



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



**GOVERNMENT COLLEGE OF TECHNOLOGY
COIMBATORE - 641 013**

ABOUT OUR INSTITUTE



ABOUT OUR INSTITUTE

The Government College of Technology, Coimbatore formerly known as Arthur Hope College of Technology, was started in July 1945. The Institute is one of the premier Engineering Institutions of the Country having a very large contribution to the academic and technological developments. Ever since that prestigious moment, it has set the standard of recognition standing out as an outstanding Institution with technical expertise. This Institution offers nine UG programs and eleven PG programs with recognized research supervisors to pursue Ph.D. Programs in all the branches of study. All departments have well qualified staff members and excellent infrastructural facilities. This Institute is supported by World bank funding under TEQIP in the Phase II to the tune of Rs. 12.5 crores along with two centres of excellence, each granted with Rs. 5 crores. The college has received BEST COLLEGE AWARD in the year 2010 from the State Government of TamilNadu and "GREEN CAMPUS OF THE YEAR - 2013" award from Dr.Rangasamy, Chief Minister of Pondicherry on April 4th for the measures taken on environmental activities. In addition the Institute received a certificate from India Book of Records for the National symposium on Zero paper event.

"Ideas are the source of innovation and innovation is the vital spark of all human change, improvement and progress". With this motto the institution has established Student Research Foundation(SRF) to initiate research and new product developments within the campus. Through SRF, innovative ideas from students are given funds and technical guidance required to develop them into full fledged products and solutions.

GCT has strong tie-ups with different industries, R&D labs and Public Sector companies. The industrial experts interact on a continual basis to revise and revamp the curriculum and keep it modern and relevant to the industry expectations.

THE ESSENCE *of our* INSTITUTE

VISION

To emerge as a centre of excellence and eminence by imparting futuristic technical education in keeping with global standards, making our students technologically competent and ethically strong so that they can readily contribute to the rapid advancement of society and mankind.

MISSION

- To achieve Academic excellence through innovative teaching and learning practices.
- To enhance employability and entrepreneurship.
- To improve the research competence to address Societal needs.
- To inculcate a culture that supports and reinforces ethical, professional behaviours for a harmonious and prosperous society.

OUR PRINCIPAL

GOVERNMENT COLLEGE OF TECHNOLOGY

Dr.K.MANONMANI



Our Institution, established in 1945, is one of the premier Engineering Institutions of the Country having a very large contribution to the academic and technological developments. We are committed to provide quality Education and Training in Engineering and Technology, to prepare students for life and work, equipping them to contribute to the technological, economic and social development of India. We pursue excellence in providing training to develop a sense of professional responsibility, social and cultural awareness and set students on the path of leadership. I extend my best wishes to my team of well qualified faculty members, who will train our beloved students in all aspects and transform them into responsible citizens, who will deliver acquired knowledge to the needs of the community globally and at the same time bring glory to our institution and nation.

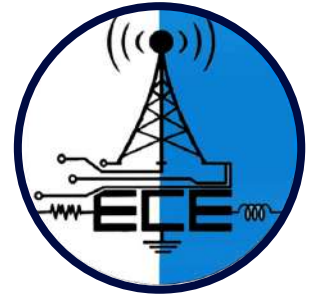
HEAD OF THE DEPARTMENT

GOVERNMENT COLLEGE OF TECHNOLOGY

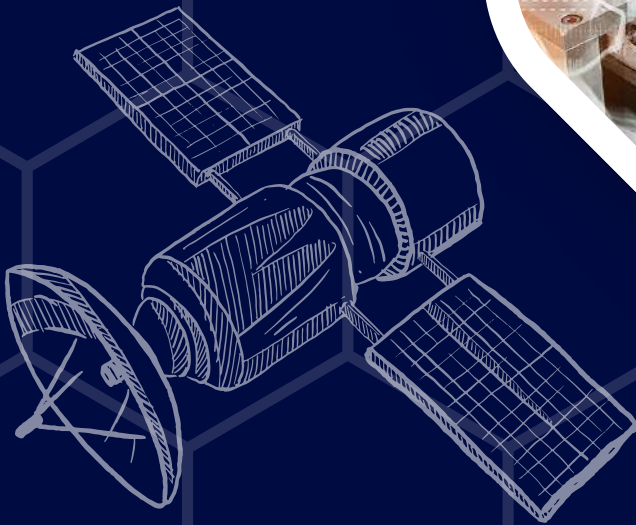
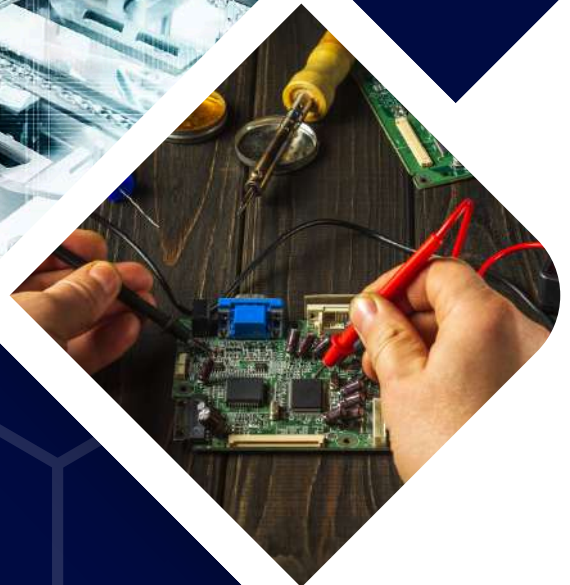
Dr.M.SANTHI



The Department of Electronics and Communication Engineering (ECE) is committed to providing a comprehensive education that blends knowledge with practical skills, aligning with industry requirements. Through continuous efforts and investments in infrastructure and faculty development, we ensure students receive quality training to meet industry demands effectively. I extend my sincere appreciation to our students across various batches for embodying the values and qualities the institute upholds, contributing to the smooth execution of our placement process. Their dedication and competence not only reflect positively on the department but also strengthen our institute's reputation in fostering industry-ready professionals. As we look ahead, we are eager to cultivate and nurture a mutually beneficial relationship between academia and industry, fostering collaboration and innovation for the benefit of all stakeholders involved.



ABOUT OUR DEPARTMENT



ELECTRONICS AND COMMUNICATION ENGINEERING

ABOUT OUR DEPARTMENT

Established in the academic year 1970–71, the Department of Electronics and Communication Engineering (ECE) at Government College of Technology (GCT), Coimbatore, has evolved into a center of academic excellence. With a strong foundation in both theoretical and practical aspects of electronics and communication, the department continuously upgrades its curriculum to meet the demands of the rapidly advancing technological world.

Our department is equipped with modern laboratories, experienced faculty, technical staffs and an excellent learning ecosystem to empower students with the latest skills in the field. We ensure a strong industry-academic interface, fostering innovative research and encouraging entrepreneurial thinking among students.

