



KARPAGAM

COLLEGE OF ENGINEERING

Rediscover | Refine | Redefine

Accredited by NAAC with 'A+' grade

Autonomous | Affiliated to Anna University

(An ISO 9001:2015 and ISO 14001:2015 Certified Institution)

AY 2024-25



**DEPARTMENT OF
ELECTRONICS AND COMMUNICATION
ENGINEERING**

ABOUT KCE

The Karpagam College of Engineering, established in the Year 2000, is an Autonomous institution, Approved by AICTE, NewDelhi and Affiliated to Anna University, Chennai. The college offers various Under Graduate and Post Graduate Engineering programmes. The College is accredited by NAAC with 'A' Grade, TCS and Wipro with 4500 students and 426 teaching and non-teaching staff members, Karpagam College of Engineering strives to impart quality education and an excellent career start to all its students. The Placement and Training facilities add a feather to its cap ensuring the students get placed on campus. The 10 Centers of Excellence strive to impart practical and experimental exposure to the students and serve as a window to the corporate world. The College is situated at Myleripalayam, 15kms from Coimbatore Central Railway station. The serene location surrounded by green fields and rich clusters of coconut groves creates a calm atmosphere conducive to learning and growth. Infrastructure with well-equipped laboratories and libraries, well maintained Play grounds, Hostels, Food Court, Gymnasium and an Indoor Stadium.

VISION

To become one of the best institutions at the National and International level by incorporating innovative teaching - learning methods to enable the students to secure a high-value career, motivate to pursue higher education and research to serve the society.

MISSION

To bring out knowledgeable engineers and professionals in their field of specialization by having qualified and trained faculty members and staff besides necessary infrastructure and to create highly conducive teaching and learning environment . To work in close association with stakeholders by way of enhanced industry – institute interaction, to take up need based research and industry specific programmes. To organize co-curricular and extracurricular activities for character and personality development to produce highly competent and motivated engineers and professionals to serve and lead the society.





ABOUT DEPARTMENT OF ECE

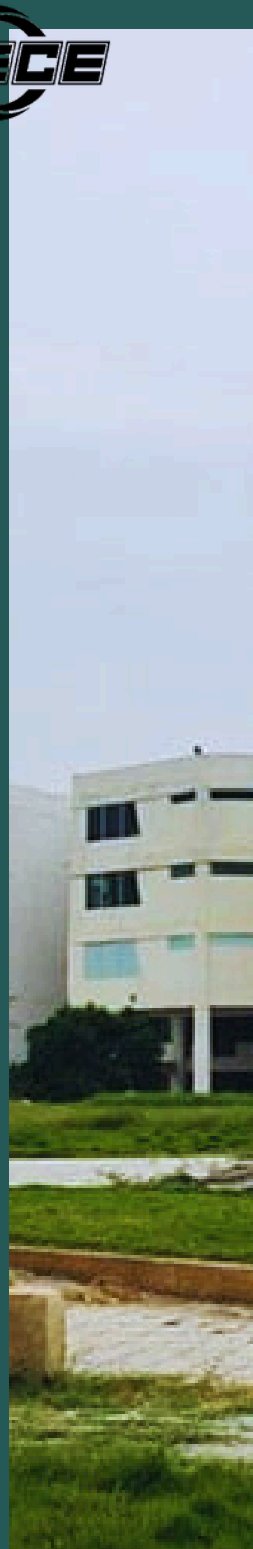
The embryonic formation of the Department of Electronics and Communication Engineering was in the year 2000 with the introduction of an undergraduate course. The Department has been accredited by the National Board of Accreditation (NBA) and affiliated to Anna University, Chennai. The Department over the time has grown in several dimensions and provides a magnetic ambience in teaching and learning. Apart from four years B.E course, the Department also offers two full time M.E courses (VLSI Design and Communication Systems) and Anna University approved Ph.D Research Centre to expand the scope of research focus of the department. Students pursuing B.E in ECE have a full and flexible undergraduate curriculum. Numerous streams can be tailored to fit every individual's interests, skills and career goals. ECE has gained a reputation for producing top-notch engineers for industry and academia. Postgraduate study in ECE prepares students for leadership roles in research, development and design positions that require skill and imaginative engineering solutions. The major areas of faculty expertise of the department include Biomedical Signal Processing, Communication Systems, Computer networks, Control Systems, Digital Signal Processing, Image Processing, Instrumentation, RF and Microwaves, Microstrip Antennas, Optoelectronic and Optical Communication, VLSI Design, Wireless Communication, Embedded Systems and MEMS. The Department has Centers of Excellence in the field of VLSI Design, Embedded Systems, Communication and Networks and Signal Processing. The Department has signed MoUs with leading industries and organizations for establishing collaborative research, conducting Workshops, Seminars and for organizing International Conferences. Professional associations such as ECE association and IEEE student chapter are developed for professional interaction.

VISION

To provide innovative teaching and learning methodologies for excelling in a highvalue career, higher education and research to the students in the field of Electronics and Communication Engineering to meet the needs of the industry and to be a part of the advancing technological revolution.

MISSION

To create engineers of high quality on par with international standards by providing excellent infrastructure and well qualified faculty. To enhance the collaborative and multidisciplinary activities to develop human and intellectual qualities. To provide technical expertise to carry out research and development.





EDITORIAL TEAM

DEPARTMENT OF
ELECTRONICS AND COMMUNICATION ENGINEERING

FACULTY EDITORS

Dr. R. SARANKUMAR, PROFFERSOR & HEAD/EC

Dr. G. ARUN FRANCIS, AP/EC

Mr. C. MUKUNTHARAJ, AP/EC

Dr. R. SELVAKUMAR, AP/EC

STUDENT EDITORS

22L343 SABITH AZEEZ S

22L149 SANTHOSH V

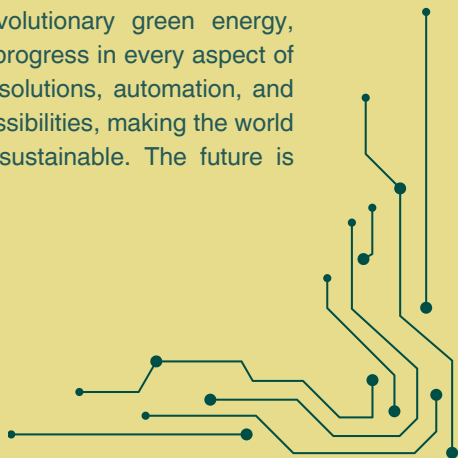
22L121 JAIPRAKASH P

22L252 SHANMUGA SRI UDAYKIRAN M S

22L148 SANTHOSH M

TECHNOLOGY AND INNOVATION

From groundbreaking AI to revolutionary green energy, technology and innovation drive progress in every aspect of life. As industries evolve, smart solutions, automation, and digital transformation redefine possibilities, making the world more connected, efficient, and sustainable. The future is now—embrace the change!



ARTICLE BEYOND 5G: THE RISE OF 6G COMMUNICATION TECHNOLOGY



What is 6G and Why is it Important?

