Bearys Institute of Technology
MANGALORE

JAN 2024 - JULY 2024

BEARYS INSTITUTE OF TECHNOLOGY

LANDS END INNOLI, MANGALORE-574199

IN FOCUS

VISION

To be recognized by the world at large as a full-fledged department offering quality technical education in the field of Electronics and Communication Engineering with focus on research and catering to the needs of the environment and society.

MISSION

1.To deliver outstanding education by continuously enhancing curriculum and fostering collaboration with industry leaders.

2.To nurture the spirit of innovation and creativity in niche areas of technology among faculty and students by providing state-of-art research facilities.

3.To provide ethical and value- based education by emphasizing multi-disciplinary activities to address the societal needs and environmental sustainability.

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 OBJECTIVES

1.Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialisation to the solution of complex engineering problems.

2.Problem analysis: Identify, formulate, 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 specified needs with appropriate consideration for public health and safety, 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.

7.Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of 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 : Recognise 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 OBJECTIVES (PSOS)

1. Professional IT development and problem solving skills.

2. Preparing graduands for higher education and competitive exams.

3. Successful Career and Entrepreneurship.

Message from HOD

Dear Students, Faculty Members, and Readers,
It is a pleasure to present the ECE Department Newsletter for the academic year 2023–2024 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 continues to remain committed to academic excellence, innovation, and skill development. Our focus is on equipping students with strong fundamentals, practical exposure, and industry-relevant competencies to address evolving technological challenges.
I congratulate our students for their accomplishments and appreciate the dedicated efforts of our faculty members in teaching, mentoring, and research.
I also extend my sincere thanks to the editorial team for their valuable contribution in bringing out this newsletter.
Let us continue to work together with enthusiasm and dedication to make every academic year productive and successful.
With best wishes,

Dr. Abdullah Gubbi
Head of the Department – ECE

Message from Faculty Editor

Dear Readers,

I am delighted to present the Department Newsletter for the academic year 2023–2024 of Bearys Institute of Technology, Mangalore. This edition reflects the dedication, creativity, and achievements of our students and faculty over the past year.

Throughout the year, the department has witnessed significant academic and co-curricular activities, innovative projects, and collaborative efforts that highlight our commitment to excellence. This newsletter serves as a record of those meaningful contributions and milestones.

I sincerely thank all the contributors and members of the editorial team for their enthusiasm, teamwork, and efforts in bringing out this publication. I hope this newsletter motivates our readers to continue striving for excellence and innovation.

With best wishes,

Prof.Nikitha
Faculty – Department of ECE

Message from Student Editor

Dear Readers

IWe are pleased to present the ECE Department Newsletter for the academic year 2023–2024 of Bearys Institute of Technology. This newsletter captures the memorable experiences, learning opportunities, and achievements of students and faculty throughout the year.

The academic year has been enriching, filled with technical events, workshops, projects, and various activities that have contributed to our overall growth. The continuous support and guidance from our faculty members have been instrumental in helping us enhance our knowledge, skills, and confidence.

This newsletter is a reflection of our collective efforts, creativity, and teamwork. We express our sincere gratitude to all students, faculty members, and the editorial team for their valuable contributions in making this publication possible

Harris Khan, Huzaina
BE Students – Department of ECE

EMPOWERING RESEARCH: IEEE BIT STUDENT BRANCH ORGANIZES "EXPLORING IEEE XPLORE DIGITAL LIBRARY" SESSION

The IEEE BIT Student Branch, in collaboration with the IEEE Mangalore Subsection, successfully organized a workshop titled "Exploring IEEE Xplore Digital Library" on 19 February 2024 at the International Seminar Hall. The session aimed to familiarize students and faculty with the powerful research resources available through the IEEE Xplore Digital Library.

The program was coordinated and welcomed by Dr. Abdullah Gubbi, Branch Counselor of the IEEE BIT Student Branch. Ms. Salma Nadaf from the Department of Electronics and Communication Engineering served as the Master of Ceremony for the event, ensuring the smooth flow of the session.

