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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

**Volume - 04, Issue- 02 \* ECE NEWS \* - (Half yearly News Letter) July - Dec 2023**

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# NEWS LETTER

## ECE NEWS



**Department of**  
**ELECTRONICS AND COMMUNICATION ENGINEERING**

**June-December 2023      Volume-4, Issue- 02**

### **ABOUT ECE DEPARTMENT**

The Department of Electronics & Communication Engineering aims to impart value-based technical education and train students to become well-rounded engineers. Since its inception in the academic year 2008-09 with an initial intake of 60 students, the department has grown significantly. The current intake of the ECE department is 180 students. The department boasts faculty strength of 53 well-qualified, experienced, and dedicated postgraduates, including 11 doctorates, with some faculty members currently pursuing Ph.D.s in various streams.

### **VISION OF THE DEPARTMENT**

To be a pioneer in Electronics and Communication Engineering and research, promoting entrepreneurship and delivering innovative solutions to societal needs

### **MISSION OF THE DEPARTMENT**

**M1:** To provide a strong foundation in Electronics and Communication Engineering, preparing students to tackle emerging technological challenges.

**M2:** To drive research in Electronics and Communication Engineering that delivers innovative solutions to societal needs.

**M3:** To promote lifelong learning, empowering students to adapt to the evolving technological advancements

### **Program Educational Objectives (PEO's):**

The following are the Programme Educational Objectives (PEO's) for Electronics & Communication Engineering Under-Graduate Programme.

**PEO 1:** Exhibit continuous growth in technical expertise and leadership within the engineering field, while upholding professional ethics.

**PEO 2:** Communicate effectively and manage resources skillfully as members and leaders of the profession

**PEO 3:** Commit to continuous learning and adapt to emerging technologies to meet the evolving needs of society.

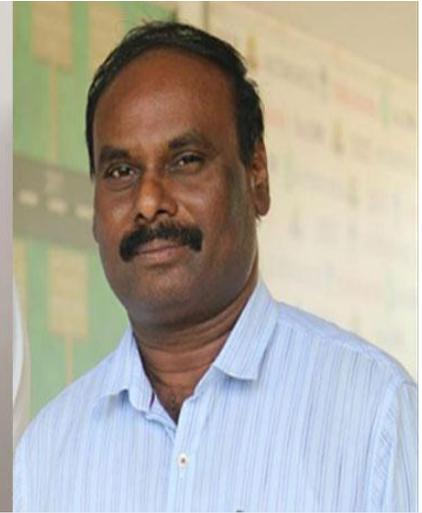
**MESSAGE FROM HOD****Dr. B. Nancharaiah**

Professor & Head of the Department, Department of ECE,

Usha Rama College of Engineering and Technology, Telaprolu

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Dr. B. Nancharaiah received his B.E. degree in Electronics and Communication Engineering in 1999 from SRKR Engineering College, Bhimavaram, affiliated to Andhra University, India. He obtained his M.Tech degree in Electronics and Communication Engineering in 2003 from Pondicherry Engineering College, Pondicherry Central University, India. He earned his Ph.D. degree in Wireless Communications and Networks in 2017 from JNTUH, Hyderabad, India.

Dr.B.Nancharaiah has been working as Professor and HOD in the Department of Electronics and Communication Engineering at Usha Rama College of Engineering and Technology, Telaprolu, Andhra Pradesh, India, since June 2018. With 23 years of teaching experience, he is a Life Member of ISTE and Fellow of IETE. He has published over 70 papers in reputable national and international journals and conferences. He is the author of two textbooks: Metaheuristic Algorithms in Wireless and Mobile Ad Hoc Networks and Antenna and Wave Propagation. His research interests include wireless communications, networks, and IoTs.

Our department is committed to providing quality education and training to our students, enabling them to excel in their chosen careers. We strive to create a stimulating learning environment that fosters innovation, creativity, and critical thinking. Our faculty members are dedicated professionals with expertise in their respective areas, and we are proud of our strong industry partnerships that provide opportunities for internships, projects, and placements.

Best regards,

Dr.B.Nancharaiah

Head, Department of Electronics and Communication Engineering

**Program Specific Outcomes (PSOs):**

**PSO1:** Develop electronics and communication systems in VLSI, embedded systems, signal processing, and RF communications using advanced tools.

**PSO2:** Apply ECE knowledge to design, develop, and test systems, considering societal, environmental, ethical, and economic factors.