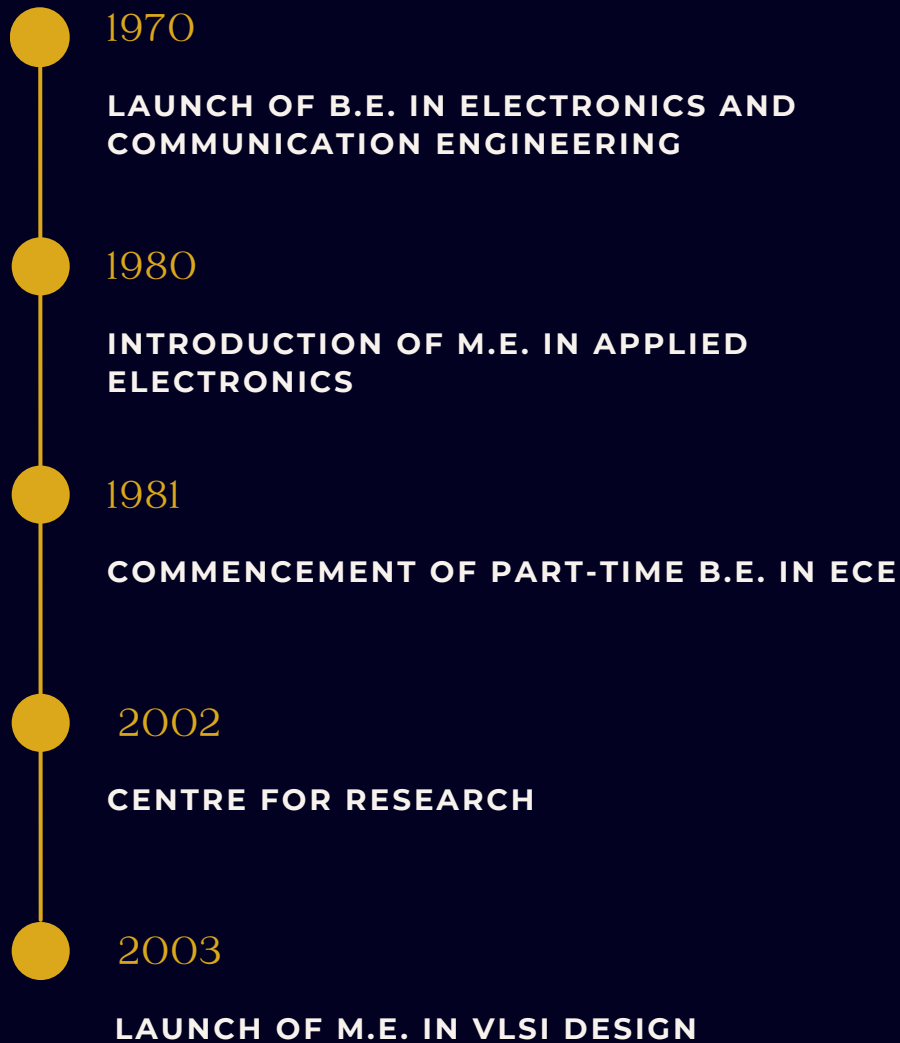
VISION

The vision of ECE department is to become pioneer in higher learning and research and to produce creative solution to societal needs.

MISSION

- To provide excellence in education research and public services.
- To provide quality education and to make the students entrepreneur and employable.
- Continuous upgradation of techniques for reaching heights of excellence in a Global perspective.

MILESTONES



COURSES OFFERED

UNDERGRADUATE

B.E ELECTRONICS AND COMMUNICATION ENGINEERING

INTAKE :

FULL TIME : 60

PART TIME : 60

POSTGRADUATE

**M.E - APPLIED ELECTRONICS
INTAKE : 18**

**M.E - VLSI DESIGN
INTAKE : 18**

RESEARCH PROGRAM

PH.D. - INFORMATION AND COMMUNICATION ENGINEERING (FULL TIME AND PART TIME)

MEMORANDUM OF UNDERSTANDING SIGNED

OCTOBER 24, 2024

Vi Microsystems Pvt. Ltd.

PERIOD : 24 October 2024 - 23 October 2027

SEPTEMBER 17, 2025

Pi -Square Technologies India Pvt. Ltd.

PERIOD : 17 September 2025 - 16 September 2027

OCTOBER 8, 2025

Kay-eM Nest global solutions

PERIOD : 08 October 2025 - 07 October 2027

SEPTEMBER 18, 2025

VLSIMINDS

PERIOD : 18 September 2025 - 17 September 2028



PROGRAMME OUTCOMES

Engineering Knowledge

APPLY THE KNOWLEDGE OF MATHEMATICS, SCIENCE, ENGINEERING FUNDAMENTALS, AND AN ENGINEERING SPECIALIZATION TO THE SOLUTION OF COMPLEX ENGINEERING PROBLEMS.

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.

Design/Development of solutions

DESIGN SOLUTION 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 CULTURE, SOCIETAL AND ENVIRONMENTAL CONSIDERATIONS.

Conduct investigations of complex problems

USE RESEARCH-BASED KNOWLEDGE AND RESEARCH METHODS INCLUDING DESIGN OF EXPERIMENTS, ANALYSIS AND INTERPRETATIONS OF DATA, AND SYNTHESIS OF THE INFORMATION TO PROVIDE VALID CONCLUSIONS.

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.

The engineer and society

APPLY REASONING INFORMED BY THE CONTEXTUAL KNOWLEDGE TO ACCESS SOCIETAL, HEALTH, SAFETY, LEGAL AND CULTURAL ISSUES AND THE CONSEQUENT RESPONSIBILITIES RELEVANT TO THE PROFESSIONAL ENGINEERING PRACTICE



PROGRAMME OUTCOMES

Environmental and sustainability

UNDERSTANDING THE IMPACT OF THE PROFESSIONAL ENGINEERING SOLUTIONS IN SOCIETAL AND ENVIRONMENTAL CONTEXTS, AND DEMONSTRATE THE KNOWLEDGE OF, AND NEED FOR SUSTAINABLE DEVELOPMENT.

Ethics

APPLY ETHICAL PRINCIPLES AND COMMIT TO PROFESSIONAL ETHICS AND RESPONSIBILITIES AND NORMS OF THE ENGINEERING PRACTICE.

Individual and team work

FUNCTION EFFECTIVELY AS AN INDIVIDUAL AND AS A MEMBER OR LEADER IN DIVERSE TEAMS, AND IN MULTIDISCIPLINARY SETTINGS.

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.

Project management and finance

DEMONSTRATE KNOWLEDGE AND UNDERSTANDING OF THE ENGINEERING AND MANAGEMENT AND FINANCE PRINCIPLES AND APPLY THESE TO ONE'S OWN WORK, AS A MEMBER AND LEADER IN A TEAM, TO MANAGE PROJECTS AND MULTIDISCIPLINARY ENVIRONMENTS.

Life-long learning:

RECOGNIZE THE NEED FOR, AND HAVE THE PREPARATION AND ABILITY TO ENGAGE IN INDEPENDENT AND LIFE-LONG LEARNING IN THE BROADEST CONTEXT OF TECHNOLOGICAL CHANGE.



PROGRAMME EDUCATIONAL OUTCOMES

PEO1

GRADUATES APPLY THEIR KNOWLEDGE OF MATHEMATICS AND SCIENCE TO IDENTIFY, ANALYZE AND SOLVE PROBLEMS IN THE FIELD OF ELECTRONICS AND DEVELOP SOPHISTICATED COMMUNICATION SYSTEMS.

PEO2

GRADUATES EXHIBIT THEIR INNOVATIVE IDEAS AND MANAGEMENT SKILLS TO MEET THE DAY TO DAY TECHNICAL CHALLENGES.

PEO3

GRADUATES EMBODY A COMMITMENT TO PROFESSIONAL ETHICS, DIVERSITY AND SOCIAL AWARENESS IN THEIR PROFESSIONAL CAREER.

PEO4

GRADUATES EXHIBIT A DESIRE FOR LIFE-LONG LEARNING THROUGH TECHNICAL TRAINING AND PROFESSIONAL ACTIVITIES.

PROGRAMME SPECIFIC OUTCOMES



1

PSO 1

GRADUATES WILL BE ABLE TO UNDERSTAND AND APPLY THE CONCEPTS OF ELECTRONICS AND COMMUNICATION ENGINEERING IN THE FIELD OF MICROELECTRONICS, SIGNAL PROCESSING, COMMUNICATION/NETWORKING, EMBEDDED AND VLSI SYSTEMS.

2

PSO 2

GRADUATES WILL BE ABLE TO DESIGN AND UTILIZE ADVANCED HARDWARE AND SOFTWARE TOOLS TO ANALYZE AND IMPLEMENT SUBSYSTEMS/PROCESSES FOR REAL TIME APPLICATIONS.

3

PSO 3

GRADUATES WILL BE ABLE TO APPLY DOMAIN KNOWLEDGE TO ENHANCE RESEARCH IN THE FIELD OF EMBEDDED SYSTEMS, VLSI SYSTEMS AND COMMUNICATION ENGINEERING.



