

# Electronics & Communication Engineering

## INSTITUTE VISION

To be a premier institution in engineering education and research, fostering innovation, societal responsibility, and ethical leadership for a sustainable future.

## INSTITUTE MISSION

1. Promote innovation and cutting-edge research to develop sustainable engineering solutions for real-world and global challenges.
2. Cultivate ethical leadership and technical excellence among students to become responsible and leading engineering professionals.
3. Encourage active societal engagement and industry collaboration to drive inclusive growth and environmental responsibility.

Inst. Vision & Mission  
Dept. Vision & Mission

- PO's
- PEO's
- PSO's

Events Organized By  
Department

Students  
Achievements and  
Workshops

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING****VISION :**

To be a center of excellence in Electronics and Communication Engineering, advancing research, innovation, ethical practice, and sustainable solutions for societal transformation

**MISSION :**

1. Foster innovation and research in Electronics and Communication Engineering, to create sustainable solutions addressing real-world and technological challenges.
2. Inculcate technical excellence and ethical values to develop competent graduates who contribute as professionals and leaders.
3. Promote industry collaboration and community engagement to ensure inclusive development and environmentally conscious engineering practices.

## **PROGRAM OUTCOMES:**

### **1. Engineering Knowledge**

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

### **2. Problem analysis**

**Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.**

### **3. Design/ Development of Solutions**

**Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.**

### **4. Conduct investigations of complex problems**

**Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.**

### **5. Modern Tool Usage**

**Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.**

### **6. The Engineer and Society**

**Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.**

## **PROGRAM OUTCOMES:**

### **7.Environment and Sustainability**

**Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.**

### **8. Ethics**

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

### **9. Individual and Team Work**

**Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.**

### **10. Communication**

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

### **11. Project Management and Finance**

**Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.**

### **12. Life-long learning**

**Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.**

## **PROGRAM SPECIFIC OUTCOMES:**

- 1. Apply core domain knowledge in electronics, communication, and systems to analyze, design, and develop innovative, cost-effective solutions for real-world problems using existing and advanced tools.**
- 2. Demonstrate technical competence to pursue higher education, efficiently manage projects in multidisciplinary domains, and grow as successful professionals.**

## **PROGRAM EDUCATIONAL OBJECTIVES:**

- 1. Graduates will apply strong foundations in Electronics, Communication, and computing to design innovative and reliable engineering solutions for real-world challenges.**
- 2. Graduates will demonstrate professional integrity, ethical responsibility, and a commitment to continuous learning to adapt to technological advancements and societal needs.**
- 3. Graduates will contribute effectively as Engineers, Leaders, or Entrepreneurs by collaborating with industry and engaging in projects that promote inclusive growth.**

## Message from HOD

Dear Students, Faculty Members, and Readers,  
It is a pleasure to present the ECE Department Newsletter 2024–2025 of Bearys Institute of Technology. This newsletter highlights the academic activities, achievements, and initiatives of the department during the year.



The Department of Electronics and Communication Engineering at BIT remains committed to academic excellence, innovation, and skill development. Our focus is on equipping students with strong fundamentals, practical exposure, and industry-relevant competencies to meet evolving technological challenges. I congratulate our students for their achievements and appreciate the dedicated efforts of our faculty members in teaching, mentoring, and research. I also thank the editorial team for their contribution in bringing out this newsletter.

Let us continue to work together with enthusiasm and dedication to make this academic year productive and successful.

With best wishes,

**Dr. Abdullah Gubbi**  
**Head of the Department – ECE**

## **Message from Faculty Editor**

**Dear Readers,**

It is my pleasure to present the Department Newsletter 2024–2025 of Bearys Institute of Technology, Mangalore. This publication showcases the achievements, projects, and creative contributions of our students and faculty over the year.

I sincerely thank all contributors and the editorial team for their dedication in bringing this issue to life. I hope it inspires curiosity, innovation, and pride within our academic community.

