SCHOOL OF ENGINEERING

Department
of
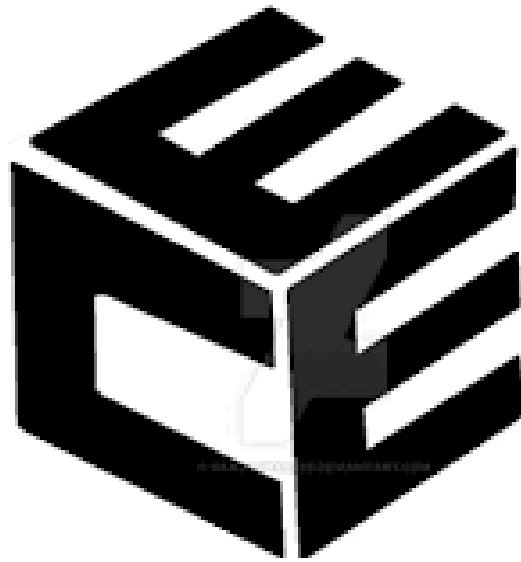## Electronics and Communication Engineering

NNRG EC Technocrats Ornate Report
NECTOR

NALLA NARASIMHA REDDY EDUCATION SOCIETY'S GROUP OF INSTITUTIONS (AUTONOMOUS INSTITUTION)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

NNRG EC Technocrats Ornate Report
NECTOR
2024-2025
(JUL-AUG)

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.

EDITORIAL BOARD

DEPARTMENT OF ELECTRONICS & COMMUNICATIONS ENGINEERING

NNRG EC Technocrats Ornate Report
NECTOR
2023-24

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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, office machinery 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 0 from the year 2019. PG Programme in M.Tech with specialization VLSI & Embedded Systems is approved by AICTE for the academic year 2013-14, with an intake of 18. Faculty of the department are 33 in number, out of them 8 are doctorates from various reputed institutions, and 12 faculty are pursuing their PhD. Younger faculty of the department is having more than 4 years of teaching experience. Department is having eight well equipped and spacious state-of–the-art laboratories. Seminars,Workshops and Technical Symposia are conducted in the department to keep faculty and students updated with latest developments in various technologies. The department is committed to provide students the 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. In labs and classrooms, students draw on the expertise and knowledge of our faculty, integrating practical with challenging and interesting course-work. The team approach is very warm in the Department.

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, SignalProcessing and Digital Signal Processing System)
- Spectrum Analyzer and Signal Generator
- OFDM trainer kit
- Digital Signal Processors Kits (TMS320C6713)
- 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

➢ AMCAT

AMCAT (Aspiring Minds Computer Adaptive Test) is an employability assessment. Mr. Chandrahas, AMCAT Manager explained about moto AMCAT & its benefits for candidates access to job opportunities across multiple sectors on 24/07/2024.

He explained about the importance of aptitude, technical knowledge, logical reasoning, and language proficiency ensuring to meet industry requirements and kept an sample assessment test.
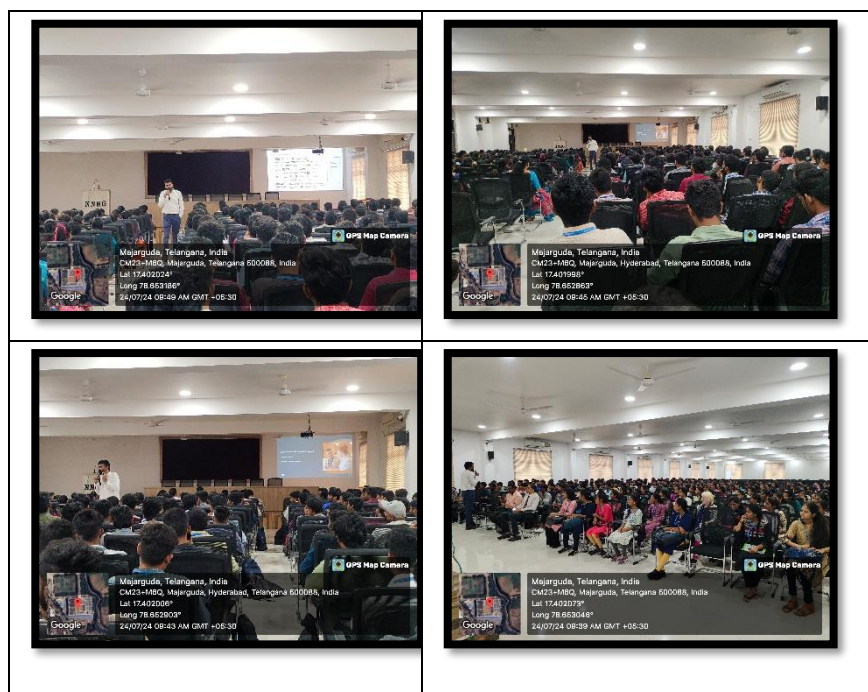
Glimpse of program
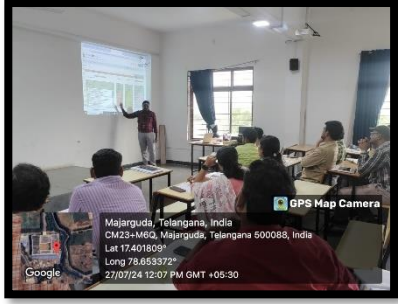
➢ NBA(CO-PO Mapping)