With 5G networks still expanding globally, researchers and engineers are already working on the next generation of wireless technology—6G. Expected to be launched around 2030, 6G will offer ultra-fast speeds, near-zero latency, and revolutionary applications in artificial intelligence (AI), the Internet of Things (IoT), and immersive experiences.

How Will 6G Be Different from 5G?

While 5G provides gigabit speeds and lower latency, 6G aims to take wireless communication to the next level with:

Terahertz (THz) Communication:

Operating in the THz spectrum (100 GHz–10 THz) for ultra-high-speed data transfer.

AI-Driven Networks:

AI-powered systems will optimize performance and enhance security.

Holographic and Immersive Communication:

Real-time holographic calls and enhanced virtual/augmented reality (VR/AR) experiences.

Integration of Space and Ground Networks:

Seamless connectivity between satellites, drones, and terrestrial networks.

Energy-Efficient Networks:

Focus on sustainability with lower power consumption and eco-friendly infrastructure.

Current Developments in 6G Research

Leading technology companies, including Nokia, Samsung, and Huawei, along with research institutions worldwide, are investing in 6G development. Countries like the US, China, Japan, and South Korea have already started test projects and standardization efforts. The Next G Alliance and Hexa-X are two major global initiatives working on 6G research and innovation.

Current Developments in 6G Research

Despite its potential, several challenges need to be addressed before 6G becomes a reality:

THz Signal Limitations:

Higher frequencies face propagation losses, requiring new materials and advanced antenna technologies.

High Infrastructure Costs:

Upgrading networks to support 6G will require massive investments.

Cybersecurity Concerns:

Enhanced connectivity increases the risk of cyber threats and privacy issues.

Standardization and Regulation:

Global standards must be developed to ensure interoperability and security.

PRIYADHARSHINI SARAVANAKUMAR
717823L242
II EC-B

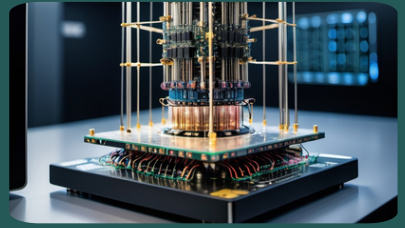


ARTICLE

QUANTUM

COMPUTING: THE

NEXT REVOLUTION



What is Quantum Computing?

Quantum computing is a new approach to computing that leverages quantum mechanics—specifically superposition and entanglement—to perform calculations exponentially faster than classical computers.

How It Works:

- Classical Computers use bits (0s and 1s) to process information.
- Quantum Computers use qubits, which can exist in multiple states at once (superposition).
- Entanglement allows qubits to be interconnected, enabling faster and more powerful computations.

This quantum parallelism gives quantum computers an edge over traditional systems, making them ideal for solving complex problems in science, business, and security.

Challenges & Limitations

Despite its potential, quantum computing faces several hurdles:

- **Hardware Limitations:** Qubits are highly sensitive and require extreme cooling to function.
- **Error Correction:** Quantum computers are prone to errors, requiring complex correction mechanisms.
- **Scalability:** Currently, quantum computers have a limited number of qubits, restricting real-world applications.

The Future of Quantum Computing

Quantum computing is no longer just a theoretical concept—it is rapidly advancing. Governments and private companies are investing billions in quantum research, aiming to develop fault-tolerant, scalable quantum systems.

In the coming years, hybrid quantum-classical computing will emerge, combining the strengths of both systems to create faster, more efficient solutions across industries.

Who is Leading the Quantum Race?

Several companies and institutions are investing heavily in quantum research. Some key players include:

- **IBM** – Developing quantum cloud computing with the IBM Quantum Network.
- **Google** – Achieved "quantum supremacy" by solving a problem faster than a supercomputer.
- **Microsoft** – Building topological qubits for scalable quantum systems.
- **Amazon** – Launched Amazon Braket for quantum computing services.
- **China & Europe** – Governments funding quantum projects for national security and economic growth.

Conclusion

Quantum computing is one of the most exciting technological breakthroughs of the 21st century. While challenges remain, its potential to revolutionize computing, solve complex problems, and drive innovation is undeniable. The quantum era is approaching—are we ready for it?

PRATHAP R
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ARTICLE

SATELLITE-BASED INTERNET COMMUNICATION (STARLINK AND BEYOND)

What is Satellite-Based Internet and Why is it Important?

Satellite-based internet communication is transforming global connectivity, providing high-speed access to remote and underserved regions. Unlike traditional fiber-optic and terrestrial networks, which are expensive and challenging to deploy in rural areas, satellite networks offer a scalable solution for global broadband coverage.

Key Innovations in Satellite Internet Technology

1. Starlink: A Game Changer in Global Connectivity

Developed by SpaceX, Starlink is deploying thousands of low Earth orbit (LEO) satellites to deliver fast and reliable internet worldwide.

- **High-Speed Performance:** Download speeds range from 50 Mbps to 250 Mbps, with future targets exceeding gigabit speeds.
- **Low Latency:** Operates at 20-40 ms, making it ideal for gaming, streaming, and real-time applications.
- **Expanding Global Coverage:** Targets underserved regions, bridging the digital divide.

2. Emerging Competitors and Expanding Market

Beyond Starlink, multiple companies are entering the satellite internet race:

- **OneWeb:** Backed by the UK government and Bharti Enterprises, aiming for a 648-satellite LEO network.

Amazon Project Kuiper: Plans to deploy 3,200 satellites to expand connectivity.



- **Telesat Lightspeed:** Focuses on enterprise and government connectivity with 298 satellites.
- **China's GuoWang:** Developing a large-scale constellation for global broadband.

3. Advances in Satellite Technology

- **Inter-Satellite Laser Links:** Reducing reliance on ground stations, enhancing efficiency.
- **AI-Optimized Network Management:** Improving performance, reducing latency, and minimizing disruptions.
- **Integration with 5G Networks:** Enhancing hybrid satellite-terrestrial communication.

Challenges Facing Satellite Internet

- **High Costs:** Expensive deployment and end-user equipment.
- **Space Debris:** Increasing concerns over satellite congestion and collision risks.
- **Regulatory and Geopolitical Issues:** Spectrum allocation, international policies, and national security concerns.
- **Weather Dependence:** Signal reliability can be affected by severe weather conditions.

Future of Satellite Internet

Looking ahead, satellite internet will play a vital role in global digital expansion, supporting AI, 5G, and smart city applications. Advances in satellite miniaturization and quantum communication will further enhance reliability and efficiency. As competition grows, costs are expected to decrease, making high-speed internet accessible worldwide.



The Role of Satellite Internet in Disaster Management

Satellite internet is crucial in disaster recovery efforts, providing communication in areas where traditional infrastructure is damaged or non-existent. Emergency responders rely on satellite networks to coordinate relief operations, ensuring real-time updates and efficient resource allocation.