With best wishes,

**Prof.Abdul Jabbar**

**Faculty – Department of ECE**

## **Message from Student Editor**

**Dear Readers**

It is with great pride and enthusiasm that We present the ECE Department Newsletter 2024–2025 of BIT. This newsletter represents the collective journey of learning, growth, innovation, and achievements experienced by the students and faculty of the Electronics and Communication Engineering department throughout the academic year.

The past year has been truly inspiring, marked by academic excellence, technical activities, workshops, projects, and remarkable student accomplishments. As students, we have been fortunate to receive constant guidance, encouragement, and mentorship from our dedicated faculty members, who have played a vital role in shaping our technical skills, confidence, and professional outlook.

This newsletter stands as a platform to showcase our efforts, creativity, teamwork, and passion for engineering. I sincerely appreciate the enthusiastic participation of my fellow students and express my heartfelt gratitude to the faculty members and the editorial team for their continuous support and valuable contributions in making this publication possible.

With best wishes,

**Junaid Raza, Aysha Manooha**

**BE Students – Department of ECE**

# FACULTY & STUDENT ACHIEVEMENTS

## Student Achievements

.

- Prof. Nikhitha C. and Mr. Mohammed Junaid Raza presented the research paper “Nanotechnology: Exploring the Frontiers and its Applications” at the International Conference Drishti 2025.
- Mr. Mohammed Junaid Raza, Mr. Shabaz S M, Ms. Suman G B, and Ms. Shabrin K R, have achieved National Level Rank 1 for their outstanding paper titled “Revolutionizing Healthcare: The Transformative Role of Artificial Intelligence.”
- Mohammed Fayeem got First place in Gamethon at BIT Hackathon – 2025
- Mohammed Fayeem, Syed Nabeel Hussain and M H Muhammed Rizwan got the 2nd Runnerup in the Caterpillar Autonomy Challenge at ‘Shaastra’ Competition held at IIT Madras
- Nida Sadaf had got First place at the Project Competition at Tech Grayhogix Internship

# FACULTY & STUDENT ACHIEVEMENTS

## Faculty Achievements

- Dr. Abdullah Gubbi et. al. received a UK Design Patent (International) titled “Smart Power Bank for Electrical Vehicle”, granted on 29 July 2025.
  - Dr. Mehaboob Mujawar received recognition as a VTU Research Supervisor under the Department of Electronics & Communication Engineering.
  - At the National Conference held at HKBK, Bangalore, Dr. Abdullah Gubbi received the Best Paper Award for the paper titled “Leveraging AI for Predictive Analytics in Healthcare: A Systematic Review and Framework for Improved Patient Outcomes.”
  - Dr. Abdullah Gubbi co-authored with Dr. Altamashuddin Khan (Civil Engineering) the paper “Machine learning Models for predicting the Compressive Strength of Concrete with Shredded PET Bottles and M-Sand as Fine Aggregate” in the IIUM Engineering Journal (International Journal) in 2025.
  - Dr. Mehaboob Mujawar, Dr Abdullah Gubbi, Aasheesh Raizada authored Chapter 1 of “AI-Powered Phishing Detection System,” in Safe Data-Driven Control for Cyber-Physical Systems (IGI Global, 2025), pp. 1-23, DOI: 10.4018/979-8-3373-1832-5.ch001, contributing research on AI-based cybersecurity solutions.
- Dr. Mehaboob Mujawar presented the paper “AI Finance: Risk Management and Fraud Detection Using Sentimental Analysis” at Artelligence 2025, International Conference on Artificial Intelligence organized by P.A College of Engineering, Mangaluru held on 7-8 May 2025.