FACULTIES



Dr. M. SANTI
M.E., PH.D

PROFESSOR &
HEAD OF THE DEPARTMENT



Dr. O. SARANIYA
M.E., PH.D

PROFESSOR (CAS)



Dr. P. DEEPA
M.E., PH.D

ASSOCIATE PROFESSOR



Dr. A. ANITHA
M.E., PH.D

ASSOCIATE PROFESSOR

FACULTIES



Dr. G. SUCHITRA

M.E., PH.D

ASSOCIATE PROFESSOR



Dr. S. MATHIVANAN

M.E., PH.D

ASSISTANT PROFESSOR



Dr. G. THIRUGNANAM

M.E., PH.D

ASSOCIATE PROFESSOR (CAS)



Dr. J. RANGARAJ

M.E., PH.D

ASSISTANT PROFESSOR



FACULTIES



**Mrs.A.SRIVIDYA
BARATHI
M.E.,**
CONTRACTUAL FACULTY



**Mrs. A. NITHYA
M.E.,**
CONTRACTUAL FACULTY



**Ms. V. G. GAYATHRI
M.E.,**
CONTRACTUAL FACULTY



**Ms. S. GAYATHRI
M.E.,**
CONTRACTUAL FACULTY

FACULTIES



Ms. P. NANDHINI

M.E.,

CONTRACTUAL FACULTY



Mrs. R.V. DIVYAPRABHA

M.E.,

CONTRACTUAL FACULTY



TECHNICAL STAFFS



Mr.R.Karthikeyan
M.E.,
FOREMAN INSTRUCTOR



Mr.P.Jagadeesan
DECE.,
SKILLED ASSISTANT GRADE- I



Ms.A.Karpagam
ITI.,
SKILLED ASSISTANT GRADE -II

Mrs.P.Girija
ITI.,

SKILLED ASSISTANT GRADE -II



TECHNICAL STAFFS



Mr.S.Murugesan
ITI.,
SKILLED ASSISTANT GRADE-II



Mrs.C.Anbumalar
B.E.,
SKILLED ASSISTANT GRADE- II



Mrs. A.Sirajunishabegum
DECE.,
SKILLED ASSISTANT GRADE-II



Mr.T.Selvam
UNSKILLED ASSISTANT





SKILLS

TOOLS

- MATLAB
- Cadence
- HFSS
- NGspice
- IAR Embedded workbench
- NetSim Academic Version 14.0

HANDS ON EXPERIENCE

- VLSI Lab
- Embedded Lab
- MPMC Lab
- Microwave Lab
- AR & VR Lab

PROGRAMMING SKILLS

- C
- C++
- Python
- Java
- MySQL
- HTML & CSS
- Verilog

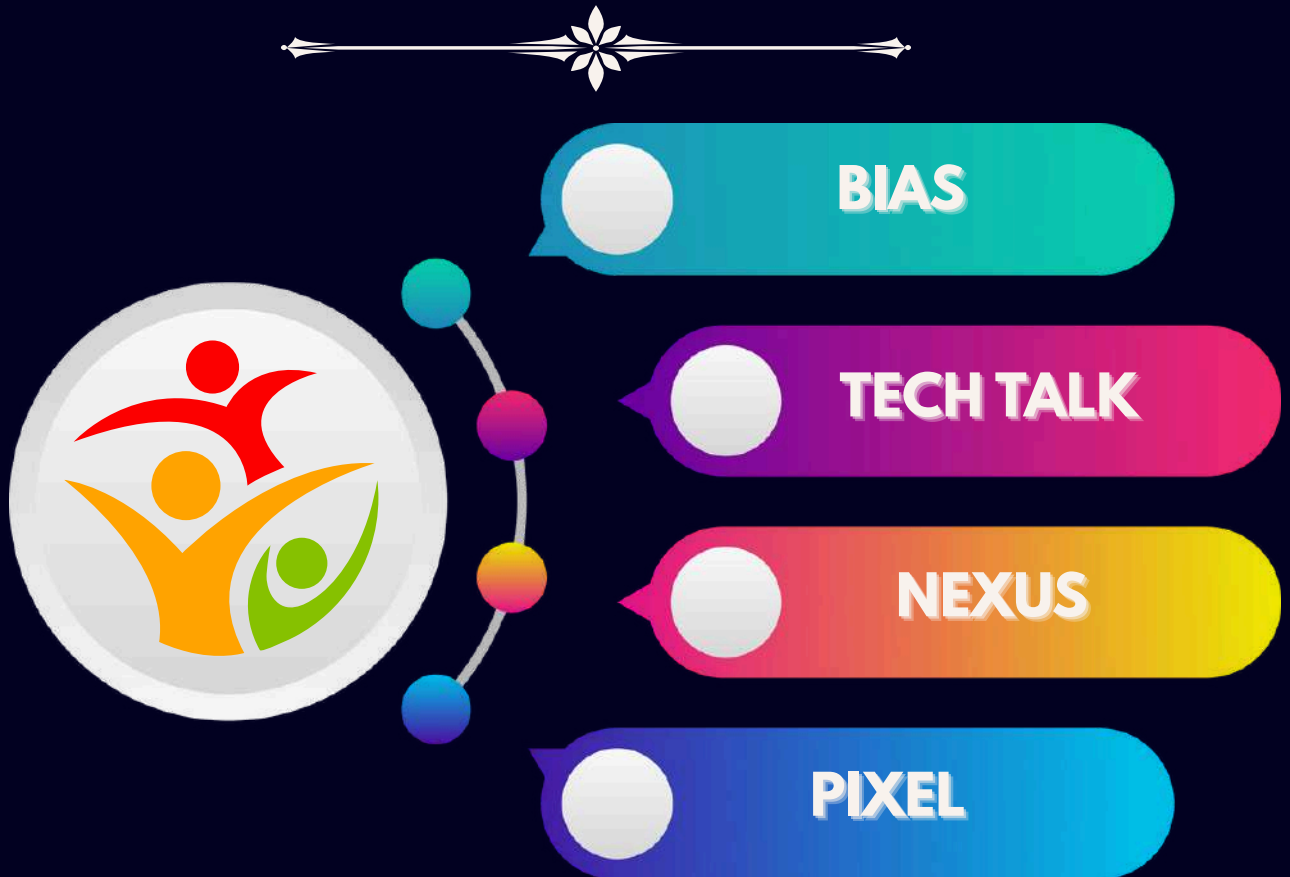
UPSKILLINGS

- E-Vehicles
- Automotive
- Electronics
- Machine Learning
- Robotics and Automation
- Data Science

WHY US ?

- Industrial Exposure
- IoT Enthusiasts
- Communication Champions
- Imaginative and Innovative

ASSOCIATION ACTIVITIES



COMMVERSE: DEPARTMENT ASSOCIATION ACTIVITIES

COMMVERSE – THE ECE ASSOCIATION

THE ELECTRONICS AND COMMUNICATION ENGINEERING (ECE) ASSOCIATION, REBRANDED AS COMMVERSE BY THE 2013 BATCH, SERVES AS THE DYNAMIC BACKBONE OF THE DEPARTMENT. ENTIRELY STUDENT-DRIVEN, COMMVERSE PLAYS A PIVOTAL ROLE IN ORGANIZING EVENTS THAT FOSTER BOTH TECHNICAL PROFICIENCY AND NON-TECHNICAL EXCELLENCE WHILE STRENGTHENING STUDENT COLLABORATION.

EVERY ACADEMIC YEAR, A TEAM OF OFFICE BEARERS COMPRISING A GENERAL SECRETARY, JOINT SECRETARY, TREASURER AND JOINT TREASURER IS ELECTED TO LEAD THE ASSOCIATION. THEY WORK ALONGSIDE A NETWORK OF STUDENT VOLUNTEERS AND FOUR DEDICATED COMMITTEES TO PLAN AND EXECUTE VARIOUS DEPARTMENTAL EVENTS.

ASSOCIATION ACTIVITIES



BIAS

Bias is the annual inauguration event for second-year students as they officially join the ECE department. More than just a celebration, Bias emphasizes teamwork, creativity and technical growth. The results play a role in recognizing top performers.



TECH TALK

Tech Talk is a department-level technical event that bridges the gap between theoretical concepts and real-world applications. Designed to enhance technical insight and soft skills, this event promotes hands-on learning, problem-solving and innovation.



NEXUS

Nexus is a national-level inter-college technical symposium, exclusively planned for second-, third- and final-year students. This two-day event draws participants from various colleges, offering a platform for academic exchange, innovation and competition.



PIXEL

Pixel is a non-technical, intra-departmental celebration aimed at offering a refreshing break from academics. This one-day event brings together students from all years for a day filled with fun, creativity and connection.