Environmental Impact and Sustainability Efforts

The growing number of satellites raises concerns about space debris and environmental impact. Companies are investing in sustainable practices, such as deorbiting mechanisms and recyclable satellite components, to mitigate these challenges and ensure long-term space sustainability.

2024 marks a pivotal year in satellite-based internet technology, shaping the future of global connectivity and digital inclusion. With continuous advancements and increasing competition, satellite networks are set to redefine the way we access the internet, making it more efficient, widespread, and resilient.

As space-based internet evolves, it will drive innovations in communication, education, healthcare, and business. Governments and private sectors must collaborate to ensure equitable access and address regulatory concerns. Moreover, sustainability efforts should remain a priority to maintain a safe orbital environment for future technological advancements.

With AI-driven network optimizations, seamless 5G integration, and further cost reductions, satellite internet is on the brink of unlocking limitless opportunities for individuals, businesses, and nations, paving the way for a truly interconnected world.



SABITH AZEEZ S
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III EC-C



ARTICLE

CYBERSECURITY CHALLENGES IN MODERN COMMUNICATION SYSTEMS



Introduction

In today's digital world, communication systems have become the backbone of global connectivity. From instant messaging and video conferencing to financial transactions and cloud-based services, businesses and individuals rely heavily on seamless and secure communication. However, as technology advances, so do cyber threats, making cybersecurity a critical concern. This article explores the biggest cybersecurity challenges facing modern communication systems and how they impact privacy, security, and global infrastructure.

The Growing Threat of Cyber Attack



In today's digital world, cyber attacks are more sophisticated and frequent than ever. Phishing scams, ransomware, and data breaches target individuals, businesses, and even governments, compromising sensitive information and financial assets. With billions of devices connected worldwide, hackers exploit vulnerabilities in emails, messaging apps, and cloud services to steal data and disrupt operations.

To stay protected, users must adopt strong passwords, multi-factor authentication, and secure encryption while businesses must invest in AI-driven cybersecurity and regular security audits.

Solutions & Strategies for Cybersecurity in Communication

As the digital landscape continues to evolve, so too do the strategies needed to protect communication systems from ever-growing cyber threats. One of the most fundamental solutions to improving cybersecurity in communication is the implementation of strong encryption methods. Encryption ensures that sensitive information, such as messages, financial transactions, and personal data, remains secure from unauthorized access. End-to-end encryption (E2EE) is one of the most effective ways to safeguard communication, as it ensures that only the sender and receiver can read the content, even if the data is intercepted. By using encryption as a standard for communication platforms, individuals and organizations can significantly reduce the risk of data breaches.

The Dark Web and Its Impact on Communication Security

The dark web is a hidden part of the internet where illegal activities, such as hacking, selling stolen data, and organizing cybercrime, take place. Communication systems are at risk of being compromised when hackers sell stolen credentials, sensitive personal data, or even hacking tools on the dark web.

Preventing access to the dark web requires strong encryption and regular monitoring of online activities. Users should also be aware of the risks of identity theft and online fraud by ensuring their personal information is not easily accessible. Awareness of the dark web's impact is key to protecting communication security in an increasingly digital world.



Cloud Security in Modern Communication Systems

Cloud computing has revolutionized how businesses and individuals manage and store data, offering flexibility and scalability. However, it has also raised concerns about cloud security. Storing sensitive data on cloud platforms exposes it to potential cyber breaches, hacking, and unauthorized access. To secure cloud-based communication systems, organizations need to use encrypted cloud storage, regularly audit cloud services for vulnerabilities, and enforce strict access controls. Choosing reputable cloud providers that follow industry standards for data protection and security certifications can also significantly reduce the risk of a security breach.

The Role of Artificial Intelligence in Cybersecurity

Artificial intelligence (AI) is playing an increasingly vital role in protecting communication systems from cyber threats. AI-powered tools can quickly analyze massive amounts of data, identify potential vulnerabilities, and respond to cyber attacks in real time. These systems are also able to learn from patterns and adapt to new threats, providing more proactive security compared to traditional methods.

AI's potential for enhancing cybersecurity includes automated threat detection, which can identify abnormal behaviors such as unauthorized access or unusual traffic patterns, and predictive analytics to identify vulnerabilities before they are exploited. However, as AI systems become more sophisticated, they also present new challenges, such as the possibility of AI-driven cyberattacks, making it crucial to develop AI tools that are both effective and secure.



conclusion

the future of cybersecurity in communication requires a multifaceted approach. By combining strong encryption, multi-factor authentication, AI-driven threat detection, regular security assessments, and emerging technologies like blockchain, individuals and organizations can build resilient communication systems that are well-protected against the growing landscape of cyber threats. Proactive security strategies will be key in ensuring the privacy, integrity, and confidentiality of digital communication in the years to come.

THAMEEZUDEEN T
717822L157
III EC-A



SAYINGS VISIONARIES OF INNOVATION: THE IMPACT OF STEVE JOBS, RATAN TATA, AND ELON MUSK ON MODERN BUSINESS

Steve Jobs



“Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is great work. And the only way to do great work is to love what you do.”

Elon Musk

“The reason I started Tesla and SpaceX was to get humanity to Mars and to help accelerate the advent of sustainable energy.”

“The first step is to establish that something is possible; then probability will occur.”



Ratan Tata



“Power and wealth are not the same. Power is the ability to create, to build, to bring about positive change, and wealth is the means to achieve it.”

“The day I am not able to learn, I will stop.”

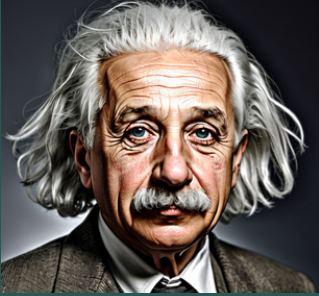
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III EC-C



SAYINGS

LEGENDS OF SCIENCE: THE LIVES AND LEGACIES OF ALBERT EINSTEIN, ABDUL KALAM, AND STEPHEN HAWKING

Albert Einstein



Einstein, once underestimated due to speech challenges, revolutionized physics with his 1905 papers, leading to his 1921 Nobel Prize. Fleeing Nazi Germany in 1933, he joined Princeton and spoke against racism and nationalism.

"Imagination is more important than knowledge. For knowledge is limited, whereas imagination embraces the entire world."

Dr. A. P. J. Abdul kalam



Dr. A.P.J. Abdul Kalam believed education should create skilled, responsible individuals. He highlighted teachers' role in shaping enlightened minds and valued perseverance, creativity, and social contribution. Advocating for skill-based learning, he viewed failure as growth, stating, "Dream, dream, dream. Dreams transform into thoughts, and thoughts result in action."

Stephen Hawking



Stephen Hawking, despite being diagnosed with ALS at 21, became a pioneering physicist, revolutionizing our understanding of black holes and the universe. He advocated for scientific curiosity, resilience, and human potential. "However difficult life may seem, there is always something you can do and succeed at."