# FACULTY & STUDENT ACHIEVEMENTS

## 2024 – 2025

- Dr. Mehaboob Mujawar presented the paper “Real-Time Network Intrusion Detection Sysytem with Machine Learning” at the Ninth International Conference on Information and Communication Technology for Intelligent Systems (ICTIS 2025), organized by the Global Knowledge Research Foundation and G.R. Scholastic LLP, held in Bangkok, Thailand, on 4-6 April 2025.
- Dr. Abdullah Gubbi presented the paper “Enhanced EEGNet Optimization Using Light weight Deep Neural Network for Detecting Human Stress Levels from Raw EEG Signals Dataset” at the 3<sup>rd</sup> International Conference on Integrated Circuits and Communication Systems (ICICACS 2025), IEEE, pages 1-6.
- Dr. Abdullah Gubbi presented the paper “Leveraging EEG and Signal-to-Noise Ratio Augmentation for Advanced Stress Detection” at the 4<sup>th</sup> International Conference on Distributed Computing and Electrical Circuits and electronics (ICDCECE 2025), held in Ballari, India.
- Prof. Ubaidullah co-authored the research paper “A Comprehensive and Pedagogical Treatment of the Origin, Selection, and Manifestations of Proximal Coupling in Magnetic Circuits” with Jora M. Gonda and I. R. Rao, published in the IEEJ Transactions on Electrical & Electronics engineering, Japan, in February 2025.

# Relevance, Awareness, and Safety: BIT ECE Students' Community Outreach Initiative



As part of its commitment to social responsibility and holistic education, the Department of Electronics and Communication Engineering (ECE), Bearys Institute of Technology (BIT), organized an awareness program at DKZP Government Higher Primary School, Uchila Gudde, Someshwara, Dakshina Kannada, on 15 February 2025.

The program aimed to create awareness among young students on essential life skills and safety aspects crucial for their overall development. Interactive sessions were conducted on career awareness and basic financial literacy, helping students understand the importance of planning and setting goals at an early stage. The program also emphasized physical fitness and nutrition, encouraging students to adopt healthy lifestyle habits. In addition, a session on road safety and traffic rules highlighted the importance of responsible behavior and personal safety in daily life.

The awareness sessions were led by 4th semester ECE students of BIT—Mr. Fayiz, Mr. Yusuf Ismail, Mr. Azman, Mr. Arshad Arif, Mr. Sawaz, Mr. Raz, Mr. Ameen, Mr. Mahroof, and Mr. Nishad—who actively engaged the school students through informative and interactive discussions. Nearly 50 students participated in the program, making it a meaningful and impactful initiative.

The program was well received and appreciated by the school faculty and students. Such outreach activities not only create awareness among young learners but also help in developing social responsibility, communication skills, and leadership qualities among engineering students, reflecting BIT's vision of education with purpose.

# IEEE Awareness Session: Benefits of Membership and Societal Engagements



The IEEE Mangalore Subsection, in collaboration with the IEEE Student Branch of Bearys Institute of Technology (BIT), hosted an enlightening awareness session on the benefits of IEEE membership and the importance of forming IEEE societies at the institutional level.

Dr. Satyanarayana, Chair of the IEEE Mangalore Subsection, delivered an insightful address highlighting the wide-ranging benefits of IEEE membership for students and faculty, including access to global knowledge resources, networking opportunities, and professional development. Dr. Parameshsachari, Vice Chair of the IEEE Bangalore Section, elaborated on the significance of establishing IEEE societies within educational institutions. He emphasized how such societies foster innovation, collaboration, and technical leadership among students and faculty members alike.

The session commenced with a warm welcome by Dr. Abdullah Gubbi, Head of the ECE Department and a key IEEE representative at BIT. Ms. Saima, Chair of the BIT IEEE Student Branch, served as the master of ceremonies and ensured the smooth flow of the event.

The program witnessed active participation from students and faculty, reinforcing BIT's commitment to nurturing a vibrant technical community through IEEE engagement.

# Evalanche Extravaganza 2K25

## A Celebration of Knowledge, Resilience & Talent



The Department of Electronics and Communication Engineering (ECE) at Bearys Institute of Technology (BIT), in association with its student association BEASPIRE, successfully organized Evalanche Extravaganza 2K25—a vibrant celebration of knowledge, resilience, and talent.

The highlight of the event was an inspiring session by the Chief Guest and Resource Person, Mr. Ankith S. Kumar, Professor at NMAM Institute of Technology, Nitte. His insightful talk on “Resilience and Leadership” motivated students to approach challenges with confidence, adaptability, and determination. He emphasized the importance of perseverance, visionary thinking, and strong character in shaping future leaders.