SCHOLARSHIPS

PRAGATI SCHOLARSHIP

ONGC SCHOLARSHIPS FOR MERIT AND SC/ST STUDENTS

POST MATRIC SCHOLARSHIP FOR SC AND ST STUDENTS

POST MATRIC SCHOLARSHIP FOR BC AND MBC STUDENTS

TAMIL PUDHALVAN SCHEME

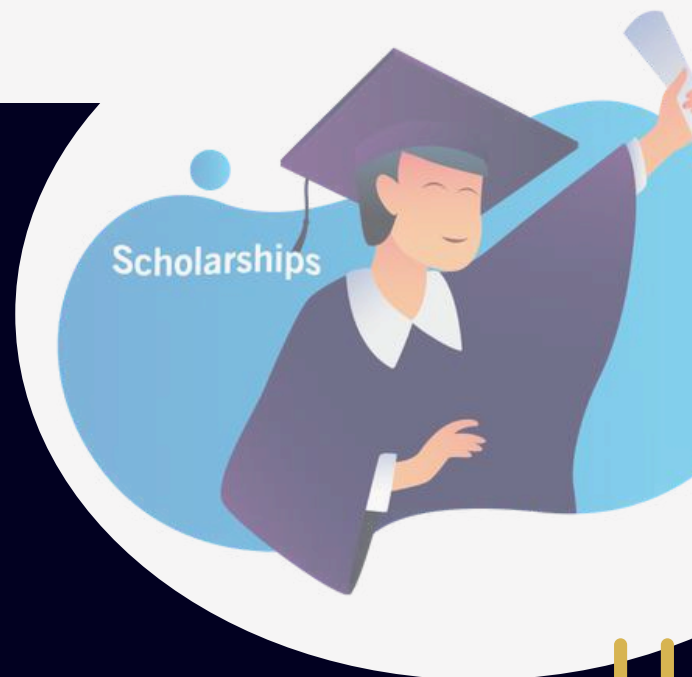
PUDHUMAI PENN SCHEME

ALUMINI SCHOLARSHIP

FOUNDATION FOR EXCELLENCE (FFE) SCHOLARSHIP

SHOOTING STARS FOUNDATION

SIEMENS SCHOLARSHIP



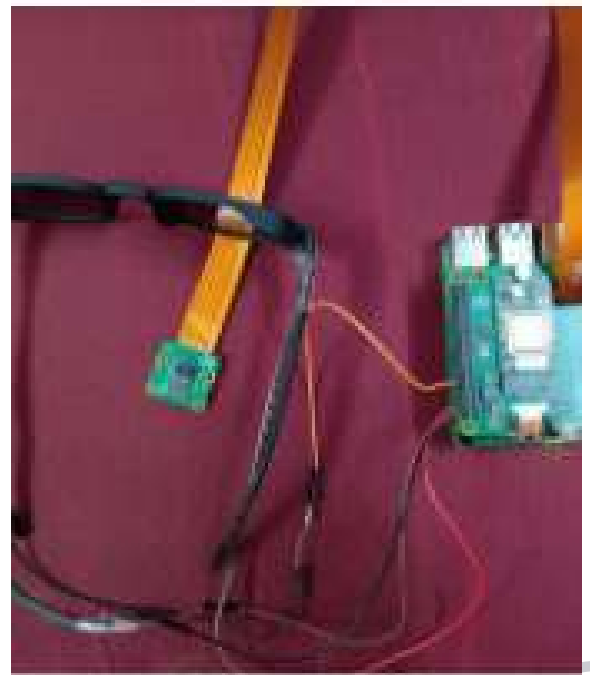


PROJECTS

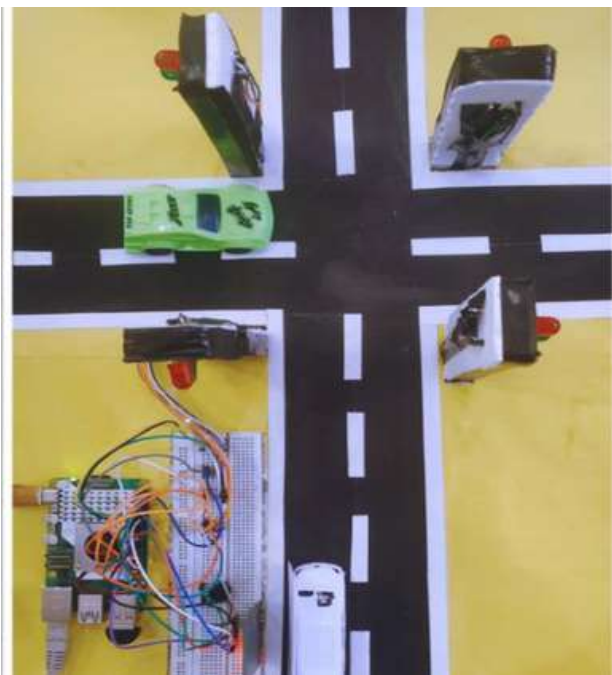
AI AND EMBEDDED PROJECTS

PROJECT EYE

Project Eye is a wearable AI-powered device designed to assist visually impaired individuals by describing their surroundings in real time. Using a camera and a small computer (Raspberry Pi), the system captures images and processes them with a Vision-Language Model to generate scene descriptions. These descriptions are then converted to speech and played through Bluetooth earphones, allowing users to understand their environment without needing to ask. The device also includes an emergency button that sends a help email with a single press.



SMART TRAFFIC MANAGEMENT (STM) SYSTEM



This project presents a Smart Traffic Management (STM) system to reduce ambulance delays and improve city traffic flow using AI and sensors. The system detects ambulances using a combination of RFID tags, a camera (with YOLOv11) and siren sound analysis. Once detected, the system automatically turns the traffic signal green to clear the way. This solution helps save lives, reduces congestion, and supports smarter and safer cities, especially in emergency situations.



PROJECTS

AI AND EMBEDDED PROJECTS

CASH FLOW TRACKER

A calculator-based solution with "Cash In" and "Cash Out" buttons that logs transactions to the cloud for easy financial tracking. Designed to help small shopkeepers manage daily cash flow without relying on complex mobile apps.



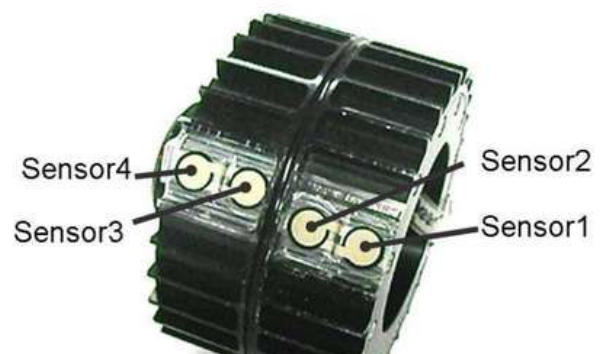
ACCIDENT DETECTION SYSTEM

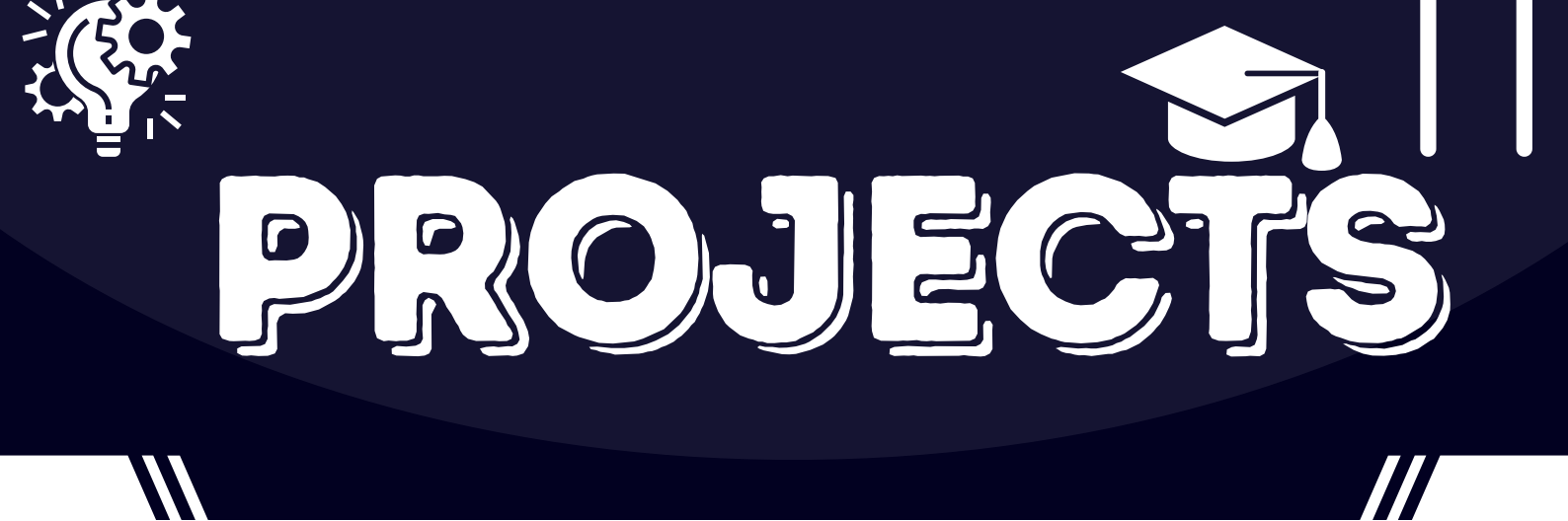


A smart system that detects vehicle accidents in real time and sends alerts for emergency response. Likewise, smart traffic systems ease congestion, health monitors track vital signs, energy meters optimize power usage and fire detection units enable instant alerts for safety.

