



# Karunya

DEEMED UNIVERSITY

SOLVING HUMAN PROBLEMS  
NAAC Accredited A++



Division of  
**ELECTRONICS and  
COMMUNICATION  
ENGINEERING**

**ADMISSIONS  
2024**





## ► About Us

The Division of Electronics and Communication Engineering (ECE) was established in the year 1986 and has a good reputation for academics & research with well qualified faculty. The division is accredited by the National Board of Accreditation (NBA).

Over the course of time, the division has acquired facilities such as Centre of Excellence in VLSI Design, Centre of Research in Semiconductor Devices, IoT centre and various other research laboratories for developing cutting edge technologies in the fields of Communication systems, Embedded systems, Signal Processing, Internet of Things and VLSI design. Specialized courses were collaborated with industries to provide practice-oriented academic and research trainings and also to help students acquire good placement opportunities.

## ► Vision

Raising competent Electronics and Communication Engineers and Technocrats to solve the problems of human society

## ► Mission

To raise Engineers and Researchers with technical expertise on par with International Standards, Professional Attitude and Ethical Values, having the ability to apply acquired knowledge and skills for a productive career and service to humanity

## ► Programs Offered

- **B.Tech.** Electronics and Communication Engineering
- **B.Tech.** Electronics and Communication Engineering (Spl. in Artificial Intelligence and Machine Learning)
- **B.Tech.** Electronics and Communication Engineering (Specialization in IoT)
- **B.Tech.** Electronics and Computer Engineering
- **B.Tech.** Electronics and Computer Engineering (Specialization in Data Science)
- **B.Tech.** Electronics and Computer Engineering (Spl. in Artificial Intelligence and Machine Learning)
- **M.Tech.** VLSI Design (2 years Full Time)
- **Ph.D.** (Full Time / Part Time)

## ► Areas of Academics and Research

- Artificial Intelligence and Machine Learning
- VLSI Design and Embedded Systems
- Internet of Things (IoT)
- Data Science
- Signal Processing
- Communication Systems

## ► Career Prospects

- Telecommunication and IT Industries
- Artificial Intelligence
- Automotive Electronics
- Consumer Electronics
- Smart Devices and Systems
- IoT Industries
- Embedded solutions
- Chip Design
- Nano Device Modelling
- Process controlled industries
- Audio and Video Processing
- Image Processing and Computer Vision
- Biomedical signal Processing
- Defense and Military Communication
- Wireless Sensor Networks
- Robotics
- Virtual Reality and Augmented Reality

## ► Laboratory Facilities

The Division has excellent state-of-art facilities with instruments and appliance matching the industry standards.

- RF Lab with MIMO-SDR platform funded by AICTE MODROB
- DRDO funded Lab
- DST funded Lab
- Computational Intelligence Lab
- Karunya IOT Centre (Internet of Things Lab)
- VLSI Design Lab



- Signal Processing Lab
- Microwave and Optical Fiber Communication Lab
- Electronics Lab
- Integrated Circuits Lab
- Microprocessor and Microcontroller Lab

## ► Centres of Excellence and Research

In addition to the laboratories, the Division has established centre of excellence and centre of Research in collaboration with industries. These centres carry out industry live projects which subsequently turns in to products.

### • Centre of Excellence in VLSI Design

The centre of excellence in VLSI Design was established in the division in agreement with M/s Test & Verification Solutions India Pvt Ltd., India on 2018. The centre enhances the student's technical expertise in VLSI testing & verification. The centre is used by faculty and students for internships, projects and placements. The centre also sponsors a post graduate programme in VLSI Design.

### • Centre of Research in Semiconductor Devices

The centre of Research in Semiconductor Devices was established in the division in the year 2019. The centre is used extensively for fabrication and modeling of semiconductor devices in the micro and nano scale level to meet Industrial needs. Collaborative research projects with Department of Space (ISRO), Ministry of Defence (DRDO) and Ministry of Electronics and Information Technology (MeitY) are carried out in this centre.

## ► Research Activities / Funding Projects / Consultancies

The Division of ECE is working on funded projects worth 3.78 crores provided by various government and R&D organizations. The division also hold valuable publications by faculty and students in reputed journals with publishers like IEEE, Elsevier, Springer, IET, etc., Further, the faculty members have collaboration with other universities and laboratories from Europe, Asia, North America and Middle East countries.

