NALLA NARASIMHA REDDY

Education Society's Group of Institutions - Integrated Campus

(UGC AUTONOMOUS INSTITUTION)

EAMCET/ECET/ICET/PGECET Code NNRG

SCHOOL OF ENGINEERING

DEPARTMENT

OF

ELECTRONICS AND COMMUNICATION ENGINEERING

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NECTOR

NNRG EC TECHNOCRATS ORNATE REPORT



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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



NNRG EC TECHNOCRATS ORNATE REPORT

NECTOR

2026-2027

(JULY-AUGUST)

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NECTOR-ECE

SCHOOL OF ENGINEERING

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

INSTITUTE's VISION AND MISSION

VISION:

- To be a premier institution ensuring globally competent and ethically strong professionals.

MISSION:

- To provide higher education by refining the traditional methods of teaching to make globally competent professionals.
- To impart quality education by providing the state-of-the-art infrastructure and innovative research facilities.
- To practice and promote high standards of professional ethics, transparency and accountability.

DEPARTMENT's VISION AND MISSION

VISION:

- To produce creative Electronics and Communication Engineering graduates with cutting edge technology and Research to meet Industry and societal needs.

MISSION:

- To provide innovative learning environment to enable the students to face the challenges.
- To provide value-based education by promoting activities addressing societal needs.
- To enable graduates to develop the skills to solve complex problems in multidisciplinary activities.

Nalla Narasimha Reddy Group of Institutions
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1. SALIENT FEATURES

ABOUT ECE

DEPARTMENT

Electronics is the branch of study that has revolutionized the life style of humanity. It is a pace setter and a prime mover behind the transition to a technological society. The field of Electronics and Communication Engineering encompasses all areas of human life. Radio, television, telephones, computers, automobiles and house-hold appliances, lifesaving medical equipment and space vehicles represent a mere sample in the wide spectrum of application of Electronics.

In the age of satellite transmitted television and transcontinental computer network, the challenge and opportunities in this profession continue to mushroom. Electronics and Communication Engineering graduates have unlimited opportunities in the field of terrestrial and extra-terrestrial communication systems like telephones, cellular phones, television, optical fiber communication, consumer and entertainment devices. Highly rewarding and greatly satisfying opportunities await the Electronics and Communication Engineers in the field of satellite space programs, embedded technologies etc.

The Department of Electronics and Communication was started in the year 2009. It is a full-fledged academic department for emerging ECE engineers. B.Tech. (ECE) program was duly approved by the AICTE and affiliated to JNTU, Hyderabad. An intake of 60 was sanctioned initially and then it is raised to 180 from the year 2019. PG Program (M.Tech.) with specialization in “Embedded Systems & VLSI” is approved by AICTE for the academic year 2013-14 with an approved intake of 18. For the academic year 2024-25, there are 11 students enrolled in the booming M.Tech Program successfully.

There are 33 Faculty members in the department which includes 8 doctorates from various reputed institutions, and 12 faculty members pursuing their Ph.D. The department is equipped with 8 spacious and well-developed laboratories. Seminars, Workshops and Technical Symposia are regularly conducted in the department to keep faculty and students updated with latest developments in various fields. The department is committed to provide opportunity to embark on a rewarding and exciting learning journey in preparation for a future career.

The Electronics & Communication Engineering (ECE) Department has built a reputation for excellence in teaching and service. Electronic engineers are changing the world to a comfortable global home. The information and technology revolution has been built on the advances of Electronics.

ECE is making exhilarating progress in areas ranging from microelectronics, mobile communications to VLSI Design Automation. The students are inspired by the expertise and knowledge of our faculty, integrating practical with challenging and interesting course-work.

The software's and major Equipment that are available in the department are:

Cadence EDA Tool

- MATLAB-2014b and Tool Boxes (Simulink, Image Processing, Communication, Signal Processing and Digital Signal Processing System)
- Spectrum Analyzer and Signal Generator
- OFDM trainer kit
- Digital Signal Processors Kits (TMS320C6713)
- MPMC COTEX M3
- Advanced RISC Machine Processor Kits (LPC2148)
- Xilinx SPARTAN 3E FPGA Boards
- Artix-7 FPGA kit, Zynq-7000 SoC kit
- Xilinx Vivado tool

2. DEPARTMENTAL EVENTS

Elite Gathering

2.1 II ECE B.TECH



II ECE Elite Gathering 28/08/2026



The Department of Electronics & Communication Engineering, NNRG, organized a one-day "Elite Gathering" program for B.Tech II Year, I-Semester ECE students on 28th August 2026. The program focused on the themes "Think Before You Click" and "Can Innovation Save the Earth."