MUHIL M V
717822L231
III EC-B





ACHIEVEMENTS

something accomplished, especially by superior ability, special effort, great courage, etc.; a great or heroic deed



Online Photography Contest:



We are thrilled to announce that Dharshan N, a third-year student from the Electronics and Communication (EC) Department, A Section of Karpagam College of Engineering, has emerged victorious in the prestigious Photography Competition! Dharshan's exceptional talent and creativity captured the attention of the judges, showcasing a keen eye for detail and a passion for visual storytelling.

His winning photograph stood out for its unique perspective, technical finesse, and ability to evoke deep emotions, reflecting the true essence of the theme. This achievement not only highlights Dharshan's artistic skills but also represents the innovative spirit and excellence of our college community.

We extend our heartfelt congratulations to Dharshan for this remarkable accomplishment, and we look forward to his future endeavors in photography and beyond.



DHARSHAN .N
717822L114
III EC -A





Road Safety Awareness :



Road safety is a crucial issue that affects everyone, and taking proactive steps to educate the younger generation is a commendable effort. Demonstrating exceptional dedication and social responsibility, Nandhitha L, a IV Year student of Karpagam College of Engineering, took the initiative to create awareness about road safety among school students. Understanding the importance of early education on traffic rules and responsible behavior on the roads, Nandhitha voluntarily organized an awareness session, guiding young minds on safe pedestrian habits, the significance of traffic signals, and the dangers of reckless driving. Through interactive discussions and practical demonstrations, she emphasized the role of discipline and caution in ensuring personal and public safety on the roads. We take immense pride in her dedication and commend her efforts in making a difference. Her initiative truly reflects the values of leadership, social responsibility, and community engagement that Karpagam College of Engineering strives to instill in its students. Let us all take inspiration from her efforts and work together towards safer roads for everyone!



NANDHITHA L
717822L703
IV EC -C



WINTER INTERNSHIP ACHIEVERS OF III YEAR ECE

The Department of Electronics and Communication Engineering at Karpagam College of Engineering takes immense pride in celebrating the outstanding achievements of our students, G. Anbarasan and S. Vinoth Kumar, for securing prestigious Winter Research Internships (WRIS-2024) at the Indian Institute of Technology (IIT), Dhanbad.

These two bright minds from III Year ECE (2024-25 Batch) have demonstrated exceptional academic excellence, dedication, and technical skills, earning them a place in one of the nation's top-tier research internship programs. This remarkable accomplishment is a testament to their hard work, perseverance, and passion for innovation in the field of electronics and communication engineering.

Through this internship, they will gain hands-on experience in cutting-edge research, working alongside esteemed professors and researchers at IIT Dhanbad. The program will provide them with a platform to explore advanced concepts, refine their technical expertise, and contribute to real-world technological advancements.

A Proud Moment for KCE

Dr. R. Sarankumar, Professor & Head of the ECE Department, and Dr. V. Kumar Chinnaiyan, Principal of Karpagam College of Engineering, have extended their heartfelt congratulations to both students for this milestone achievement. Their success is a source of inspiration for their peers and a moment of pride for the institution.

As they embark on this exciting research journey, we wish G. Anbarasan and S. Vinoth Kumar all the best for their future endeavors. May this internship be the stepping stone toward even greater success in their careers!

#SuccessThroughInnovation #ECEAchievers #KarpagamProud

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Autonomous Institution under the Government of Tamil Nadu
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DEPARTMENT OF
ELECTRONICS AND
COMMUNICATION
ENGINEERING



Heartily
CONGRATULATIONS
to our

WINTER INTERNSHIP ACHIEVERS

"Celebrating Success and Hard Work"

We are proud to announce and congratulate our
selected winter Internship students for securing this amazing opportunity!

!! Best Wishes for an Exciting Journey Ahead!!!!

INTERNSHIP STUDENTS OF III EC (AY : 2024-25)



G. ANBARASAN
REGISTRATION NO. 24
INDIAN INSTITUTE OF TECHNOLOGY, DHANBAD
WINTER RESEARCH INTERNSHIP
(2024-2025)



S. VINOOTH KUMAR
REGISTRATION NO. 25
INDIAN INSTITUTE OF TECHNOLOGY, DHANBAD
WINTER RESEARCH INTERNSHIP
(2024-2025)

Dr. R. SARANKUMAR
Professor and Head / EC

Dr. V. KUMAR CHINNAIYAN
Principal



wekceians

**www.kce.ac.in**

PHOTOGRAPHY

Photography captures the world's most beautiful and meaningful moments, preserving them for eternity. It's an art that connects us, sharing stories and emotions through a single frame.



Capturing moments: the art and evolution of modern photography

By Jai Prakash

JAI PRAKASH .P
717822L121
III EC -A



"Through the Lens: Exploring the Power of Visual Storytelling"

By Santhosh



SANTHOSH V
717822L149
III EC A



"Shutter Stories: Mastering the Craft of Photography in the Digital Age"

By Dharsan



DHARSHAN
717822L114
ECE A 3RD YEAR



Creativity

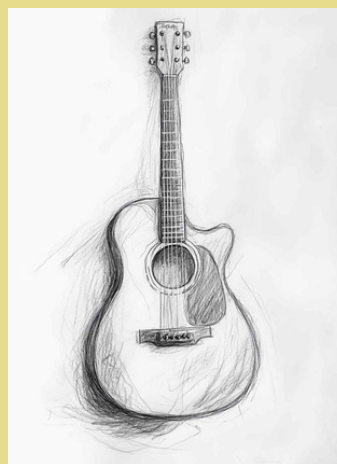


Creativity is the spark that turns imagination into reality, allowing new ideas to flourish. It's the ability to see the world differently and transform ordinary moments into extraordinary experiences.



PENCIL DRAWING

By Sangavi

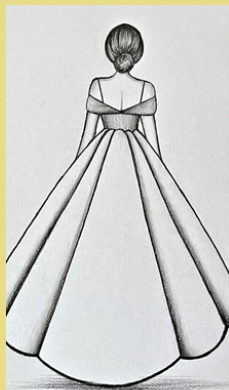
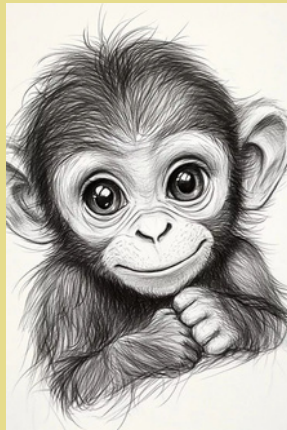


SANGAVI S
717822L344
III EC-C



PENCIL DRAWING

By priyadharshini saravanakumar



PRIYADHARSHINI SARAVANAKUMAR
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II EC-B