**Program Outcomes (POs):**

**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 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.

**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.

**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 assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

**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 setting.

### Research paper publications

SCI/SCIE	Web of Science	Scopus	UGC	Others
1		8	-	-

1. Dr. B. Nancharaiah, Department of ECE, published a paper titled "Analysis of Visual Expression of Light and Color in Movies Based on Wavelet Neural Network" in IEEE 2023 Second International Conference on Smart Technologies for Smart Nation (SmartTechCon) (Scopus, International), August 2023.
2. Dr. B. Nancharaiah, Department of ECE, published a paper titled "Analysis of Visual Communication Effect of Color in Print Advertising Design Based on Decision Tree Classification Algorithm" in IEEE 2023 Second International Conference on Smart Technologies for Smart Nation (SmartTechCon) (Scopus, International), August 2023.
3. Dr. B. Nancharaiah, Department of ECE, published a paper titled "Machine Learning and Block Chain Model for Supplying Food Products and Maintain Food Quality" in Carpathian Journal of Food Science and Technology (Scopus, International), October 2023.
4. Dr.B. Nancharaiah ECE IEEE 2023 Second International Conference On Smart Technologies For Smart Nation (SmartTechCon) Scopus International Analysis of Visual Expression of Light and Color in Movies Based on Wavelet Neural Network August 2023.
5. Dr.B. Nancharaiah ECE IEEE 2023 Second International Conference On Smart Technologies For Smart Nation (SmartTechCon) Scopus International Analysis of Visual Communication Effect of Color in Print Advertising Design Based on Decision Tree Classification Algorithm August 2023.
6. Dr.B. Nancharaiah ECE Carpathian Journal Of Food Science And Technology Scopus International Machine Learning and Block Chain Model for Supplying Food Products and Maintain Food Quality October 2023.
7. Dr. A. Suneel Kumar ECE International Journal Of Microwave And Optical Technology Scopus International Design and Evolution of High Gain, Ultra Wide Band Antenna for 5G Applications September 2023.
8. M. V. Srikanth ECE The Applied Computational Electromagnetics Society Journal (ACES) SCI International The Synthesis of Elliptical Antenna Array Using Hybrid SSWOA September 2023

9. M. V. Srikanth ECE International Journal of Microwave and Optical Technology Scopus International Design and Evolution of High Gain, Ultra Wide Band Antenna for 5G Applications September 2023.
10. Ramakrishna Reddy Eamani ECE Indonesian Journal of Electrical Engineering and Computer Science Scopus International A Low Power-High Speed Full Adder Cell Using CNTFETs July 2023.

## FDP/Seminars/Webinars/workshops/STTP Attended/ Conducted

### Workshops Conducted

#### 1. Data Analysis Using Python

Time	Activity
9:45AM	Lighting the Lamp & Prayer Song
9:50AM	Inviting the Guest on to the dais
9:55AM	Opening Remakes by Dr.B.Nancharaiah, Head of the Department, ECE, URCET.
10:00AM	Message by the Dr.G.V.K.S.V.Prasad, Principal, URCET
10:05AM	Address by Dr.K. Rajasekhar Rao, Director, URCET
10:25AM	Dr.K.Naga Prakash Professor, ECE Department, Gudlavalleru Engineering College, Gudlavalleru.
10:30AM	Felicitation to the guest
10:35AM	Vote Of Thanks
10:40AM	National Anthem



# USHARAMA

## COLLEGE OF ENGINEERING AND TECHNOLOGY

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IETE Student Forum & E-Cratz Student Association

A six-day national-level workshop on Data Analysis using Python was conducted from 31st July to 5th August 2023.

Venu: R-Block Seminar Hall.

Name of the Faculty Coordinator T. Sreedhar & M.K.Kishore

The six-day workshop offers a comprehensive introduction to data analysis and machine learning using Python, beginning with foundational programming concepts and progressing toward real-world applications. Participants start with Python basics, data types, and control structures before diving into powerful libraries like NumPy and Pandas for efficient data handling and cleaning. Data visualization techniques using Matplotlib and Seaborn are covered to help interpret dataset trends visually. Exploratory Data Analysis (EDA) deepens understanding of data distributions and relationships, setting the stage for an introduction to machine learning concepts using Scikit-learn. The final day culminates in a capstone project where participants apply their skills to analyze a dataset end-to-end, present their findings, and explore further learning resources, reinforcing both theoretical and hands-on experience throughout the workshop.



