

BUILDERS ENGINEERING COLLEGE



A NEWSLETTER OF

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

DEPARTMENT - VISION & MISSION

VISION

To be the renowned department in creating highly talented, skilled and well-disciplined professional in Electronics and Communication Engineering.

MISSION

- Providing quality education through effective teaching learning processes.
- Focus on research and excellence in electronics and communication to nurture the spirit of innovation and creativity.
- Enabling students for successful practice of the profession by nurturing career improvements and to develop human and social intellectual qualities.

CONTENTS

EVENTS ORGANISED

FACULTY PARTICIPATION

STUDENT PARTICIPATION

COLLEGE VISION & MISSION

Vision of the Institution

To be the most preferred knowledge provider.

Mission of the Institution

Builders Engineering College endeavors to prepare rural students for successful career through academic and applied research.

About the Department

Established in 2009, the Department commenced with an initial intake of 60 students. It boasts 10 fully-equipped laboratories, each adhering to university norms and furnished with cutting-edge technology.

The ECE Computer Centre provides students access to special software packages such as MENTOR GRAPHICS, PSPICE, MATLAB, Xilinx ISE, MULTISIM, MODELSIM, and KIEL.

The department stands out with its distinctive offerings, including advanced trainer kits, ARM Processors, Altera development boards, CPLD Trainer kits, and Wireless Sensor Networks trainer kits. These resources empower students to engage in real-time projects and practical learning experiences.

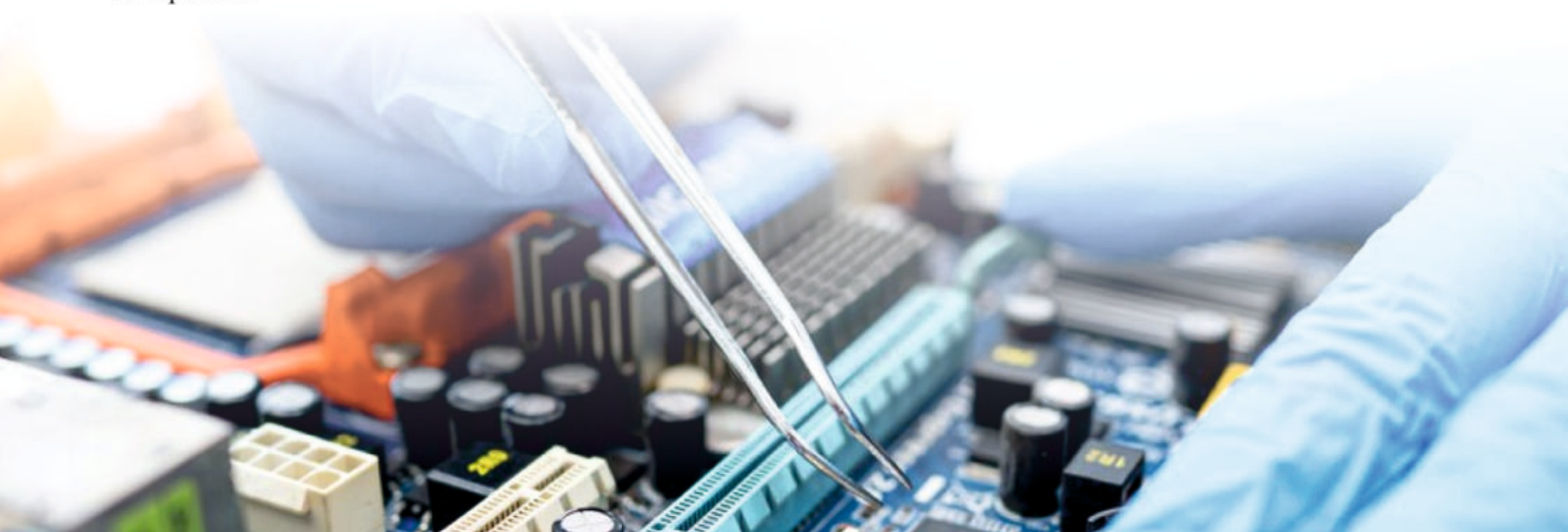
The department actively engages with professional bodies such as IEEE, IETE, and ISTE, providing a valuable platform for both faculty members and students. Additionally, an incubation centre has been established to foster and cultivate a culture of innovation, particularly in the realm of IoT systems, utilizing LoRaWAN technology.