SENSOR-BASED TERRAIN CLASSIFICATION FOR ROVER NAVIGATION

Utilizes pressure sensors in rover wheels to classify terrain and detect obstacles in real-time for safer navigation. Offers a low-power, sensor-based alternative to vision systems for environments with poor visibility.



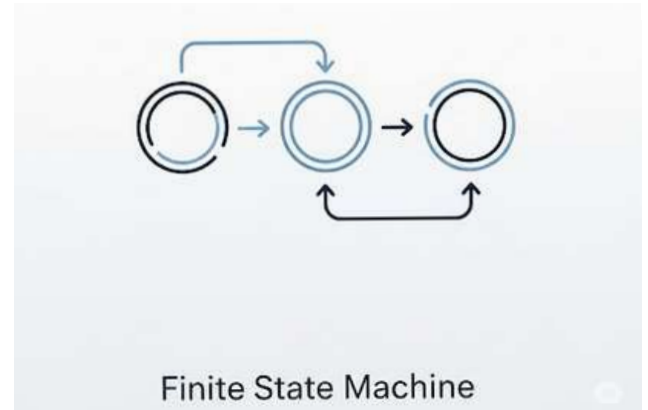


PROJECTS

VLSI PROJECTS

FSM-BASED INTER-LOCKING SYSTEM

An automated railway track switching and signaling system using Finite State Machine (FSM) to minimize human errors and enhance safety. It dynamically manages states like route locking and error handling to prevent accidents like those in Odisha.



RISC-V CPU – SINGLE CYCLE 32-BIT PROCESSOR



This project is a simple 32-bit RISC-V processor that runs one instruction in each clock cycle. It supports all basic instruction types: I-type, R-type, S-type, B-type, J-type and U-type. The design is easy to understand and is useful for learning, experimenting and small embedded system applications.

FAULT DIAGNOSIS IN VLSI CIRCUIT USING ML & DL

Uses advanced machine learning and deep learning models to detect and diagnose faults in VLSI circuit designs, enabling automated error identification, reducing design cycle time and ensuring higher accuracy, faster debugging and improved chip reliability.





PROJECTS

NETWORKS AND COMMUNICATION PROJECT

1

**REAL-TIME NETWORK RESILIENCE
IN HOSPITAL INFRASTRUCTURE**



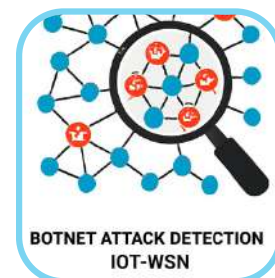
2

**RPL-BASED ROUTING IN SMART BUILDING
IOT NETWORKS**



3

BOTNET ATTACK DETECTION IN IOT-WSN



4

**DISASTER MANAGEMENT USING WIRELESS
SENSOR NETWORKS (WSN)**



5

**SMART TRAFFIC MANAGEMENT SYSTEM
USING VANET**





PAPER PRESENTATION



1

6G TECHNOLOGY

Discussed the future of wireless communication with 6G, focusing on ultra-low latency, terahertz waves and AI-driven networks.

BRAIN-COMPUTER INTERFACES

Introduced the concept of direct communication between the brain and external devices for medical and control applications.

2



3

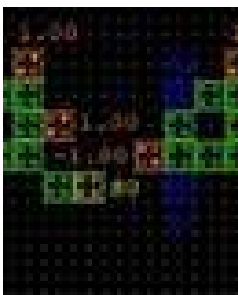
ACOUSTIC LEVITATION

Explains how ultrasonic waves are used to levitate objects without contact, with applications in clean handling and microgravity research.

RED TACTON TECHNOLOGY

Discusses Human Area Networking using the body for data transmission via electro-optic sensors, enabling secure 10 Mbps communication.

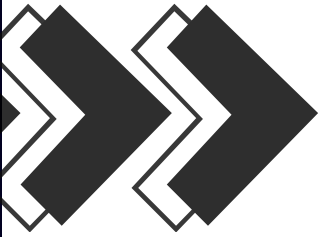
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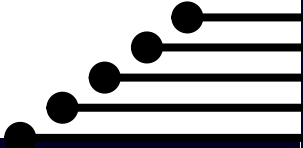
5

QUANTUM DOT CELLULAR AUTOMATA

Presents QCA as a nanoscale, low-power CMOS alternative using quantum dots for logic gate design and binary computation.



ACHIEVEMENTS



Our students have actively participated in numerous competitions, both within and beyond the college, earning accolades and recognition across various domains. These achievements reflect their technical skills, practical experience and dedication, preparing them to excel in professional environments. A few of these accomplishments are highlighted below.



TANSAM Hackathon – 2nd Prize

Final-year ECE students secured 2nd place at the TANSAM Hackathon organized by Naan Mudhalvan, showcasing innovation and problem-solving skills.



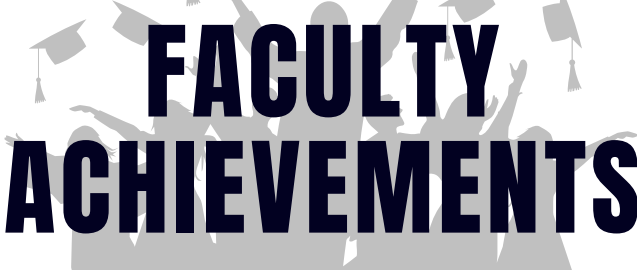
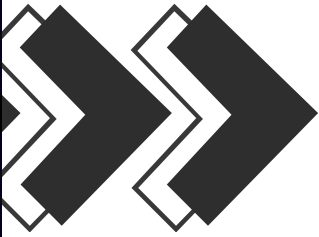
Circuitronix – 1st Prize

At Mindkraft '25, Karunya Institute, the ECE team won 1st place among 100+ participants by demonstrating excellent circuit design and teamwork.

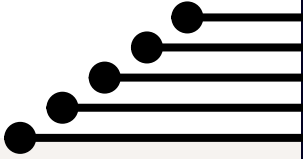


Qt:Athon 2024 – 3rd Prize

Team Yeagerists secured 3rd place in Coding and 1st place in Perseverance at a global-level competition, competing among top talents worldwide.