## ► Research Projects

### High Power Electronic Devices and Systems

- Defense Research and Development Organization, Govt. of India – 50 Lakhs
- Indian Space Research Organization, Govt. of India – 30.44 Lakhs
- Ministry of Electronics and Information Technology – 85 Lakhs

### Medical Signal Processing

- Department of Science and Technology, Govt. of India - 47 Lakhs
- Boston children hospital, Boston, USA – 0.65 Lakhs
- University of Westminster, UK – 32.97 Lakhs
- TNSCST, DST, ICMR, AICTE-MODROB – 95 Lakhs

### Low Power Wearable Electronics

- Defense Research and Development Organization, Govt. of India – 37.64 Lakhs

## ► MOUs Signed / Industry Collaborations

- Samsung R&D India
- Tessolve
- Jasmine InfoTech (P) Ltd.
- Data Patterns

## ► Salient Features

- Industry based training
- Summer Internship / In-plant Training / Industry Visits
- Student Professional Bodies like **IETE** and **IEEE**
- Entrepreneur / Higher Education / Career Guidance Cell
- Mini-project-Expo / Symposiums
- Seed Money for innovative student projects
- Student patents
- Faculty Awards / Recognitions
- ECE Alumnus Visit
- Internships abroad with stipend through IAESTE
- GATE / IES Coaching
- Wi-Fi connected campus





## ► Add-on / Certificate Courses

- AICTE sponsored ATAL FDPs and trainings
- Add-on Course on "Android IoT Applications (Developer Course)"
- RF Circuit Design using NI AWR Microwave office
- Verilog HDL Programming in Xilinx ISE
- Add-on course On Verilog system design using FPGA
- Intel IoT workshop
- Antenna design using ANSYS HFSS
- Electronics for Intelligent Machines - Summer School
- Remote Sensing and Digital Image Analysis, Conducted by: Indian Institute of Remote Sensing, ISRO, Dehradun in KITS, CBE
- Add-on Course ML and DL Using MATLAB
- Add-on course on "Evolution Towards 5G systems"

## ► Program Educational Objectives (PEOs)

- PEO I: Graduates demonstrate their technical knowledge in the field of Electronics and Communication Engineering for real world applications.
- PEO II: Graduates exhibit competence as academicians, researchers and entrepreneurs by pursuing continuous professional development.
- PEO III: Graduates contribute to the development of the society with professional ethics.

## ► Program Specific Outcomes (PSOs)

- PSO1: 1. Impart solid foundation in mathematical, scientific and engineering fundamentals required to solve electronics and communication engineering problems.
- PSO 2: Specify, analyze and design the electronic systems using semiconductor technology.
- PSO 3: Understand, analyze, design and simulate the various communication systems, data processing techniques and validate their performance for practical applications.
- PSO 4: Specify, analyze, design, implement and test the analog and digital systems using the state of art components, software tools and ICT

## ► Testimonies



### Mr. L K Livingstone

B.Tech. ECE (2020 – 24)

Placed in Tejas Network and Accenture

During my four years at Karunya Institute of Technology and Sciences, I experienced a well-rounded education in the division of Electronics and Communication Engineering. The curriculum blended theoretical knowledge with hands-on practical applications, providing me with a comprehensive understanding of the subject.

The university environment fostered personal growth through engaging projects, and I had the privilege of collaborating with classmates on a project funded by Boston Harvard University. The mentor-mentee system coupled with the strong foundation laid during the course, enabled me to excel in interviews and secure two promising placements.

These four years have not only shaped me professionally as an Engineer but also imparted crucial life lessons that I will carry with me forever.



### Mr. Eajarla Reddy Sreekar

B.Tech. ECE (2020 – 24)

Placed in Bi3, Intellipath and Jet Aerospace

Studying here in Karunya was overall the most fulfilling and enriching journey I have ever dreamed of. The institution not only enriched my education but also helped me shape my inner self to deal with the running world. I am purely grateful to the staff and the faculty members for making this four-year journey of mine more memorable and faithful. The facilities in the library and the laboratories provided here have solely contributed to my self-growth and knowledge-gain.

The placement opportunities here are wide, and I am so grateful that I have been placed in 3 companies. I am thankful for each and every day I have spent here and for all the opportunities I have received at and through the university.

## ► Major Recruiters

accenture BOSCH



HCL

HYUNDAI MOBIS

ti HEXAWARE



ibsssoftware



RapidData7



tcs TATA CONSULTANCY SERVICES

Tech Mahindra



TESSOLVE A HERO ELECTRONIX VENTURE

TIGER ANALYTICS

Visteon



ZOHO



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The Head of Division  
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