Programme Specific Outcomes (PSOs)

- To design and develop complex systems in the research areas of next generation Communication Systems, RF and Power systems.
- To design and develop systems in the domains of IoT based Embedded Systems, Advanced Signal and Image Processing and latest Semiconductor technologies.

Program Educational Objectives (PEOs)

- Shall be successful in their professional careers, academic pursuits and research
- Shall study and build abilities on a continual basis in order to deliver high-impact, energy-efficient and futuristic solutions
- Shall demonstrate strong communication skills, a professional mindset and ethics in order to create and build real-world multidisciplinary solutions that are technically sound, economically feasible, and socially acceptable.





Principal's Message

Builders Engineering College takes immense pride and satisfaction in releasing the Newsletter from the Department of ECE. The College has made significant strides in all academic and non-academic domains, as well as in capacity building for both staff and students. I am confident that this issue of the Department Newsletter will resonate positively with staff, students, and individuals interested in technical education and technology-based activities. I extend my congratulations to the Editorial Board of this Newsletter, whose remarkable efforts have resulted in the timely completion of the task.

I wish to express my deep gratitude to Dr. Kumar, HoD/ECE, whose guidance has been instrumental in initiating and completing this technical endeavor within the designated timeframe.

Furthermore, heartfelt congratulations are extended to the staff members and students for their productive contributions.

Dr. S. Ramkumar

Principal

Words from Head of the Department

Dear Members of the ECE Community,

It brings me great joy to extend my heartfelt congratulations on the introduction of the Electronics and Communication Engineering (ECE) Newsletter. This publication serves as evidence of the remarkable progress made across various domains, encompassing both academic and non-academic spheres. It also underscores the continuous development of capabilities crucial to our esteemed staff and students. I commend the Editorial Board for their commendable role in achieving this task with exceptional efficiency and within a record timeframe. I would like to express my sincere gratitude to Mr. U. Rajasekaran, AP/ECE, for his invaluable guidance. My warmest congratulations go to the dedicated staff members and enthusiastic students who have devoted their time and effort to bring this newsletter to life. Your collective contributions have undoubtedly played a pivotal role in the success of this publication.

Dr. S. Kumar

Head of the Department





Editor's Desk

Dear Readers,

Welcome to the latest edition of our Electronics and Communication Department Newsletter! As we navigate the dynamic and ever-evolving world of technology, we are thrilled to share with you the latest developments, achievements, and exciting projects from our department.

We are proud to highlight the accomplishments of our students and faculty, who continue to push the boundaries of knowledge and contribute to advancements in the field.

Our commitment to fostering a collaborative and forward-thinking community is evident in the various events and activities featured in this newsletter. From guest lectures by industry experts to workshops and hackathons, we strive to provide our students with opportunities to engage with real-world challenges and enhance their skills.

As we embark on another semester filled with promise and potential, we extend our gratitude to our dedicated faculty, enthusiastic students, and supportive community. Together, we are shaping the future of electronics and communication, and we are excited to have you join us on this journey.

Thank you for your continued interest and support. We hope you enjoy reading this edition of our newsletter and stay tuned for more updates from the Electronics and Communication Department.