FACULTY ACHIEVEMENTS



RESEARCH & PUBLICATIONS

-  **PUBLISHED PAPERS IN SCI / SCOPUS / UGC INDEXED JOURNALS.**
-  **PRESENTED RESEARCH WORK AT INTERNATIONAL AND NATIONAL CONFERENCES.**
-  **PUBLISHED BOOK CHAPTERS / PATENTS IN EMERGING TECHNOLOGIES**

FUNDED PROJECTS & GRANTS

-  **RECEIVED SPONSORED RESEARCH PROJECTS FROM AGENCIES SUCH AS MEITY.**

AWARDS & RECOGNITION

-  **RECEIVED RESEARCHER AWARD FROM OUR ACADEMIC INSTITUTION.**
-  **HONORED WITH PROFESSIONAL SOCIETY MEMBERSHIPS (IEEE, IETE, ISTE, IEI, ETC.).**

ACADEMIC CONTRIBUTIONS

-  **INTRODUCED NEW LABORATORY FACILITIES AND COURSES ALIGNED WITH INDUSTRY NEEDS.**
-  **GUIDED UG, PG, AND PH.D. STUDENTS IN INNOVATIVE PROJECTS.**
-  **MENTORED STUDENTS IN HACKATHONS, IDEATHONS, AND COMPETITIONS LEADING TO AWARDS.**

STUDENT ACHIEVEMENTS

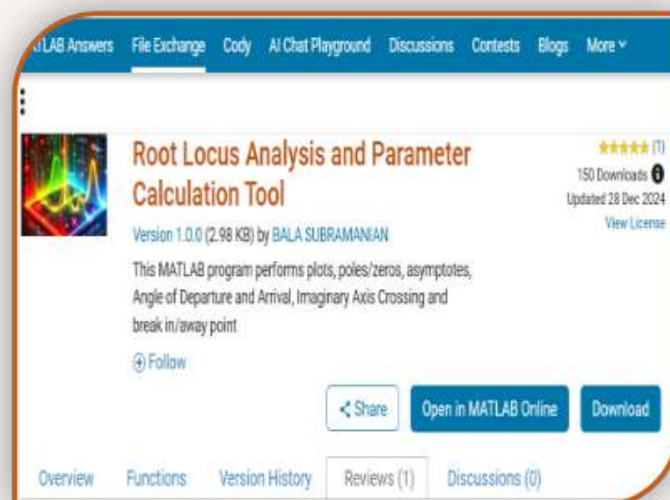
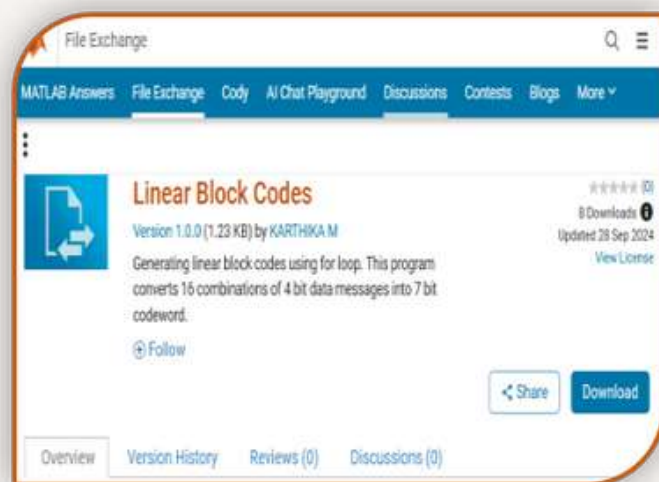
STUDENTS WERE PLACED IN HIGH-PACKAGE HARDWARE CORE COMPANIES SUCH AS TEXAS INSTRUMENTS, CADENCE, AND 5C NETWORKS

STUDENTS SECURED 6TH ALL INDIA RANK (AIR) IN THE MATHWORKS MINIDRONE COMPETITION

STUDENTS SECURED 7TH ALL INDIA RANK(AIR) AT THE NATIONAL LEVEL SAE DRONE DEVELOPMENT CHALLENGE 2024

OBTAINED COPYRIGHT FROM MATLAB FOR THE ROOT LOCUS ANALYSIS AND PARAMETER CALCULATION TOOL.

OBTAINED COPYRIGHT FROM MATLAB FOR WORK ON LINEAR BLOCK CODES



STUDENT ACHIEVEMENTS

◆ UNDERGOING INTERNSHIP FOR PRODUCT DEVELOPMENT AT KAY-EM NEST GLOBAL SOLUTION, COIMBATORE.

◆ SUBMITTED DESIGN REPORT IN THE ISRO ROBOTICS COMPETITION 2024

◆ SECURED INTERNSHIP AT IIT KHARAGPUR THROUGH THE NPTEL ONLINE COURSE PROGRAM

◆ SUCCESSFULLY PARTICIPATED IN THE NXP AIM 2025 REGIONAL FINALE, HELD AT M.S. RAMAIAH INSTITUTE OF TECHNOLOGY, BANGALORE IN JULY 2025

◆ PRESENTED PROJECTS AT THE CII EDU-TECH EXPO 2024, ORGANIZED BY THE DOTE, GOVERNMENT OF TAMIL NADU

◆ GRANTED A ₹2.5 LAKH SPONSORED PROJECT INTERNSHIP IN THE SPRINT IDEATHON 2024, UNDER THE MENTORSHIP OF DR. G. THIRUGNANAM, PROFESSOR (CAS)/ECE, ORGANIZED BY IIT ROPAR – TECHNOLOGY AND INNOVATION FOUNDATION.



Dear MAKESHWARAN M.

This is for reference.

Forwarded message

From: HHub AWaDH <awadh@ihub-awadh.in>

Date: Mon, 24 Feb 2025 at 15:23

Subject: Congratulations! Your Proposal Selected Among the Top 6 in SPRINT Ideathon 2024 by IIT Ropar (TIF - AWaDH)

To: Thirugnanam G <thirugnanam.g@gct.ac.in>

Dear MAKESHWARAN M and Dr.G.THIRUGNANAM

We are delighted to inform you that after a thorough review by our expert panel, your proposal has been selected among the **Top 6 projects**.

The Idea submitted by you has been selected in the **SPRINT Ideathon 2024**, organized by **IIT Ropar - Technology and Innovation Foundation (IHub AWaDH)**.

Team Member Name: Makeshwaran M, Kamalesh E, Abilash C, Jai Alwin M

Mentor Name: Mr. THIRUGNANAM G

Position In the Top Six: First Prize

Funding and Support for the Top 6 Projects

Each of the top six projects will receive a financial grant of **₹2.5 Lakh** for a period of **10 months**, with a possible extension of up to **18 months** under DST provisions. The fund shall be transferred to the University / Institute Account where mentor shall be the PI for the Project. **Detailed guidelines and terms are attached to the email**

CERTIFICATIONS AND TRAININGS

NPTEL

A significant number of students from the Department of Electronics and Communication Engineering have actively enrolled in and successfully completed NPTEL courses as part of their continuous learning efforts.

Over 40+ students have completed certifications in key areas such as:

- **Introduction to Industry 4.0 and Industrial Internet of Things**
- **Electronics System Design**
- **Digital Image Processing**
- **Programming in Java**
- **Artificial Intelligence**

These certifications reflect the department's commitment to encouraging self-paced online learning and upskilling through premier platforms like SWAYAM-NPTEL, supported by the Ministry of Education, Government of India. Notably, two students scored in the **top 2% nationwide**.

INTERNSHIPS

Practical experience is a cornerstone of engineering education and our students have taken part in various internships to bridge the gap between theory and industry.

- 25+ students completed internships in reputed companies and institutions such as:
 - **Sunshiv Electronics (PCB Design, PIC Microcontroller)**
 - **Siemens Training (BMEX, Atria University)**
 - **BSNL (Telecommunication Intern)**
 - **Emglitz (Embedded Systems)**
 - **Galvin Technologies and Mescope Solutions**
 - **Anna University (Semiconductor IC Design & Testing)**
- In addition, 2 students successfully completed prestigious online internships:
 - **FOSSEE Semester-Long Internship – IIT Bombay**

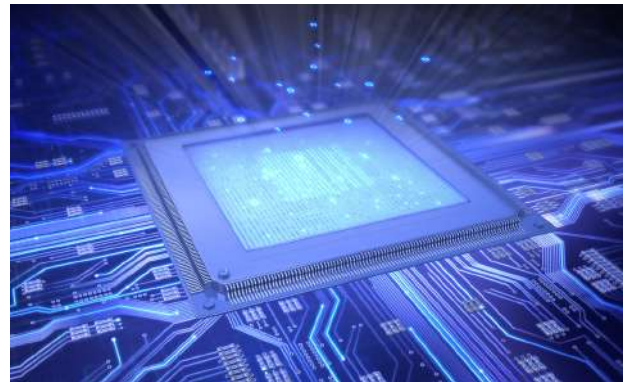
These internship opportunities have enhanced technical skills, industry exposure and career readiness among students, aligning with the vision of producing competent and industry-ready graduates.



WORKSHOPS AND CONFERENCE

Students of the department have consistently participated in a wide range of workshops conducted across inter and intra-college platforms. Their active involvement in these programs has provided valuable exposure, enhancing both technical knowledge and practical skills. While students have attended numerous such workshops, a few key ones have been highlighted below as representative examples of their continual learning and engagement.