Following the session, students actively participated in a technical quiz and an engaging memory test, where they identified renowned personalities. These activities encouraged analytical thinking, general awareness, and healthy competition among participants.

Adding to the vibrancy of the event, students showcased their artistic talents through captivating dance and singing performances, making the program both intellectually enriching and entertaining. The event was smoothly anchored by Shahbaz and Ms. Nida, who maintained an energetic and engaging atmosphere throughout.

The program began with a welcome address by Mr. Junaid Raza, setting a positive tone for the event. Dr. Abdullah Gubbi, Head of the Department of ECE, delivered an inspiring address, encouraging students to strive for excellence in all their endeavors. The event concluded with a vote of thanks by Ms. Mahisha Shaikh, expressing gratitude to all who contributed to its success. Evalanche Extravaganza 2K25 stood as a testament to BIT’s commitment to holistic education by blending technical knowledge with creativity, while fostering teamwork, resilience, and leadership among students.

# Robotics Knowledge Sharing Session

## Inspiring Innovation through Hands-On Demonstration



POVA 6 Neo 5G

25mm f/1.89 1/33s ISO4385

Inoli, Karnataka, India  
Rxxw3+0vx, Inoli, Karnataka 574199, India

Pavoor, Karnataka, India  
Rxxw4+9c, Pavoor, Karnataka 574199, India  
Lat 12.845863° Long 74.955248°  
21/03/2025 11:46 AM GMT +05:30

The Department of Electronics and Communication Engineering (ECE) at Bearys Institute of Technology organized an engaging knowledge-sharing session on "Robotics" for students of 1st, 2nd, and 3rd year. The session was conducted by final-year students Mr. Rizwan, Mr. Haris Khan, and Hafeez.

During the session, the presenters showcased two of their self-developed robots, explaining their design, working principles, and practical applications. They also introduced the key components and basic programming concepts involved, offering valuable technical insights to junior students.

The seniors shared their project journey, highlighting the challenges faced, problem-solving approaches adopted, and the recognition they received for their work. Their experiences emphasized the importance of perseverance, teamwork, and innovation.

A key highlight of the session was its interactive nature, where students were given hands-on experience in operating the robots. This practical exposure enhanced their understanding and sparked interest in robotics and project-based learning.

The session proved to be an excellent platform for peer learning and inspiration, motivating students to explore emerging technologies and actively engage in innovative projects. It concluded on a highly enthusiastic note, leaving participants eager to delve deeper into the field of robotics.

# A Milestone of Research Excellence and Collaborative Achievement



In a proud achievement for Bearys Institute of Technology (BIT), Prof. Nikitha C and Mr. Junaid Raza from the Department of Electronics and Communication Engineering (ECE) secured the Best Paper Award at the National Conference on Emerging Trends in Engineering and Technology (NCETET-2025), held at HKBK Engineering College, Bangalore, on April 11–12, 2025.

Their research paper, titled “Leveraging Artificial Intelligence for Predictive Analytics in Healthcare: A Systemic Review & Framework for Improved Patient Outcomes,” was highly appreciated for its innovative approach, technical depth, and practical relevance. The study focused on the role of Artificial Intelligence in predictive healthcare and proposed a structured framework to enhance diagnosis, risk prediction, and treatment outcomes.

This achievement reflects BIT’s commitment to promoting research, innovation, and interdisciplinary collaboration. The work contributes significantly to the growing field of intelligent healthcare systems and data-driven decision-making.

The Management, Principal Dr. S. I. Manjur Basha, and Head of the ECE Department Dr. Abdullah Gubbi congratulated the awardees for their outstanding accomplishment and for bringing recognition to the institution. They appreciated their dedication, teamwork, and contribution to impactful research.

This milestone serves as an inspiration to students and faculty alike, encouraging continued pursuit of excellence in research and innovation. BIT proudly celebrates this success and looks forward to many more achievements in the future.