The session highlighted the importance of responsible digital behaviour, including avoiding misinformation, phishing, privacy breaches, and harmful online interactions. It also discussed how technology and innovation can contribute to environmental sustainability through renewable energy, carbon capture, vertical farming, and AI-based resource management, while emphasizing that human responsibility, conservation, policy, and responsible consumption are equally important.

A screening process was conducted on 27th August 2026, after which nine students were selected as speakers/participants.

The gathering was attended by senior professors and faculty members. The reported outcomes included developing leadership and professional skills, executive presence, networking, peer mentoring, and collaborative abilities through discussions and case studies.

Overall, the Elite Gathering provided students with a platform to develop leadership qualities, understand responsible use of technology, and explore the role of innovation in creating a sustainable future.

For more information: https://nnrg.edu.in/PDF/events/ECE/GL_Road%20%20Map%20to%20Success.pdf

2.2 III ECE B.TECH





The Department of Electronics & Communication Engineering at Nalla Narasimha Reddy Education Society's Group of Institutions, Hyderabad, organized a one-day "Elite Gathering" for B.Tech III Year, I-Semester ECE students on 24th August 2026 at the ECE Seminar Hall. The program was conducted in collaboration with the college management and ECE Department.

The gathering focused on the themes "Small Steps Big Changes" and "India, I want to See." It emphasized how small, consistent actions, micro-innovations, policy improvements, and community initiatives can contribute to long-term social and economic transformation. The program also encouraged students to envision an India driven by technological leadership, economic growth, inclusive development, sustainable infrastructure, quality education, cultural preservation, and ethical innovation.

The event provided students with an opportunity to develop communication, leadership, teamwork, confidence, creative thinking, and cultural awareness while interacting with peers and faculty. Six students participated as speakers during the gathering.

The program concluded with a focus on converting broader visions into practical, measurable actions and encouraging collaboration towards future-ready infrastructure, quality education, and ethical digital transformation.

For more information: https://nnrg.edu.in/PDF/events/ECE/II%20EC%20E%2028-08-2026%20(photo).pdf

3. INSTITUTIONAL EVENTS

3.1 I-Year Orientation program

The Director, **Dr. C. V. Krishna Reddy**, welcomed the dignitaries, faculty, parents, and students, and congratulated parents for choosing NNRG. He highlighted that the institute, established in 2009 on a 16-acre green campus, is committed to producing globally competent and ethically strong professionals, with a special focus on advanced fields like semiconductors and emerging technologies.





Dr. Ravi Bolimera, Head of ECE, addressed first-year B.Tech ECE students and their parents, highlighting the department's state-of-the-art labs and equipment. He emphasized opportunities in hardware, software, and government sectors like ISRO and defense.

Dr. Ravi Bolimera noted the department's 10 Ph.D. Faculty and over 80% placement rate in hardware companies. He also discussed the growing demand for ECE graduates in the future.

3.2 Guest Lecture

"Beyond Engineering: Roadmap to Success"






Date: 29th July 2026

Venue: ECE Department, in association with ADDA 24/7

Speakers: Mr. A. Anjaneyulu and Mr. V. Nageswara Rao

The Department of ECE organized a programme titled "Beyond Engineering: Road Map to Success" in association with ADDA 24/7, with 180 student participants. Dr. Ravi Bolimera, HOD, ECE, delivered the welcome address. The speakers highlighted career planning, communication, leadership, and opportunities in SSC, RRB, Banking, Government organizations, and PSUs. The programme also introduced the ADDA 24/7 mobile application for competitive examination preparation, helping students explore diverse career opportunities beyond engineering.

For more information: https://nnrg.edu.in/PDF/events/ECE/GL_Road%20Map%20to%20Success.pdf?utm_source=chatgpt.com

4. FACULTY ACHIEVEMENTS

4.1 Faculty R&D Achievements – July–August 2026

Journals

1. **Mr. Nitesh Gaikwad** – "Artificial Intelligence for Blood–Brain Barrier Permeability Prediction: Recent Advances and Future Directions". *International Journal of Drug Delivery Technology (IJDDT)*, Vol. 16, 2026, August, pp. 94–100. **SCOPUS**.