Through these workshops, students have gained hands-on experience with emerging technologies and industry-relevant tools, fostering innovation and practical problem-solving skills. Their active participation reflects the department's commitment to holistic learning, preparing students to excel in both academic and professional arenas. To further drive student interest and nurture their curiosity, our department has conducted the following workshops:



WORKSHOP ON CADENCE ANALOG ,DIGITAL AND MIXED SIGNAL FLOW

The Cadence Analog, Digital, and Mixed Signal Flow Workshop, organized in association with ENTUPLE Technologies, was a three-day intensive hands-on training program designed to provide participants with comprehensive exposure to IC chip design. The workshop covered digital design using Verilog, analog and mixed-signal circuit design and the complete semi-custom and full-custom design flows using Cadence tools. Through expert guidance and practical sessions, students were able to bridge theoretical concepts with real-time applications, gaining industry-relevant knowledge and strengthening their foundation in VLSI design and verification.



This program not only enhanced the technical competence of participants but also instilled confidence in handling advanced EDA tools widely used in the semiconductor industry. It created an environment of collaborative learning and innovation, preparing students to meet the challenges of modern chip design and encouraging them to pursue excellence in the field of VLSI.

WORKSHOPS AND CONFERENCE

WORKSHOP ON FULL CUSTOM AND SEMICUSTOM IC DESIGN

The Department of Electronics and Communication Engineering, Government College of Technology, Coimbatore, organized a three-day intensive workshop on Cadence-based IC Design. The session provided hands-on exposure to Semi-Custom and Full-Custom design flows using industry-standard tools like Genus for RTL Synthesis, Innovus for Physical Design and Incisive for Functional Verification.

Participants also explored the Cadence Virtuoso platform for Full-Custom design, covering schematic entry, layout creation, DRC/LVS checks, parasitic extraction and GDSII generation. Analog and Mixed-Signal design concepts were reinforced through the implementation of a Common Source Amplifier. The workshop helped students build a strong foundation in VLSI design, combining theoretical knowledge with practical applications.



ONSITE TRAINING PROGRAM ON NETSIM ACADEMIC VERSION 14.2

The Department of ECE, GCT Coimbatore, in collaboration with TETCOS LLP, conducted a two-day onsite training on NetSim Academic Version 14.2. The program focused on modern networking technologies such as MANETs, IoT, Wireless Sensor Networks (WSN) and LTE/LTE-A.

Participants received hands-on training in network simulation using NetSim, Python and SUMO, guided by industry expert Mr. Manjunath V B from TETCOS LLP. The sessions included real-time scenarios, protocol simulations and application-based learning. A technical quiz and research interaction enhanced student participation. The program served as a practical bridge between academic concepts and real-world network communication challenges.



WORKSHOPS AND CONFERENCE

NATIONAL CONFERENCE ON ADVANCED COMPUTING AND COMMUNICATION SYSTEMS (NCACCS 2024 & 2025)

The Department of ECE, Government College of Technology, Coimbatore, organized the National Conference on Advanced Computing and Communication Systems (NCACCS 2025) on March 27, 2025. The conference served as a platform for students and researchers to present their innovations in fields such as VLSI, IoT, Embedded Systems, Machine Learning and Signal Processing.

A total of 29 teams were shortlisted for final presentations, with 6 papers being selected for Best Paper Awards based on their originality, technical depth and relevance. From the 2026 batch of GCT ECE, two teams participated and presented their work at the conference. We are proud to share that both teams received Best Paper Awards for their outstanding contributions.



The awarded papers were:

- “High-Speed and Low-Power Full Adder Using 16T Hybrid Design in 90nm Technology” – under the VLSI category.
- “Project Eye: Vision Assistance System for the Visually Impaired” – under the Embedded Systems category.

The conference provided a valuable learning experience through knowledge-sharing, technical interactions and exposure to current research trends, motivating students to pursue further innovation and research.

IEEE'25

Secretary – Saranya J
Vice Chairperson – Haripreeth D M
Social Media Handler – Akshaya S,
Manikandan J, Nancy Infancia M
Vtools Manager – Prathipa L,
Abishek kumar A
Director of events – Sabrin S
UI/UX Lead – Siva Ramakrishnan S
Student Relational Officer – Midun
S melathil

IEEE'26

Chairperson – Siva
Ramakrishnan S
Treasurer – Manikandan J
IoT Lead – Abishekkumar A

CAS

Treasurer – Ranjani V
Satoz Pilot – Kavipriya S
Promotion Director –
Karthika M

RESPONSIBILITY IN CLUB

Y'S CLUB OF GCT

Joint Treasurer –
ShanmugaPrema S
Podcast Head – Girubhashini T G
Executive Member – Thara R D

NATIONAL SERVICE SCHEME(NSS)

Dhejasri S

SPORTS

Athlets – Abirami S
Kho-Kho Member – Anupriya S
Ball Batminton Captain –
Sivabharathi U
Criket Members – Yeshwanth U,
Hariharan
Volley Ball Members – Sachin T,
Chandru
Silambam Captain – Balayokesh
Pranav
Chess Members – Saranya J,
Dhejasri S

COURSES OFFERED

LINEAR ALGEBRA AND CALCULUS

ENGINEERING PHYSICS

PROGRAMMING IN C

DIFFERENTIAL EQUATIONS AND NUMERICAL METHODS

SEMICONDUCTOR PHYSICS

APPLIED CHEMISTRY

BASICS OF ELECTRICAL ENGINEERING

CIRCUIT THEORY

DATA STRUCTURES

SIGNALS AND SYSTEMS

ANALOG CIRCUITS

DIGITAL CIRCUITS DESIGN

ELECTROMAGNETIC WAVES AND WAVEGUIDES

PROBABILITY AND RANDOM PROCESS

ANALOG INTEGRATED CIRCUITS

MICROPROCESSOR AND MICROCONTROLLER

CONTROL SYSTEM ENGINEERING

DIGITAL COMMUNICATION

EMBEDDED COMPUTING

COMPUTER ARCHITECTURE AND ORGANIZATION

ANALOG COMMUNICATION

DIGITAL SIGNAL PROCESSING

NETWORKS AND TRANSMISSION LINES

ANTENNAS AND WAVE PROPAGATION

VLSI DESIGN

OPTICAL FIBER COMMUNICATION

COMPUTER NETWORKS

MICROWAVE AND RF ENGINEERING

WIRELESS COMMUNICATION

MANAGEMENT THEORY AND PRACTICE

SOPHISTICATED EQUIPMENT AND FACILITIES

CHIPS TO STARTUP (C2S)

The department has been equipped with industry-standard software under the Chipss-to-Startup scheme of the Ministry of Electronics and Information Technology (MeitY) from 2025 onwards.