## 2. Raspberry Pi Pico and Its Applications

Time	Activity
9:45AM	Lighting the Lamp & Prayer Song
9:50AM	Inviting the Guest on to the dais
9:55AM	Opening Remarks by Dr.B.Nancharaiah, Head of the Department, ECE, URCET.
10:00AM	Message by the Dr.G.V.K.S.V.Prasad, Principal, URCET
10:05AM	Address by Dr.K. Rajasekhar Rao, Director, URCET
10:25AM	Dr.M.Ranga Rao Professor, ECE Department, PSCMRCET, Vijayawada.
10:30AM	Felicitation to the guest
10:35AM	Vote Of Thanks
10:40AM	National Anthem



**USHARAMA**  
**COLLEGE OF ENGINEERING AND TECHNOLOGY**

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**IETE Student Forum & E-Cratz Student Association**



**A six-day national-level workshop on Raspberry Pi Pico and its Applications was conducted from 4th to 11th October 2023.**

Venue: **R-Block Seminar Hall.**

Name of the Faculty Coordinator  
**Dr. Nancharaiah Battula**

The six-day workshop provides a hands-on introduction to embedded systems and IoT using the Raspberry Pi Pico microcontroller. Beginning with setup and basic hardware interfacing, participants explore the fundamentals of MicroPython programming through LED and button-based projects. The workshop progresses to sensor integration using analog-to-digital conversion, enabling real-world data acquisition and visualization. Key communication protocols like UART, I2C, and SPI are introduced for interfacing with external modules such as OLED displays and RTCs. In the IoT-focused segment, participants work with Wi-Fi-enabled Pico boards to transmit sensor data to cloud platforms and build basic home automation systems. The final day is dedicated to project presentations, showcasing practical applications of the skills learned, followed by discussions on future integration with AI, ML, and robotics, culminating in a valedictory session and certification.



### 3. Career Guidance



Day 1 of the workshop offers a comprehensive exploration of career planning, competitive exams, and personal development. The day begins with an overview of emerging career domains like AI, IoT, and Green Tech, followed by a session on choosing the right career path using tools like SWOT analysis and mentorship. In the afternoon, participants delve into strategies for preparing for competitive exams such as GATE, GRE, and UPSC, along with tips on time management and profile building for higher studies. The final session focuses on essential soft skills, including resume building, communication, and personal branding, equipping participants with the tools to succeed in job interviews and professional environments. The day concludes with a valedictory session, offering a summary of key insights, a Q&A with the guest speaker, and certificate distribution.

### 4. TECH TALK

The event kicked off with an insightful Session 1 on "Emerging Trends in Technology," exploring the transformative impact of AI, IoT, and Industry 4.0 on modern industries. After a refreshing tea break, Session 2 delved into "Tech Innovation – Startup & Research Perspective," focusing on bridging the gap between academia and industry through groundbreaking innovation. Following a well-deserved lunch break, an engaging Interactive Panel Discussion on "Future Skills for Engineering Graduates" brought together industry experts, faculty, and alumni to discuss the evolving skillset required in today's tech-driven world. The day concluded with a closing ceremony, certificate distribution, feedback session, and a heartfelt vote of thanks, leaving attendees with a deeper understanding of the current tech landscape and the future of engineering education.

## 5. CROSS WORDS

The event began with an exciting Preliminary Round, featuring a written crossword challenge, either individual or team-based, with top scorers advancing to the final round. After a refreshing tea break, participants gathered for the high-energy Final Round – Crossword Showdown, a live, timed challenge that tested both speed and accuracy. Following a lunch break, the Fun Round & Audience Engagement session took center stage, inviting the audience to participate in spot crosswords, a buzzer round, and other puzzles, with small prizes for winners. The day concluded with the Valedictory Session, where the winners were announced, and certificates and prizes were distributed. A heartfelt vote of thanks wrapped up the event, celebrating the enthusiasm and participation of everyone involved.

## 6. Technical Quiz

Technical quizzes are important because they help reinforce knowledge, identify skill gaps, and encourage continuous learning in a focused and engaging way. By challenging individuals to apply concepts and problem-solving abilities, technical quizzes promote deeper understanding and retention of subject matter. They also prepare learners for real-world scenarios and competitive environments, boosting confidence and readiness for interviews or professional tasks. Overall, technical quizzes serve as an effective tool to measure and enhance both theoretical knowledge and practical skills.

## Faculty Development Programs Organized

### Wireless Communication Systems

The week-long program titled "Wireless Communication Systems: 5G and Beyond," held from October 23 to October 28, 2023, featured expert speakers including Dr. K. Naga Prakash, Professor of ECE at Gudlavalleru Engineering College; P. Suresh Varma, Professor of CSE at Adi Kavi Nannaya University; and Dr. B. Nancharaiah, Professor of ECE at Usharama College of Engineering & Technology. The workshop, conducted in virtual mode, attracted 125 participants and provided an in-depth exploration of the latest advancements and future trends in wireless communication technologies, focusing on 5G and beyond.