PAINTING

By Akshaya

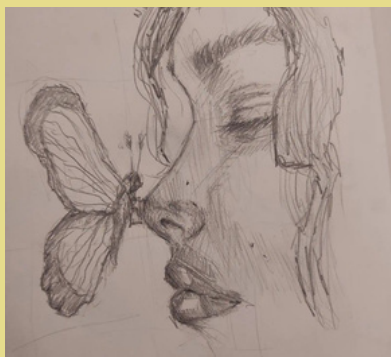
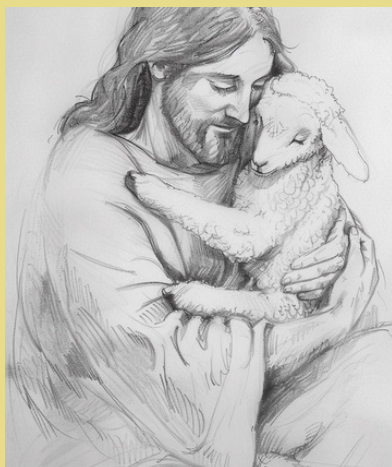
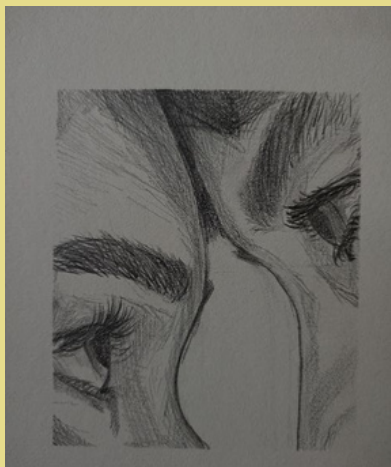


AKSHAYA M
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III EC-C

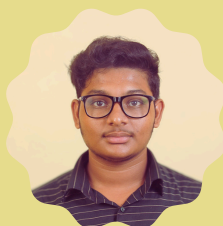


PENCIL DRAWING

By Vasan



VASAN P
717822L159
III EC-A



WALL DRAWING

By Boomika



BOOMIKA E
717822L206
III EC-B



MEHANDI

By Monika



MONIKA K
717822L131
III EC-A



AARI WORK

By Abiya



ABIYA D
717822L103
III EC A



CRAFT WORK

By dheivani m



DHEIVANI M
717822L210
III EC-B



WRITINGS AND POEMS



Writing is the craft of transforming ideas into words, conveying thoughts, emotions, and stories. It bridges minds, sparks creativity, and communicates across time and space.

கவிதைகள்

அன்பு

அன்பு என்பது பசுமை போல,
உயிரின் வளம், நெஞ்சின் வலிமை.
கனவுகள் தோற்றும் ஏன் அந்தக் காற்றில்,
நிழல் போல ஓடும் உந்தன் பாதையில்.
அன்பின் ஓசை, இதயத்தில் வரியாய்,
வெளிச்சம் போல வரவேற்கும் நிழலாய்.
இரவின் இருளில், நிலவு போல ஒளி,
என் உள்ளத்தைச் செறிந்த அருள் மிகு பொழி.
உன் அன்பு என் வாழ்வின் ஒளியாய்,
சாய்ந்த காற்றில் உண்டான தென்றலாய்.
அழகிய புனிதம் உன்னிடத்தில் இருந்தாலும்,
என் காதலுக்கு இங்கு பணி இல்லையென்று.
எண்ணங்களின் வழி, அன்பு தான் வழிகாட்டி,
ஒரே செறிவாய் உறவின் உறுதிப்பாட்டி.
சில சொற்கள் சொல்வதில்லை, அது உணர்வு,
நிலவின் கதிர்கள் போல பரப்பிடும்.
மழை வந்து, நிலா நழுவி போகும் போது,
உன் அன்பில் தூரம் போகாதிருக்கும்.
இறைவன் செய்த கடவுள் ரகசியம் அது,
அன்பு தான் மனிதர் வாழ்க்கையின் முன்னணி.
உனக்கு என் அன்பு என்றும் நிலையாக,
நெஞ்சின் மொழி, உயிரின் காதலாக.
உள்ளம் புகுந்து, அது பரவாத காதல்,
உன் பேரில் உண்மையான அருளின் பாதல்.

அம்மா

அம்மா உன் அன்பு, கடல் போல ஆழம்,
என்றும் என் மனதில், உன் புகழின்
ஆக்கம்.
நெஞ்சில் தங்கிய நெகிழ்ச்சி பரிமாணம்,
உன் பாசத்தில் நான் வாழும் பரிதி சுகம்.
உன் கைசேர்ந்த உறவின் கதை
இல்லாமல்,
உலகம் அனைத்தும் வீற்றிருக்கும் வீர்
சிலம்.
உன் சிரிப்பு, என் வாழ்கையின் கவிதை,
அவள் மட்டுமே என் உயிரின் அடிப்படை.
உன் கரங்கள் என் வாழ்க்கை வழிகாட்டி,
நட்சத்திரம் போல எப்போதும் பிரகாசம்.
உன் மடி, என் கனவின் உறுதி நிலை,
உன்னை நினைத்தபோது எல்லாம்
நிம்மதி நிலை.
உலகம் தாண்டி, என் அம்மா அருள்,
அவளே நான், அவளே என் பெருமை,
நம்பிக்கை.
அம்மா என் அன்பின் சொற்கள்
பலவல்ல,
உன் விழிகளோடு, நான் வாழும் வாழ்வு
வளம்.

VIJAYAKUMAR M
717822L160
III EC-A



கவிதைகள்

பெண்ணின் ஆற்றல்

பெண்ணின் மதிப்பு வரவேற்கும் ஓர்
கானம்,
அவள் சிரிப்பில் மகிழ்ச்சி
பரவும்தான்.
தழல்தழலென வெற்றிகளை
வைக்கப் போதும்,
தன் கைகளில் சக்தி, அன்பும்
நிலையானது.
அவள் உணர்வுகளால் பூத்த பூக்கள்
பல,
என்றும் வெற்றி கொஞ்சம் பெருமை
உடல்.
அழகான கனவுகள் அவளின்
உள்ளத்தில்,
அவள் புனிதமான தன்மையில்
பரவுகின்றது.
பொதுவாகவும் அவள் சிறந்த தோழி,
அவள் அன்பு போகும் பரிசுகளை
நகின்று தரும்.
விழிவுகள், சவால்கள் அசைத்தாலும்,
பெண்ணின் மனம் எப்போதும் பெரும்
ஆற்றல்!
அவள் பக்கம் ஒளி பரப்பி உலகினில்,
ஒரு பெண் ஒரு கதை, வெற்றி, அறம்,
ஊக்கம்.
வாழ்க்கை பாதையில் அவளின்
அணி இல்லாமல்,
வெற்றி இன்றி ஒரு உலகம் யார்
வாழ்ந்தாலும்?