Conferences

1. **Shetty Sravanthi (B), Ravi Bolimera, Rambabu Kambhampati, Bhargavi Ravulapalli, Sai Kiran Shanigarapu, and Vinay Teja Rapolu** – "Agriculture Automation and Intelligent Crop Planning System". *2025 International Conference on Artificial Intelligence and Software Engineering (ICAISE 2025)*, August, pp. 654–661. **Springer (Published)**.
2. **Vangala Swapna, Sravanthi, Rambabu Kambhampati, K. Anuradha, Ravi Bolimera, S. K. Fairooz** – "Context-Aware Device Interaction Optimization in Smart Home IoT Systems". *7th International Conference on Artificial Intelligence and Smart Environments (ICAISE 2025)*, August, pp. 649–653. **Springer (Published)**.
3. **K. Anuradha, Shetty Sravanthi, V. Venkata Nandhini, B. V. Sai Krishna, B. Hemanth Kumar, G. Karthik** – "Smart AI Temperature Control System with ESP32 and Alerts". *2026 International Conference on Data Science and Business Systems (ICDSBS)*, August, pp. 1–5. **IEEE (Published)**.
4. **Suresh Nalla, Pininti Nanditha, Pannala Charan Teja, Pagidimunthala Varaprasad, Ravi Bolimera, Alampally Aravind** – "IoT Enabled Robotic Vehicle for Environmental Monitoring and Hazard Detection in Radiation Zones". *International Conference on Artificial Intelligence and Software Engineering*, August, pp. 679–684. **Springer (Published)**.
5. **K. Anuradha, V. Sherlin Solomi, S. Ravichand** – "Region Norm VLM: QLoRA-Enhanced Vision–Language Model with Region Proposals and Indic Normalisation for Telugu Scene Text Captioning". *7th International Conference on Artificial Intelligence and Smart Environments (ICAISE 2025)*, August, pp. 671–675. **Springer (Published)**.

4.2 Faculty Participation – July–August 2026

School of Engineering – Department of Electronics & Communication Engineering
Academic Year: 2026–27 | **Semester:** I | **Date:** 15/09/2026

S. No	Publications	<= 2 Days	2 to 5 Days	> 5 Days	Total
1.	FDP	-	-	3	03

S.NO	NAME OF THE FACULTY	TITLE	PLACE/ORGANIZATION	DATE(S)
1	DR. NITESH GAIKWAD	INTEGRATING INDIAN KNOWLEDGE SYSTEM FOR HOLISTIC EDUCATION	UGC-MALAVIYA MISSION TEACHER TRAINING CENTRE-JNTUHMMTTC	01-09-2026 TO 08-09-2026
2	MR. N. SURESH	RAILWAY SIGNAL ENGINEERING AND AUTOMATIC TRAIN PROTECTION SYSTEM -KAVACH	INDIAN RAILWAYS INSTITUTE OF SIGNAL ENGINEERING AND TELECOMMUNICATION (IRISET)	27-07-2026 TO 07-08-2026
3	MS. G. SOUMYA	RAILWAY SIGNAL ENGINEERING AND AUTOMATIC TRAIN PROTECTION SYSTEM -KAVACH	INDIAN RAILWAYS INSTITUTE OF SIGNAL ENGINEERING AND TELECOMMUNICATION (IRISET)	27-07-2026 TO 07-08-2026

5. STUDENT'S ACHIEVEMENTS

5.1 Academic Toppers of IV SEM — II B.Tech ECE

Batch 2024-25 **Regulation: R22**

Class	Position	Roll No.	Name of the Student	SGPA	CGPA
II ECE	1	247Z1A04C1	MUDUMBAI ABDHIJA	9.65	9.35
	2	247Z1A04D4	NARMEEN ZARA	9.05	9.09
	3	247Z1A04A3	MADIHA TAHSEEN	9.00	9.33
II ECE - A	1	247Z1A0467	GOVINDULA ARCHANA	8.50	8.64
	2	247Z1A0419	BHUKYA ASMITHA	8.40	8.41
	3	247Z1A0466	GEDDAVALASA SAIKUMAR	8.30	8.33
II ECE - B	1	247Z1A04C1	MUDUMBAI ABDHIJA	9.65	9.35
	2	247Z1A04D4	NARMEEN ZARA	9.05	9.09
	3	247Z1A04A3	MADIHA TAHSEEN	9.00	9.33
II ECE - C	1	247Z1A04H0	SUNKARI AKHILA	8.70	8.86
	2	247Z1A04E5	PYATA NANDINI	8.65	9.13
	3	247Z1A04G5	SHYAMALA NIHARIKA	8.45	9.01
	4	257Z5A0404	CHAMAKURA SRUTHI	8.45	8.53