–The keynote session was delivered by Mr. M. S. Srinivasa, EBSCO/IEEE Training Manager, who provided an insightful and interactive demonstration on effectively navigating and utilizing the vast collection of journals, conference papers, and technical standards available on the IEEE Xplore platform. The session offered practical guidance on enhancing research skills and making the most of digital academic resources.

The event concluded with a heartfelt vote of thanks delivered by Mr. Shankar, Librarian, who expressed gratitude to the speaker, organizers, and participants for contributing to the success of the workshop.

EXPLORING OPPORTUNITIES WITH INFOSYS SPRINGBOARD AT BIT MANGALORE

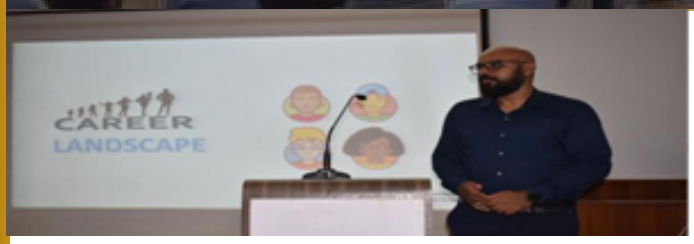
An Infosys Springboard Awareness Program was held on February 21, 2024, at the International Seminar Hall, BIT Mangalore, to familiarize faculty members and students with the features and benefits of the Infosys Springboard learning platform.

The program commenced with a warm welcome by Prof. Abdul Jabbar H, SPoC – Infosys Springboard at BIT, who also coordinated the event. The session was led by Ms. Aishwarya Rajeev, Senior Analyst – Learning at Infosys, who delivered an informative presentation on the Infosys Springboard platform, highlighting its functionalities and the wide range of learning opportunities it offers for skill development.

The session witnessed active participation from faculty members and students, who gained valuable insights into utilizing the platform for academic and professional growth.

The program concluded with a heartfelt vote of thanks delivered by Mrs. Ashwini, Placement Manager, expressing gratitude to the speaker and participants for making the event a success.

INSIGHTS INTO CAREERS: IEEE BIT STUDENT BRANCH HOSTS INTERACTIVE SESSION



The IEEE BIT Student Branch, in collaboration with the IEEE Mangalore Subsection, successfully organized an interactive session titled “The Career Landscape” on February 23, 2024, at the International Seminar Hall, BIT Mangalore.

The session was delivered by Mr. Mohammed Faizal, Faculty Coordinator of IEEE PRO COMM and Google Developer Student Club. He shared valuable insights on navigating the vast opportunities in the IT industry and emphasized the importance of SWOT analysis in career planning and professional development

. The session provided practical guidance to students on enhancing their research capabilities and pursuing academic growth.

The event was coordinated by Dr. Abdullah Gubbi, Branch Counsellor of IEEE BIT Student Branch. The program commenced with a welcome address by Mr. Swahaf, while Ms. Nabila, a student from the ECE Department, served as the Master of Ceremony for the event. The session was attended by faculty members and students who actively engaged in the discussion.

The program concluded with a heartfelt vote of thanks delivered by Ms. Fida, expressing gratitude to the speaker and all participants for contributing to the success of the event.

SHOWCASING STUDENT INNOVATION: MINI PROJECT COMPETITION AT BIT

In a remarkable display of innovation and technical expertise, the IEEE BIT Student Branch, in association with the CEABIT Computer Science Student Forum, organized a Mini Project Competition on August 1, 2024.

The competition was honored by the presence of Prof. Chandra Singh from Sahyadri College of Engineering, who served as the reviewer for the projects.

His valuable insights and expert feedback provided participants with constructive guidance, enriching their learning experience.

The program commenced with a welcome address by Dr. Abdullah Gubbi, Branch Counselor of IEEE BIT Student Branch, and was graced by Dr. Aziz Mustafa, Principal of BIES. Students enthusiastically showcased their projects, demonstrating creativity, technical knowledge, and practical problem-solving abilities.