**Faculty Development Programs Attended**

1. Dr. Nancharaiah Battula, Professor, actively participated in the Five-Day Workshop on Machine Learning and Data Science held at Birla Global University from 11th to 15th September 2023.
2. Dr. Jeya Kumar, Professor, actively participated in the Five-Day Workshop on Machine Learning and Data Science held at Birla Global University from 11th to 15th September 2023.
3. Mr. Sai Siva Kalyan Jasthi, Assistant Professor, actively participated in the Five-Day Faculty Development Program on "Emerging Research Areas in Advanced VLSI System Design & Challenges: Semiconductor to End Application" held at PACE Institute of Technology and Sciences from 4th to 8th December 2023.
4. Mr. Ramakrishna Reddy Eamani, Assistant Professor, actively participated in the Five-Day Faculty Development Program on "Emerging Research Areas in Advanced VLSI System Design & Challenges: Semiconductor to End Application" held at PACE Institute of Technology and Sciences from 4th to 8th December 2023.
5. Mr. Padmanabhaiah Gottipati, Assistant Professor, actively participated in the Five-Day Faculty Development Program on "Emerging Research Areas in Advanced VLSI System Design & Challenges: Semiconductor to End Application" held at PACE Institute of Technology and Sciences from 4th to 8th December 2023.
6. Koteswara Kishore Movva Assistant Professor, SuneethaGatikanti Assistant Professor, NityaKanakamedala Assistant Professor, Sarath Chandra Atluri Assistant Professor, AmmanaPanchakarla Assistant Professor, Suman actively participated in the Five-Day Faculty Development Program on "Emerging Research Areas in Advanced VLSI System Design & Challenges: Semiconductor to End Application" held at PACE Institute of Technology and Sciences from 4th to 8th December 2023.
7. Mr. Suneel Kattuboyina, Assistant Professor, actively participated in the Five-Day Workshop on Machine Learning and Data Science held at Birla Global University from 11th to 15th September 2023, and the Five-Day Faculty Development Program on "Emerging Research Areas in Advanced VLSI System Design & Challenges: Semiconductor to End Application" held at PACE Institute of Technology and Sciences from 4th to 8th December 2023.
8. Ms. Uma Guguloth, Assistant Professor, actively participated in the Five-Day Workshop on "Cloud Infrastructures (AWS)" organized by Brainovision Solutions India Private Limited from 21st to 25th August 2023, and also in the Five-Day Workshop on Machine Learning and Data Science held at Birla Global University from 11th to 15th September 2023.

9. Mr. Kota Sandeep, Assistant Professor, actively participated in the Five-Day Workshop on "Cloud Infrastructures (AWS)" organized by Brainovision Solutions India Private Limited from 21st to 25th August 2023, and also in the Five-Day Workshop on Machine Learning and Data Science held at Birla Global University from 11th to 15th September 2023.
10. Mr. Ravi Muthamala, Assistant Professor, actively participated in the Five-Day Workshop on "Cloud Infrastructures (AWS)" organized by Brainovision Solutions India Private Limited from 21st to 25th August 2023, and also in the Five-Day Workshop on Machine Learning and Data Science held at Birla Global University from 11th to 15th September 2023.
11. Mr. Sri Venkata Sai Kalyan Kothapalli, Assistant Professor, actively participated in the Five-Day Workshop on "Cloud Infrastructures (AWS)" organized by Brainovision Solutions India Private Limited from 21st to 25th August 2023, and also in the Five-Day Workshop on Machine Learning and Data Science held at Birla Global University from 11th to 15th September 2023.
12. Mr. Rajesh Govada, Assistant Professor, actively participated in the Five-Day Workshop on "Cloud Infrastructures (AWS)" organized by Brainovision Solutions India Private Limited from 21st to 25th August 2023, and also in the Five-Day Workshop on Machine Learning and Data Science held at Birla Global University from 11th to 15th September 2023.
13. Battu Chandini Assistant Professor, Lakshmi PrasannaRamiseti Assistant Professor, Thota Srinivasarao Assistant Professor, Naga Ravi Kumar Kondaveeti Assistant Professor, Sravani Kapavarapu Assistant Professor, actively participated in the Five-Day Workshop on "Cloud Infrastructures (AWS)" organized by Brainovision Solutions India Private Limited from 21st to 25th August 2023, and also in the Five-Day Workshop on Machine Learning and Data Science held at Birla Global University from 11th to 15th September 2023.
14. Mr. Basava Tirumala Boppana, Assistant Professor, actively participated in the Five-Day Workshop on Machine Learning and Data Science held at Birla Global University from 11th to 15th September 2023.
15. Ms. Raja Kumari Motupalli, Assistant Professor, actively participated in the Five-Day Workshop on Machine Learning and Data Science held at Birla Global University from 11th to 15th September 2023.
16. Mr. Bhaskar Karra, Assistant Professor, actively participated in the Workshop on Teachers Training and Research held at Bhopal, and also in the Five-Day Workshop on Machine Learning and Data Science conducted at Birla Global University from 11th to 15th September 2023.