கல்வியின் வலிமை

கல்வி என்பது ஒளியாய் பிரகாசிக்கும்,
நெஞ்சில் புதுமைகளை உருவாக்கும் ஓர்
ஜோதி.
அறிவின் வழியே உலகை மாற்றிய,
கற்றல் நமக்கு அன்பையும்
உயரத்தையும் தரும்.
அதை தழுவி முன்னேறுவது வெற்றி,
பாதைகளை கடக்கிறது கல்வி.
மழையில் ஓர் காற்று.
அழுக்கான கட்டடங்களில், விறுவிறுப்பாக
வளர,
உலகின் தலைவனாய் மாறும் அவன்
அடுத்த அடியெடுக்க.
கல்வி ஓர் அடையாளம், செல்வாக்கு
உயிரின்,
எல்லா இடங்களிலும் அதன் பயனே
வளம்.
புதுவாழ்வு, புதிய நாட்கள் மகிழ்ச்சி,
கல்வி எங்கு போகுமானாலும்
நிறைவாக உண்டாக்கும்

SANGAVI S
717822L344
III EC-C



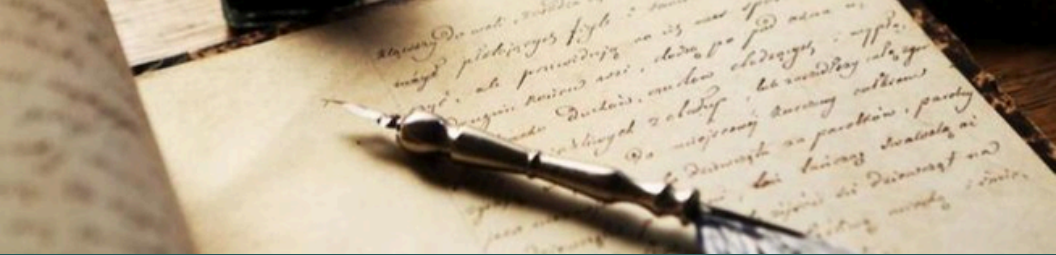
கவிதைகள்

சின்ன கனவுகளால் வாழ்க்கை அழகு,
பெரிய பாதைகளில் பயணம் தொடர்ந்தே
போக வேண்டும்.
கஷ்டங்களும், சிரமங்களும் இடையில்
வரும்,
ஆனால் நம்பிக்கை உள்ளவர்கள்
எப்போதும் வெற்றியடையும்.
கடவுளின் கிருபையுடன் நாமென்றும்
வாழும்,
மிகவும் வலிமையானது உயிரின் அழகு.
அனைவரும் ஒற்றுமையுடன் நகர,
போதிய நேரத்தில் துணை நிற்போம்.
துயரங்களை நம் குணங்களால் அழிக்க,
கண்டறியும் அந்த மகிழ்ச்சி நம்
பாதையில்.
அந்த உயர்வு பெற ஒளி தேவை,
பழிவுகள் கடந்தே வாழ்வைத் தழுவ
வேண்டும்.

நெஞ்சிலே மனதை விரிவாக்கி,
நம்பிக்கை கொடுத்து வழி
செலுத்த வேண்டும்.
எல்லா போராட்டமும் ஒருநாள்
முடியும்,
சிறந்த நாள்கள் கடந்து வரும்.
படிப்புகளும், கனவுகளும்
உணர்வு கொடுக்கும்,
வாழ்க்கை பயணத்தில் நம்
தன்மை காட்டும்.

ARAVIND M
717822L107
III EC-A





WRITINGS

Navigating Work and Life with Purpose

In today's fast-paced world, achieving a healthy career balance is more important than ever. With the pressures of meeting deadlines, advancing in your field, and maintaining a fulfilling personal life, it can sometimes feel like there's never enough time. However, finding balance between your career and personal life isn't just about managing time—it's about aligning your work with your values, setting boundaries, and making intentional choices that support both your professional goals and personal well-being.

A key part of career balance is knowing what matters most to you. This could be spending time with loved ones, pursuing hobbies, or prioritizing health and self-care. When you understand your priorities, it becomes easier to make decisions that protect those aspects of your life. For example, taking breaks during the workday, setting clear work hours, and learning how to say "no" when necessary are all important steps in creating a balanced lifestyle.

In the long run, career balance leads to better mental health, stronger relationships, and a more fulfilling sense of purpose. By respecting your time, setting boundaries, and embracing your personal priorities, you create space to thrive both in your career and your life outside of work. After all, success isn't just about professional achievement—it's about living a well-rounded and meaningful life.

SANTHOSH M
717822L148
III EC-A





SPORTS

Sports are physical activities that involve skill, competition, and teamwork, often played for enjoyment or to achieve a goal. They promote fitness, teamwork, and mental focus while fostering a sense of community.

SUDHARSAN - A VOLLEYBALL STAR IN THE MAKING

Karpagam's ECE Department Celebrates Sporting Excellence

The Department of Electronics and Communication Engineering (ECE) at Karpagam College of Engineering is proud to recognize the remarkable achievement of Sudharsan D (717822L357, III ECE-C), who played an integral role in securing fourth place in the Volleyball Tournament at Sri Eshwar Thiran Sports Fest 2025, held on February 14 and 15, 2025.

Sports have always been an essential part of holistic education, and Sudharsan's accomplishment stands as a shining example of dedication, teamwork, and resilience. Competing against some of the best collegiate teams, Sudharsan and his team displayed exceptional skill and coordination, proving their mettle in a highly competitive environment.

A Passion for Volleyball and Determination to Succeed

From the early days of his college life, Sudharsan has shown an unbreakable passion for volleyball. His commitment to training, coupled with his ability to strategize and lead on the court, has made him a key player in the Karpagam volleyball team. Whether it's a powerful spike, a well-placed serve, or a perfectly timed block, Sudharsan has demonstrated a level of skill that sets him apart.

His journey to this achievement was not easy. Balancing academics with sports requires immense discipline, and Sudharsan has managed to excel in both areas. His ability to manage time effectively, train rigorously, and stay focused under pressure is a testament to his strong character and determination.



RIISING ABOVE THE NET: A TRIUMPH IN VOLLEYBALL

A Stage for the Best Athletes

The Sri Eshwar Thiran Sports Fest 2025 is one of the most prestigious sporting events in the region, bringing together some of the most talented athletes from top engineering colleges. The volleyball tournament, in particular, was highly competitive, with teams battling fiercely for the top positions.

Sudharsan and his team entered the tournament with a strong mindset, ready to face any challenge. They played multiple matches against well-trained opponents, giving their best in each round. Despite tough competition, they showcased incredible teamwork, quick reflexes, and a never-give-up attitude, securing a well-deserved fourth place finish.

Memorable Moments from the Tournament

One of the most thrilling moments of the tournament was the semi-final clash, where Sudharsan's team went head-to-head with a formidable opponent. With the crowd cheering, every point became a battle of skill and endurance. Sudharsan's well-timed spikes and strategic gameplay kept the team in the fight until the last moment. Though they fell just short of reaching the finals, their performance was nothing short of spectacular.

Another unforgettable moment was Sudharsan's game-winning serve in the quarter-finals, where he delivered a powerful and precise shot that secured the team's place in the top four. It was a defining moment that showcased his ability to handle high-pressure situations with confidence and skill.