SYNOPSYS

CLIOSOFT

SILVACO

XILINX

VITIS

HFSS

ANSYS TOOLS

MENTOR GRAPHICS

SOFTWARE

CADENCE

MATLAB

LABVIEW

ALTERA QUARTUS II TOOL

UNITY

BLENDER

HARDWARE

XILINX ZYNQ-7000

LAN TRAINER KITS

VIRTEX 5 FPGA KIT

PIC18F MICROCONTROLLER

ALTERA DE 2 FPGA KIT

ARM CORTEX KIT

SPARTAN 6 EKS6SP601-G

NETWORK ANALYZER

SPARTAN 3E FPGA KIT

SPECTRUM ANALYZER



LABORATORIES



ANALOG AND Digital IC LAB



**ARGUMENTED REALITY AND VIRTUAL
REALITY LAB**



LABORATORIES



COMMUNICATION LAB



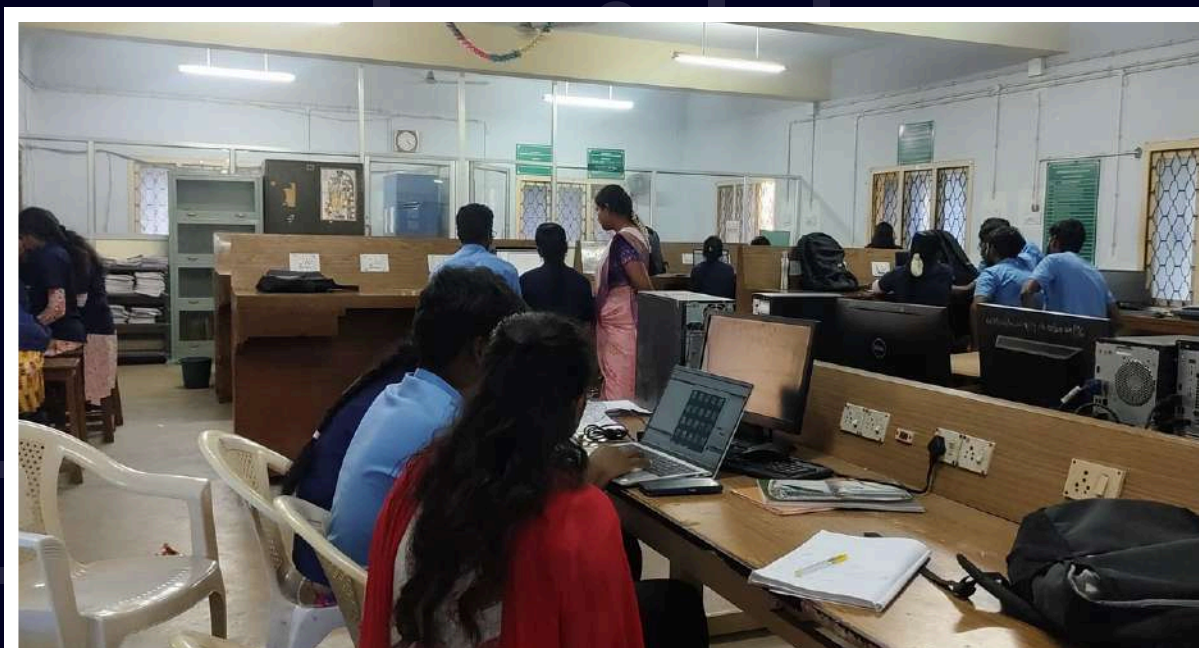
COMPUTER LAB



LABORATORIES



DIGITAL SIGNAL PROCESSING LAB



EMBEDDED LAB



LABORATORIES



MICROWAVE LAB



MICROPROCESSOR AND MICROCONTROLLER LAB



LABORATORIES



VLSI LAB



NETWORK SIMULATION LAB



PROFESSIONAL ELECTIVES



High Speed Communications



- Information Theory and Coding
- High Speed Networks
- Error Control Coding
- AdHoc and Wireless Sensor Networks
- Software Defined Radio
- Massive MIMO and Millimeter Wave Systems
- Optical Communication Networks
- Evolution of 4G/5G Technologies

RF Technologies



- Electromagnetic Interference and Compatibility
- Electromagnetic Radiation Hazards and Safety
- Advanced Radiation Systems
- Satellite Communication
- Microwave Integrated Circuits
- Smart Antennas
- RF System Design
- RF Transceivers

Signal and Image Processing



- Advanced Digital Signal Processing
- Image Processing
- Speech Signal Processing
- VLSI Signal Processing
- Non-linear Signal Processing
- Neural Networks and Deep Learning
- Computer Vision Algorithms and Applications
- Digital Signal Processors

VLSI Design



- Digital IC Design
- Analog IC Design
- Low Power VLSI
- ASIC Design
- System on Chip Design
- Programming FPGA using HDLs
- VLSI Testing and Design for Testability
- Design for Verification using UVM

PROFESSIONAL ELECTIVES



Biomedical Technologies



- Biosensors
- Biomedical Instrumentation Systems
- Medical Imaging Systems
- Bioinformatics for Biomedical Engineers
- Biotelemetry and Telemedicine
- Biomedical Signal Processing
- Wearable Technologies
- Hospital Safety and Management

Embedded Systems and IoT



- Introduction to Internet of Things
- Introduction to MEMS
- Smart Sensors
- Industrial Internet of Things
- Embedded Operating Systems
- Embedded Processors-I
- Embedded Processors-II
- Electronic System Design and Productization

Diversified Electives



- Automotive Electronics
- Electronic Circuit Design
- Introduction to Power Electronics
- High Speed Electronics
- Artificial Intelligence and Machine Learning
- Nano Electronics

DISTINGUISHED ALUMNI



MYLSWAMY ANNADURAI

Former Director, ISRO



CHITRA HARIHARAN

*Secretary of VLSI Society of India (VSI)
Renesas Electronics*



SHEELA SETHURAMAN

Founder & CEO of CUETHINK



HRISHI HRISHIKESH

*Partner & Director @Boston
Consulting Group*



SRINATH MALLAYA

Chief Information Officer, Atos Syntel

DISTINGUISHABLE ALUMNI



SHANTHI MUNUSWAMY

*ISRO & Nari Shakthi
Puraskar Award*



MAGESH E

*Director General
@CDAC*



JEYAKODI VK IAS

*Former Additional Chief Secretary,
Govt of Tamilnadu*



SWAMI MANOHAR

*Sr. Principal Researcher @Microsoft
Research India*



**PRABHA
SANTHANAKRISHNAN**

*Co Founder & CEO
@Cookr, Ex Microsoft*

EXTRACURRICULAR ACTIVITIES



CHESS

MALINI R - ZONALS 2ND / COVAITIES 3RD



**BALL
BADMINTON**

GOWRI N- CM TROPHY/ALUMNI TROPHY(GCT)/ZONALS 2ND
BALA ABINAYA S - ZONALS 2ND / ALUMNI TROPHY(GCT) 2ND
VENI SRI K-CM TROPHY/ALUMNI TROPHY(GCT)/ZONALS 2ND
GOPIKA T- CM TROPHY/ALUMNI TROPHY(GCT)/ZONALS 2ND
VAISHNAVI B-CM TROPHY/ALUMNI TROPHY(GCT)/ZONALS 2ND
VARISHA M -CM TROPHY/ALUMNI TROPHY(GCT)/ZONALS 2ND



VOLLEYBALL

ABIRAMI G - CM TROPHY / ZONALS



BASKETBALL

F.DENCY - CM TROPHY / ZONALS



BADMINTON

SUBIKSHA R - CM TROPHY
MALINI R - CM TROPHY
RAGACHANDRIKA A - CM TROPHY
HARINI P - CM TROPHY



DANCE

JAYAKRISHNAN N
DEVIPRIYA J

EXTRACURRICULAR ACTIVITIES

SPORTS:



ASIAN COLLEGE



ZONALS



ALUMNI TROPHY



CIT, COIMBATORE

DANCE:



NIT TRICHY



HINDUSTAN COLLEGE

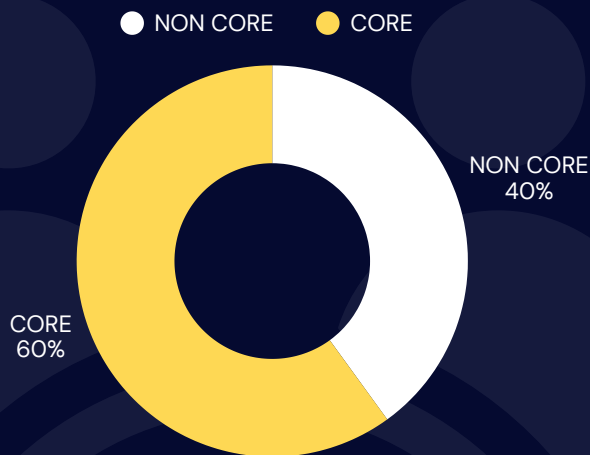
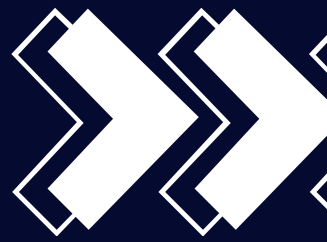


ROYAL COLLEGE KERELA

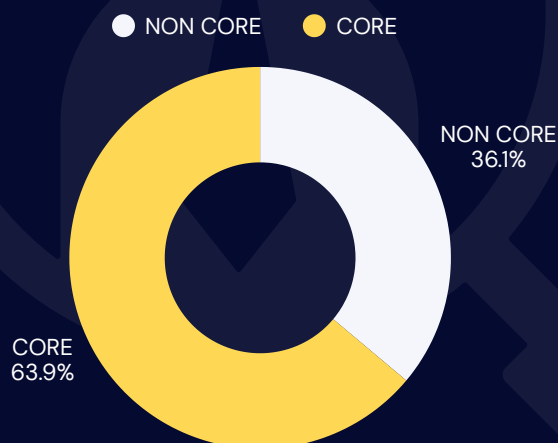
OUR RECRUITERS



PLACEMENT STATISTICS



BATCH 2024



BATCH 2025

**Package Offered
3.5 LPA – 28 LPA**