17. Mr. Sreedhar Tandle Assistant Professor, Mr. Syam Kumar Athota Assistant Professor, Mr. Suresh Pothuraju Assistant Professor, Ms. Siva Padmavathi Donepudi, Assistant Professor, actively participated in the Five-Day Workshop on Machine Learning and Data Science held at Birla Global University from 11th to 15th September 2023.
18. Ms. Tirupatamma Sonti, Assistant Professor, Mr. Nagaiah Bandaru, Assistant Professor, actively participated in the Five-Day Workshop on "Cloud Infrastructures (AWS)" organized by Brainovision Solutions India Private Limited from 21st to 25th August 2023.
19. Mr. Raja Ramesh Vanga, Assistant Professor, actively participated in the Five-Day Workshop on "Cloud Infrastructures (AWS)" organized by Brainovision Solutions India Private Limited from 21st to 25th August 2023, and also in the Five-Day Faculty Development Program on "Emerging Research Areas in Advanced VLSI System Design & Challenges: Semiconductor to End Application" held at PACE Institute of Technology and Sciences from 4th to 8th December 2023.
20. Mr. Suresh Tammuluri, Assistant Professor, actively participated in the Five-Day Workshop on "Cloud Infrastructures (AWS)" organized by Brainovision Solutions India Private Limited from 21st to 25th August 2023, and also in the Five-Day Faculty Development Program on "Emerging Research Areas in Advanced VLSI System Design & Challenges: Semiconductor to End Application" held at PACE Institute of Technology and Sciences from 4th to 8th December 2023.
21. Mr. Ratna Kishore Madasu, Assistant Professor, actively participated in the Five-Day Faculty Development Program on "Emerging Research Areas in Advanced VLSI System Design & Challenges: Semiconductor to End Application" held at PACE Institute of Technology and Sciences from 4th to 8th December 2023, and also in the Five-Day Workshop on Machine Learning and Data Science conducted at Birla Global University from 11th to 15th September 2023.
22. Mr. Mahesh Vunnam, Assistant Professor, ShaikLal John Basha Assistant Professor, Pedaraju Kuraganti Assistant Professor actively participated in the Five-Day Faculty Development Program on "Emerging Research Areas in Advanced VLSI System Design & Challenges: Semiconductor to End Application" held at PACE Institute of Technology and Sciences from 4th to 8th December 2023, and also in the Five-Day Workshop on Machine Learning and Data Science conducted at Birla Global University from 11th to 15th September 2023.

**Students Participation in Inter College Competitions**

<b>Student</b>	<b>Name of the Event</b>	<b>Name of the Organization</b>	<b>Date of the Event</b>	<b>Prize</b>
Balla Ramya	Paper Presentation	SRK Institute of Technology	28 July 2023	Second Place
Gadireddy Devesh Kumar	Project expo	SRK Institute of Technology	28 July 2023	Second Place
Goriparthi Swathi	Paper Presentation	Andhra Loyola Institute of Technology	4 September 2023	First Place
Kanakala Nikhitha	Project expo	Vasi Reddy Venkatadri Institute of Technology	4 July 2023	Second Place
Kanchanapalli Jaswanth Naga Prabhu	Paper Presentation	SRK Institute of Technology	17 October 2023	Third Place

**Editorial Members**

**Chief Editors**

**Dr K. Babu Rao,Professor.**

**Mr.E.Ramakrishna Reddy,Asst. Professor.**

**Associate Editors**

**S.Vamsi- II ECE.**

**Arumalla Akhila- II ECE.**

**Derangula Raviteja III ECE.**

**Ella Deepika- III ECE.**

**Mekala Priyanka-IV-ECE.**

**Sunkara Tanuja - IV-ECE.**