# Anti-Drug & Anti-Ragging Awareness Programme

## “A Safe Mind. A Safe Campus. Say No to Ragging & Drugs.”



The NSS Unit of Bearys Institute of Technology (BIT), Mangalore, organized an impactful Anti-Drug & Anti-Ragging Awareness Programme at Bearys Knowledge Campus (BKC) under the theme “A Safe Mind. A Safe Campus. Say No to Ragging & Drugs.” The initiative aimed to create awareness among students about the legal, social, and psychological consequences of drug abuse and ragging, while promoting a culture of respect and responsibility.

The programme began with an invocation, followed by a welcome address by Dr. Mohamed Kafeel Delvi, NSS Programme Officer, who emphasized the importance of moral values, discipline, and mutual respect among students.

The Principal, Dr. S. I. Manjur Basha, in his presidential address, highlighted the collective responsibility of students and faculty in maintaining a safe and inclusive campus environment. He stressed the role of education in shaping character and encouraged students to uphold integrity and empathy.

Adding valuable legal insights, Mr. Puneet Gaonkar, PSI of Konaje Police Station, spoke on the serious legal consequences of drug abuse and ragging, supported by real-life examples. Mr. Ramesh from the Police Department also addressed the gathering, emphasizing discipline and responsible behavior.

The event was graced by the presence of distinguished dignitaries including Mr. Khalil Razzak Shaik, Principal of BEADS; Prof. Prithviraj M, Director of BIT Polytechnic; Mr. Mustafa Khaleel, Anti-Ragging & Anti-Drug Coordinator; and Mr. Mohammed Gouse Asundi from the Police Department.

The programme concluded with a vote of thanks by Dr. Mohamed Kafeel Delvi, followed by the National Anthem. The event successfully reinforced the importance of maintaining a drug-free and ragging-free campus.

This initiative reflects BIT’s commitment to nurturing responsible citizens alongside academic excellence, encouraging students to contribute positively to society.

# PLACEMENTS



**Mohammad Asad PJ**  
BE - ECE

Offered by



**Nida Sadaf**  
BE - ECE

Offered by



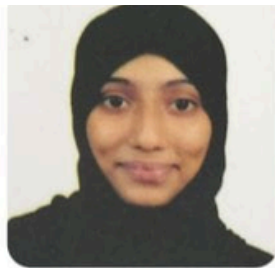
**Sania Banu**  
BE - ECE

Offered by



**Saniya K A**  
BE - ECE

Offered by



**Bibi Fathima**  
BE - ECE

Offered by



**Mohammad Swahaf**  
BE - ECE

Offered by



**M H Muhammad Rizwan**  
BE - ECE

Offered by



**Harris Khan F**  
BE - ECE

Offered by



14-15

# PLACEMENTS



**Kadeejathul Fida**  
BE - ECE

Offered by



**Zikra Fathima**  
BE - ECE

Offered by



16-



**Aman Sharif**  
BE - ECE

Offered by



**Sayikha Nidha**  
BE - ECE

Offered by



**Shahzadi Begum**  
BE - ECE

Offered by

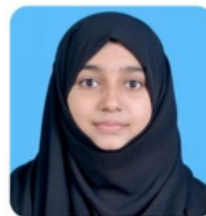


**Shobha Akhandappa Hadapad**  
BE - ECE

Offered by



18-19/2.



**Ayesha Saniya**  
BE - ECE

Offered by



**Nabila urf Asma Banu M. Belgaum**  
BE - ECE

Offered by



**Ayesha Saniya**  
BE - ECE

Offered by



**Nabila urf Asma Banu M. Belgaum**  
BE - ECE

Offered by



## *Conclusion*

As we conclude this edition of the ECE Department Newsletter, we look back with pride on the achievements, innovations, and collaborative spirit that continue to propel our department forward. From pioneering research and successful student initiatives to meaningful industry collaborations and engaging campus activities, our community continues to flourish.

We extend our heartfelt appreciation to our faculty, students, alumni, and partners for their constant support and valuable contributions. Together, we are playing a vital role in advancing the field of electronics and communication engineering.

As we move ahead, let us remain connected, inspired, and committed to excellence. Here's to continued growth, innovation, and success in the semesters to come!

*Junaid Raza  
Aysha Manoocha  
Student Editor*

*Prof. Abdul Jabbar  
Faculty Editor*