skills, and proficiency in Python programming, which is essential for today's digital world. This practice-based learning environment equips students to apply Python effectively in software development, data science, machine learning, and automation projects, bridging theoretical concepts with industry-relevant skills.

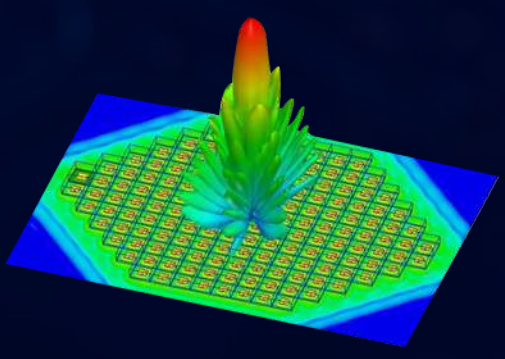


H.F.S.S. (Ansys)

The department is proud to present the HFSS (High-Frequency Structure Simulator) laboratory, a state-of-the-art platform for 3D electromagnetic simulation widely used in research and industry for high-frequency design challenges. HFSS is renowned for its accuracy and reliability in simulating RF, microwave, antenna, and electromagnetic compatibility (EMC) problems through advanced adaptive meshing techniques.

The HFSS lab enables students and researchers to model and analyze complex electromagnetic structures such as antennas, waveguides, filters, and PCBs with precision. It significantly reduces design cycle times while enhancing product performance and reliability, preparing learners for cutting-edge careers in wireless communication, aerospace, radar systems, and semiconductor industries.

With HFSS simulation tools, the department fosters innovation in virtual prototyping and electromagnetic design, bridging theoretical concepts with practical applications in modern engineering fields.



Department Of Electronics and Communication Engineering

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