Outstanding projects were recognized and awarded certificates and mementos, celebrating the exceptional innovation and dedication displayed by the participants. The event provided an excellent platform for students to present their ideas and enhance their technical and research skills. The event was smoothly hosted by Ms. Saniya Banu, a student from the ECE department, who served as the Master of Ceremonies. The program concluded with a heartfelt vote of thanks delivered by Prof. Sinan of the CSE Department, expressing appreciation to all participants, organizers, and supporters who contributed to the success of the event.

BIT'S ECE STUDENTS SHINED BRIGHT AT IIT MADRAS' CATERPILLAR AUTONOMY CHALLENGE ON 6TH JAN 2024

Students from the Electronics and Communication Engineering (ECE) department of BIT Mangalore achieved a significant milestone by securing 3rd prize in the Caterpillar Autonomy Challenge held during Shaastra at Indian Institute of Technology Madras on January 6, 2024.

The team developed an innovative space autonomous rover model designed for strategic and intelligent operations. The rover is equipped with a sophisticated camera system for vision and detection, enabling it to effectively monitor and analyze its surroundings. Additionally, an ultrasonic sensor allows precise distance measurement, which plays a crucial role in autonomous navigation.

The model also features a versatile robotic arm integrated with sensors and a camera, enabling the rover to detect specific objects and perform responsive actions such as picking and placing items in designated areas. This capability enhances the rover's efficiency in gathering intelligence and responding to diverse operational scenarios.

The project was successfully developed by Mr. Aadil, Mr. Rizwan, Mr. Arshak, Mr. Fayeem, Mr. Thahseen, and Mr. Nabeel, students of 5th Semester ECE at BIT Mangalore. Their achievement highlights the students' technical expertise, innovation, and commitment to advancing autonomous robotic systems.

FACULTY & STUDENT ACHIEVEMENTS

Student Achievements

··Junaid Raza and his team from the 4th Sem ECE won 1st place in the National Level Paper presentation held at Sairam College, Bangalore

·Rizwan and his team from the 6th Sem ECE secured first place in the Hackathon organized by COMEDKARES and first runner-up in the Crafter Hackathon

·The Department of ECE won the Overall Championship in UTSAV 2024
·Adler Nunez from the 8th Sem ECE won First place in the IEEE Poster Competition – 2024

·Mohammed Raziq from the 8th Sem ECE became the First Chairperson of the IEEE student branch. He also got patent for his Final Year Project.

Faculty Achievements

·Dr. Mehaboob Mujawar made extensive contributions in 2024 through multiple research papers published in Q2 and Scopus-indexed journals, authored two books and published book chapters in IGI Global and Wiley. He also presented papers on innovative antenna designs and IoT applications at prestigious international conferences in India, Oman and Goa.

·Dr. Abdullah Gubbi, Dr. Mehaboob Mujawar and students of ECE-Adler Nunez, Abdel Ahmed Shawaf received the Indian Design Grant Patent for the invention entitled “A Novel Image Processing Camera Device to capture the Image of an Over Speed Vehicle” on 18/10/2023.

·Dr. Mehaboob Mujawar received an Indian Design Patent (National) titled “Wearable Electronic Security Device with Camera for Women Safety”, granted on 08 December 2023.

Conclusion

As we bring this edition of the ECE Department Newsletter 2023–2024 to a close, we reflect with pride on the progress, innovation, and shared efforts that have marked our journey throughout the year. From academic accomplishments and creative student projects to engaging programs and collaborative initiatives, our department continues to evolve with dedication and enthusiasm.

We sincerely thank our faculty, students, and all contributors for their continued commitment and support. Their valuable contributions have greatly strengthened our academic and professional ecosystem.

Looking ahead, let us remain motivated, united, and driven to achieve even greater success. Here's to embracing new opportunities, fostering innovation, and striving for excellence in the years to come!

Harris Khan
Huzaina
Student Editor

Prof. Nikitha
Faculty Editor