Inspiration for Future Champions

Sudharsan's achievement is more than just a personal victory; it is an inspiration for his peers and juniors. His journey serves as a reminder that success in sports, just like in academics, requires hard work, perseverance, and passion.



KICKING TO GLORY: ECE DOMINATES REPUBLIC DAY FOOTBALL TOURNAMENT!

KCE Football Star Shines at Republic Day Tournament

The spirit of sportsmanship and perseverance was on full display as Rushanth M (717822L341), a III-year ECE-C student of Karpagam College of Engineering, achieved a remarkable feat at the Republic Day Football Tournament held at Echanari TDA Turf, Coimbatore. Competing against some of the best teams, he showcased his exceptional skills, determination, and teamwork, securing a well-deserved third place in the highly competitive tournament.



The tournament, held on the occasion of Republic Day 2025, witnessed intense matches filled with thrilling moments and strategic play. Rushanth's performance on the field reflected his unwavering dedication and passion for football, earning recognition and applause from teammates, opponents, and spectators alike. His contribution to the game not only brought pride to Karpagam College of Engineering but also served as an inspiration for aspiring athletes within the institution.

A True Sportsman's Spirit

From precise ball control to powerful strikes, Rushanth's ability to adapt to high-pressure situations played a crucial role in his team's success. His commitment to training and continuous improvement has made him a standout player in the college football scene.

The Department of Electronics and Communication Engineering, along with the entire KCE family, congratulates Rushanth M on his outstanding achievement and wishes him continued success in future tournaments. His journey is a testament to the power of hard work, discipline, and perseverance, proving that with determination, anything is possible.

ECE SHINES IN REPUBLIC DAY CRICKET TOURNAMENT

Champions on the Field: EC Triumphs in Republic Day Cricket Tournament"

The Republic Day Cricket Tournament at Karpagam College of Engineering witnessed an exhilarating display of talent, teamwork, and sportsmanship as Mohammed Sameer A (717822L326) and Kavin Prabhu M (717822L322) from ECE-C emerged victorious, securing the 1st prize in the highly competitive event.



From powerful batting to precise bowling, the duo played a pivotal role in leading their team to victory. Their consistent performance and strategic gameplay helped them dominate the tournament, leaving a mark on the field with their skill and dedication.

The tournament, held in honor of Republic Day 2025, brought together some of the best cricketing talents from across the college, making the competition intense and thrilling. Mohammed Sameer and Kavin Prabhu's outstanding contributions were instrumental in their team's success, proving that hard work and passion are the keys to triumph.

Their win not only adds another feather to the cap of ECE but also serves as an inspiration for aspiring cricketers in KCE. The Department of Electronics and Communication Engineering congratulates them on this remarkable achievement and wishes them continued success in future tournaments.

A well-deserved victory!



The background of the page is a composite image. It features silhouettes of graduates in the foreground, with several graduation caps (mortarboards) tossed into the air. The background is a bright, hazy sky with a warm, golden light, suggesting a sunset or sunrise. The entire image is overlaid with a grid of thin black lines.

TESTIMONIAL FOR THE GRADUATING CLASS OF 2024 (BATCH 2020)

Dear Esteemed Graduates of 2024,

On behalf of the Department of Electronics and Communication Engineering at Karpagam College of Engineering, I extend my heartfelt congratulations to each one of you. Today is not just a milestone but a testament to your dedication, perseverance, and passion for learning. We celebrate your achievements and the bright future that awaits you.

Over the years, we have watched you evolve from eager students into capable professionals, ready to embrace the challenges of the ever-changing world of technology. The knowledge, skills, and experiences you have gained here will serve as a strong foundation as you embark on new journeys—whether in industry, research, or entrepreneurship.

As you step into this next phase of your life, remember that learning never stops. The world of electronics and communication is advancing at an unprecedented pace, and your ability to innovate and adapt will define your success. Stay curious, remain resilient, and continue pushing boundaries.

Success is not measured by titles or accolades but by the impact you create. Lead with integrity, embrace challenges with confidence, and let your passion drive you forward. No matter where life takes you, always strive to make a difference.

We take immense pride in your accomplishments and have no doubt that you will shine in your chosen paths. Wishing you all success, growth, and fulfillment in the years ahead.

Go forth and make us proud!



With warmest regards,
Dr. R. Sarankumar, M.E., Ph.D.,
Head of Department of EC.



Dear Graduates,

It has been an incredible journey watching you grow, learn, and evolve during your time at Karpagam College of Engineering, Coimbatore – 32. Your dedication, resilience, and passion for knowledge have been truly inspiring, and we, as faculty, could not be prouder of your achievements.

Each of you has contributed uniquely to this institution, shaping its vibrant academic and cultural spirit. As you step into the next phase of your life, carry forward the same enthusiasm and determination that have brought you this far. The world is full of possibilities, and we are confident that you will make the most of every opportunity that comes your way.

On behalf of the entire faculty, I extend my heartfelt congratulations and best wishes for your future. May the experiences and knowledge gained here be the foundation for your success, guiding you toward fulfilling your dreams and making a positive impact on the world.

Go forward with confidence and make us proud!

**With warmest regards,
Dr. R. Selvakumar, M.E., Ph.D.,
Assistant Professor/Department of EC**



Dear Future Innovators,

As an Assistant Professor in the Electronics and Communication Engineering Department, I take immense pride in witnessing the passion and ingenuity that our students bring to this ever-evolving field. The world of electronics is not just about circuits and signals—it's about transforming ideas into reality and driving technological advancements that shape the future. From smart systems to sustainable energy solutions, electronics plays a vital role in shaping industries and improving lives. Our curriculum is designed to blend theoretical knowledge with practical applications, ensuring that students are well-equipped to tackle real-world challenges. With access to state-of-the-art labs and research opportunities, we encourage students to think beyond textbooks and engage in meaningful innovation. One of the most inspiring aspects of our department is the collaborative spirit among students and faculty. This synergy fuels creativity, fosters critical thinking, and paves the way for groundbreaking discoveries in areas like IoT, embedded systems, and next-generation communication technologies. As we move forward, I encourage all students to embrace curiosity, push boundaries, and seek solutions to the challenges of tomorrow. Your passion and perseverance will be the driving force behind the next wave of technological transformation. The future is in your hands—let's build it together!



With warmest regards,
Dr. G. Arun Francis, M.E., Ph.D.,
Assistant Professor/Department of EC



Dear Graduates!

With immense joy and pride, I extend my warmest congratulations to the graduating class of 2024. Your journey has been one of perseverance, learning, and transformation. You have embraced challenges, seized opportunities, and grown into individuals ready to leave a lasting impact on the world.

Beyond academic achievements, your journey has been defined by resilience, collaboration, and the pursuit of excellence. The friendships you have built, the knowledge you have gained, and the experiences you have shared will serve as the foundation for your future success. You are stepping into a world filled with possibilities, and I have no doubt that your skills, innovation, and determination will lead you to great heights.

As you embark on this exciting new chapter, carry forward the lessons you have learned and the passion that has brought you here. The future is yours to shape—embrace it with confidence, curiosity, and a commitment to making a difference.