5.2 Academic Toppers of IV SEM — III B.Tech ECE

Batch 2023-24 **Regulation: R22**

Class	Position	Roll No.	Name of the Student	SGPA	CGPA
III ECE	1	237Z1A0444	DORA GAYATHRI DEVI	9.20	9.35
	2	237Z1A0452	GANDAMALLA SINDUJA	9.20	8.90
	3	237Z1A0469	GURRALA AKSHITHA	9.05	9.26
	4	237Z1A04C2	N SAI RAM	9.05	9.13
	5	237Z1A04H1	SILPOJU ASHWITHA	9.00	9.26
III ECE - A	1	237Z1A0444	DORA GAYATHRI DEVI	9.20	9.35
	2	237Z1A0452	GANDAMALLA SINDUJA	9.20	8.90
	3	237Z1A0469	GURRALA AKSHITHA	9.05	9.26
	4	237Z1A0420	BEJJANKI MEGHANA	8.90	9.19
III ECE - B	1	237Z1A04C2	N SAI RAM	9.05	9.13
	2	237Z1A04A4	LADE KEERTHANA	8.65	8.29
	3	237Z1A0474	JANGA BHAVANA	8.50	8.33
III ECE - C	1	237Z1A04H1	SILPOJU ASHWITHA	9.00	9.26
	2	247Z5A0409	KOYALKAR PALLAVI	8.80	9.19
	3	247Z5A0413	SAPA SANDHYA RANI	8.80	9.04
	4	237Z1A0413	VAGGU BINDHU	8.55	8.45

6. TRAINING & PLACEMENT

6.1 AI and Soft Skills Training

Date: 24th August 2026 to 2nd September 2026

Venue: ECE Department, in association with Magic Bus India

Speaker: Mr. J. Seetharam, Training Manager, Magic Bus India

The Department of ECE organized a one-week training programme on “AI and Soft Skills Training” for 68 students in association with Magic Bus India. The programme focused on AI tools, communication, critical thinking, teamwork, conflict management, and responsible AI usage, equipping students with essential technical and interpersonal skills for professional development.



For more information:AIandSoftSkills2k26.pdfhttps://nnrg.edu.in/PDF/events/ECE/AIandSoftSkills2k26.pdf

7. EDITORIAL COLUMN

7.1 FACULTY EDITORIAL COLUMN

Optical and Neuromorphic Computing

The computing industry is entering a new era where traditional electronic processors are increasingly being complemented by **optical and neuromorphic computing technologies**. With the growing demands of Artificial Intelligence (AI), 6G communications, autonomous systems, robotics and edge computing, these technologies offer new possibilities for faster and more energy-efficient processing. **Optical computing** uses photons to process and transmit information, offering high bandwidth, low latency and potential energy savings. **Neuromorphic computing**, on the other hand, takes inspiration from the human brain and uses architectures based on neurons and synapses. Spiking Neural Networks (SNNs) process information through discrete spikes, making them suitable for low-power and real-time applications.

The combination of photonic and neuromorphic computing is an emerging research direction with potential applications in **6G networks, intelligent systems, autonomous robotics and high-performance AI**.

-Mrs. Shiva Prasanna Kannagulla

Assistant Professor

7.2 STUDENT EDITORIAL COLUMN

Blockchain Lab: Building the Future of Secure and Decentralized Engineering

Blockchain technology has evolved beyond cryptocurrencies and is becoming an important area of engineering education and research. A **Blockchain Lab** provides students with hands-on exposure to distributed ledgers, cryptography, consensus mechanisms and decentralized networks.

Students can work with technologies such as **Ethereum, Solidity, Remix IDE, Hardhat and Web3 libraries** to create blockchain networks, develop smart contracts, validate transactions and build decentralized applications.

For ECE students, blockchain can be combined with **IoT and cybersecurity** for applications such as secure sensor-data sharing, smart agriculture, device authentication, supply-chain tracking and tamper-resistant academic certificates.

A well-designed Blockchain Lab can therefore serve not only as a learning facility but also as a platform for **innovation, research, interdisciplinary projects and entrepreneurship**, helping students prepare for a secure and digitally connected future.

-K. Harshavardhan Goud

247Z1A0477

8. ALMA CORNER

8.1 Alma Reflection



D.Srija

Working at UTS, Kondapur

Role: Embedded Hardware team

I am **D. Srija**, a graduate of the **2026 batch**, currently working at **Unistring Tech Solutions, Kondapur** as part of the **Embedded Hardware Team**. My role involves working on **SDR and FPGA boards**, with responsibilities including **testing, debugging, flashing, and programming** at the **R&D level**.

My experience in the embedded hardware domain has helped me develop practical skills in hardware testing, troubleshooting, programming, and working with advanced development platforms. Working in an R&D environment has provided me with valuable exposure to real-world engineering challenges and strengthened my problem-solving and technical abilities.

My journey from graduation to working in the embedded hardware industry has given me an opportunity to apply my academic knowledge to practical applications while continuously learning and improving my technical expertise.