Best regards,

Mr. U. Rajasekaran, AP/ECE
Managing Editor

Editorial Team

Editor in Chief:

Dr. S. Kumar, HoD/ECE

Managing Editor:

Mr. U. Rajasekaran, AP/ECE

Concept & Design:

Ms. V. Manimala, AP/ECE

Student-Chief Editor:

Mr. P. Ashokkumar, IV Year

Associate Editors:

Mr. V. Manibalan, IV Year

Ms. A. Gokulapriya, III Year

EVENTS ORGANIZED



Process of Innovation Development, Technology Readiness Level (TRL); Commercialisation of Lab Technologies & Tech-Transfer

February 20, 2023

The Department of Electronics and Communication Engineering along with the Entrepreneurship Development Cell organized an enriching webinar aimed at enhancing the knowledge base of students. Titled "Process of Innovation Development, Technology Readiness Level (TRL); Commercialization of Lab Technologies & Tech-Transfer," the webinar took place on February 20, 2023, at 05:00 p.m. The resource person for the event was Prof. B. Venkatesan M.E., (Ph.D), an Innovation Ambassador from the Department of Electronics and Instrumentation Engineering at Kongu Engineering College, Erode. Through this webinar, students had the opportunity to delve into the intricacies of innovation development, explore the concept of Technology Readiness Level (TRL), and understand the processes involved in the commercialization and transfer of lab technologies.

The Next Generation of Wearable Electronic Devices

April 25, 2023



The Department of Electronics and Communication Engineering Association concluded its Intra-department symposium, GNAANA '2K23, with a valedictory function held on April 25, 2023, from 2:00 p.m. to 4:00 p.m. The esteemed Dheeran Chinnamalai Auditorium served as the venue for this event. Dr. Pandiyarasan Velusamy, an Assistant Professor Grade I at the SMart and Innovative Laboratory for Energy Devices (SMILE), Indian Institute of Information Technology, Design, and Manufacturing (IIITDM), Kancheepuram, graced the occasion as the guest speaker. Dr. Velusamy delivered an engaging guest lecture on "The Next Generation of Wearable Electronic Devices." His discourse explored cutting-edge advancements and potential applications in wearable technology, igniting curiosity and enthusiasm among attendees. The valedictory function provided a valuable platform for students to delve into emerging trends in electronics and communication engineering, inspiring them to explore innovative avenues in the field. Dr. Velusamy's insights contributed significantly to broadening participants' understanding of the evolving landscape of electronic devices.

FACULTY PUBLICATION

Faculty Name	Title of the programme	Name of the Journal/Conference
Mr. T. Velmurugan	Design of High-speed FIR filter using Ladner fischer	International Conference on Recent Developments in Engineering, Science & Technology, Dhaanish Ahmed Institute of technology, Coimbatore
	The Fisherman helping system	International conference on Recent Developments in Engineering, Science & Technology, Dhaanish Ahmed Institute of technology, Coimbatore
	An intelligent communication system for Fisherman	Virtual conference on smart computing & Advanced communication (SCAC'23), PSNA College of Engineering & Technology, Dindigul
Mr. M. Shanmugham	IoT Based Manhole detection and monitoring system	International conference on Recent Developments in Engineering, Science & Technology, Dhaanish Ahmed Institute of technology, Coimbatore
	Manhole detection and monitoring system	Virtual conference on smart computing & Advanced communication (SCAC'23), PSNA College of Engineering & Technology, Dindigul
Mr.S.D.Vijayakumar	AI Based garbage segregation dustbin to reduce environmental pollution	International conference on Recent Developments in Engineering, Science & Technology, Dhaanish Ahmed Institute of technology, Coimbatore
Mr.M.Prakash	Wearable socks based Non-invasive solution for Varicose vein	Virtual conference on smart computing & Advanced communication (SCAC'23), PSNA College of Engineering & Technology, Dindigul
Mr.R.Praveenkumar	Estimation of Human health parameters and prevention system in Public places	International conference on Recent Developments in Engineering, Science & Technology, Dhaanish Ahmed Institute of technology, Coimbatore
	Performance analysis of energy-efficient multipath routing protocols	International conference on Recent Developments in Engineering, Science & Technology, Dhaanish Ahmed Institute of technology, Coimbatore
Ms.G.Vijayakumari	Automated farming operation using a Microcontroller	Virtual conference on smart computing & Advanced communication (SCAC'23), PSNA College of Engineering & Technology, Dindigul
Ms.V.Manimala	Design and Simulation of 28 GHz MIMO Antenna for mobile applications	Virtual conference on smart computing & Advanced communication (SCAC'23), PSNA College of Engineering & Technology, Dindigul
Mr.U.Rajasekaran	IoT based industrial air pollution monitoring system	International conference on Recent Developments in Engineering, Science & Technology, Dhaanish Ahmed Institute of technology, Coimbatore