Once again, congratulations! We are incredibly proud of you and look forward to seeing all that you will achieve.

Best wishes for a bright and fulfilling future!



Warm regards,
Mr. C. Mukuntharaj, B.E., M.E.,
Assistant Professor/Department of EC



Dear Graduates,

I still remember the day you first walked into our institution, filled with dreams and aspirations. Today, as you stand on the threshold of a new beginning, I am incredibly proud of the confident, skilled, and determined individuals you have become. Your journey here has been one of growth, learning, and transformation, and now, you are ready to step into the world with the knowledge and experience you've gained.

The road ahead will bring both challenges and opportunities. Embrace every experience with an open mind and a fearless heart. Let the lessons you've learned, the friendships you've built, and the values you hold guide you in every step you take. You have the power to innovate, inspire, and create meaningful change.

As you move forward, stay curious, stay passionate, and never stop striving for excellence. Believe in yourself, take bold steps, and surround yourself with those who encourage and uplift you. The future is yours to shape—make it extraordinary.

Wishing you success, happiness, and a fulfilling journey ahead!



**With warmest regards,
Dr. C. Priya, M.E., Ph.D.,
Associate Professor/Department of EC**



Dear Graduates!!

It has been an incredible privilege to witness your journey at Karpagam College of Engineering, Coimbatore – 32. As a tutor of IV ECE A students, I have watched you grow into determined, capable, and ambitious individuals, ready to take on the world. Your perseverance, dedication, and passion for learning have led you to this significant milestone, and today, we celebrate your success.

Graduation is not just an end but the beginning of a new chapter filled with opportunities and challenges. The knowledge and experiences you have gained over the past four years will serve as a strong foundation as you step into the future. Keep your curiosity alive, embrace lifelong learning, and stay open to innovation and change.

Success is not measured solely by achievements but by the resilience and character you build along the way. As you embark on your journey—whether in the professional world, higher studies, or new ventures—approach every challenge with confidence, humility, and determination. Believe in yourself, stay true to your dreams, and never stop striving for excellence.

I am incredibly proud of each one of you. May your future be filled with endless possibilities, fulfillment, and success. Dream big, work hard, and never hesitate to carve your own unique path.

Wishing you all the best in your journey ahead!



**With warmest regards,
Ms. L. Saranya, M.E.,
Assistant Professor/Department of EC**



Dear Class of 2024,

As you stand on the brink of a new journey, I want to take a moment to celebrate your achievements and the incredible dedication that has brought you to this milestone. Your time at Karpagam College of Engineering, Coimbatore, has been a journey of learning, perseverance, and growth. Every challenge you faced, every lesson you learned, and every goal you pursued has shaped you into the individuals you are today. It has been an honor to watch you evolve—not just as students, but as future leaders, innovators, and changemakers. The resilience, creativity, and passion you have displayed throughout these years are a testament to the bright future that lies ahead.

As you step into the next phase of your life—whether it be a professional career, higher education, or new ventures—remember that learning never stops. The knowledge and experiences gained here will guide you, but it is your determination and willingness to adapt that will define your success. Embrace every opportunity, face challenges with confidence, and continue pushing boundaries.

Success is not just about reaching a destination; it's about the journey, the lessons learned, and the impact you create. Believe in yourself, follow your dreams, and never be afraid to take bold steps toward your aspirations.

Wishing you all a future filled with purpose, growth, and endless possibilities. Congratulations and best of luck!



With warmest regards,
Ms. S. Ramprasath, B.E., M.E.,
Assistant Professor/Department of EC



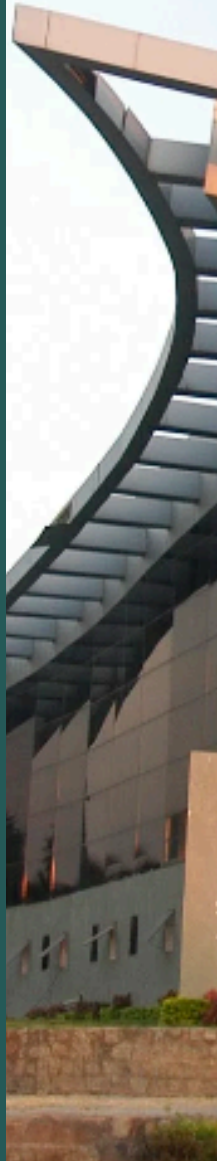
PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

- PEO1:** Graduates will be able to comprehend Mathematics, Science, Engineering fundamentals, laboratory and work based experience to formulate and solve problems related to the domain and shall develop proficiency in computer based engineering and the use of computational tools.
- PEO2:** Graduates will be prepared to communicate and work team based on the multidisciplinary projects practicing the ethics of their profession with a great sense of social responsibility.
- PEO3:** Graduates will recognize the importance of lifelong learning to shine as experts either as entrepreneurs or as employees and thereby broadening their professional knowledge.

PROGRAMME OUTCOMES (PO)

GRADUATES WILL HAVE

- PO1:** Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems
- PO2:** 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.
- PO3:** 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.
- PO4:** 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.
- PO5:** 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.
- PO6:** 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.



•**PO7:** 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.

•**PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

•**PO9:** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

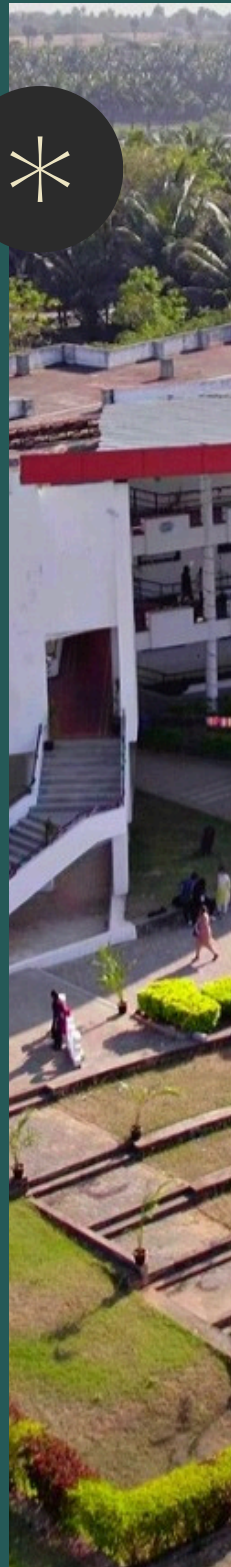
•**PO10: Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PROGRAM SPECIFIC OUTCOMES (PSO)

GRADUATES WILL HAVE

•**PSO1:** Good knowledge and hands-on competence to solve emerging real-world problems related to Electronic Devices and Circuits, Communication Systems, Digital Systems, and Electro-magnetics.

•**PSO2:** Demonstrate proficiency in specialized software packages and computer programming useful for the analysis/design of electronic engineering systems and profession.





KARPAGAM
COLLEGE OF ENGINEERING

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