Faculty Name	Title of the programme	Name of the Journal/Conference
Ms.G.Vijayakumari	Smart system for optimized garbage collection and disposal in urban areas	International conference on Recent Developments in Engineering, Science & Technology, Dhaanish Ahmed Institute of technology, Coimbatore
Dr.S.Kumar	LPG Gas level detection and gas leakage prevention with automatic booking system	International Conference on Recent Developments in Engineering, Science & Technology, Dhaanish Ahmed Institute of technology, Coimbatore
		Virtual conference on smart computing & Advanced communication (SCAC'23), PSNA College of Engineering & Technology, Dindigul
Mr.M.Prakash	Revolutionary non-invasive solution for varicose veins: wearable compression socks (ISSN 2319-8753)	Journal - international journal of innovative research in science, engineering and technology (IJIRSET)
Ms. G.Vijayakumari	Wireless Sensor Network for Effective Irrigation Control and Monitoring	International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET)

FACULTY PARTICIPATION

Date	Faculty Name	Title of the programme
04.02.2023	Mr. V. Kumar	Sustainability hackathon challenge 2023
10.03.2023	Ms. G.Vijayakumari	Wireless Energy transfer for sustainable transportation
23.01.2023		Trends and innovation in industry 4.0
24.02.2023		Scope of Quality Research for Funded Projects and High Impact Publications
29.04.2023		Smart System for Optimized Garbage Collection and disposal in urban areas
09.01.2023	Mr. M. Prakash	Recent technologies in e-mobility and battery management systems
23.01.2023		Trends and innovations in industry 4.0
30.01.2023		Innovation in mentoring pedagogy and incorporation of ICT techniques in education
11.02.2023		Comparative analysis of vertical axis and horizontal axis wind turbine using Qblade software
10.03.2023		Wearable socks-based non-invasive solution for varicose vein

Date	Faculty Name	Title of the programme
23.01.2023	Ms. S. Jayabratha	Trends and innovation in industry 4.0
23.01.2023	Ms.R.Preethi	Trends and innovation in industry 4.0
04.02.2023	Ms. V. Manimala	Sustainability Hackathon Challenge 2023
17.01.2023		Innovation In Mentoring Pedagogy and Incorporation of ICT Techniques In Education
17.01.2023	Mr.U.Rajasekaran	Innovation In Mentoring Pedagogy and Incorporation of ICT Techniques In Education
17.01.2023	Mr.T.Velmurugan	Innovation In Mentoring Pedagogy and Incorporation of ICT Techniques In Education
17.01.2023	Mr.S D Vijayakumar	Innovation In Mentoring Pedagogy and Incorporation of ICT Techniques In Education

INDUSTRIAL VISIT



Industrial Visit on February 24 & 25, 2023

The Department of Electronics and Communication Engineering at Builders Engineering College has organized an Industrial Visit to KEL in Kochi, Kerala, scheduled for February 24 and February 25, 2023. With 21 students and 2 faculties participating, the visit aims to provide firsthand exposure to industrial operations and technology applications in the electronics sector. KEL, recognized as a prominent player in the electronics industry, offers insights into cutting-edge technologies, manufacturing processes, and industry standards. Through this visit, students will gain practical knowledge and industry insights, effectively bridging the gap between theoretical learning and real-world applications. The opportunity to interact with professionals and observe operations at KEL will significantly enhance students' understanding of their field and foster innovative thinking. Faculties accompanying the students will facilitate discussions and offer valuable guidance, enriching the educational experience. This Industrial Visit reflects the college's commitment to providing holistic education and preparing students for successful careers in electronics and communication engineering.