Department has organized sessions on CO-PO Mapping & Attainment for NBA. This   enlightened the faculty in their subjects. Faculty members acted as **r**esource Persons and elaborated about the importance of Course Outcomes, Program Outcomes, Mapping & Attainment and concluded the sessions with the COPO mapping & attainment process. This   helps ensure that there is coherence and alignment between individual courses and the overall program, and that students are making progress towards achieving the desired learning

outcomes. It also provides valuable information for curriculum review and improvement.

The following faculty members explained about the CO-PO Mapping &Attainment.

S.No.	Name of the Faculty	Subject	Date
1	Dr. B. Ravi	Digital signal Processing	27/07/2024
2	Ms. E. Suneetha	Analog Circuits	01/08/2024
3	Ms. K. Shiva Prasanna	Electronic Circuit Analysis	01/08/2024
4	Ms. N. Lavanya	Electronic Devices and Circuits	01/08/2024
5	Dr.B.Hari Prasad Naik	Antenna Wave Propagation	03/08/2024
6	Dr.S.Rekha	Network Analysis and Synthesis	03/08/2024
7	Ms.G.Soumya	Signals and Systems	05/08/2024
8	Dr.V.Sravan Kumar	Python Programming	05/08/2024
9	Ms.K.Madhavi	Digital Image Processing	06/08/2024
10	Ms.Anuradha.K	Digital Logic Design	07/08/2024
11	Mr.N.Raju	Analog and Digital Commmunications	07/08/2024

Dr.B.Ravi HOD-ECE explaining CO of Digital Signal Processing subject

Ms. E. Suneetha, Associate Professor explaining about CO of Analog Circuits

Ms. K. Shiva Prasanna, Assistant Professor explaining about CO of Electronic Circuit Analysis

Ms. N.Lavanya,Assistant Professor explaining about CO of Electronic Devices and Circuits

Dr.B.Hari Prasad Naik,Associate Professor explaining about CO of Antenna Wave Propagation

Dr.S.Rekha, Associate Professor explaining about CO of Network Analysis and Synthesis

Ms. G.Soumya,Assistant Professor explaining about CO of Signal and Systems

Dr.V.Sravan Kumar, Associate Professor explaining about CO of Python Programming

Ms. K.Madhavi,Assistant Professor explaining about CO of Digital Image Processing

Ms.K.Anuradha,Assistant Professor explaining about CO of Digital Logic Design

Mr. N.Raju,Assistant Professor explaining about CO of Analog and Digital Communications

➢ **Industrial Visit: Geological Survey of India**

The Department of Electronics & Communication Engineering of Nalla Narasimha Reddy Education Society's Group of Institution, Hyderabad with the support of college management and department staff had organized an Industrial Visit program (1-day program) for B.Tech. (ECE) students on 12th August 2024 (Monday) to 'GEOLOGICAL SURVEY OF INDIA (GSI)', Bandlaguda, Hyderabad following an invitation from them on the workshop titled "SPACE TECHNOLOGY APPLICATIONS" for the commemoration of maiden 'National Space Day'.

The Speakers who were Senior Scientists working at GSI highlighted various aspects of application of space technology, used and to be used in the coming days for the launch of missiles and satellites for the benefit of exploring the solar system & universe with its elements.

Group photo with delegates of the program.

Chief Guest delivering her talk on ISRO achievements.

Resource Person speaking on Chandrayaan-3 mission success.

Faculty & Students with chief guest and dignitaries.

3. INSTITUTIONAL EVENTS

➢ Inauguration of Robotics Club (NIKRos)

NNRG officially inaugurated the NIKRos (NNRG Innovation Knight of Robotics), marking a significant milestone with the formal inauguration of the Robotics Club on 09/07/2024.The event is a fusion of innovation and enthusiasm. Mrs. Madhavi K, Assistant Professor, ECE Department will act as a Coordinator for NIKRos. Robotics plays avital role in automation and embedded system and has a wide scope of innovation. To cater this requirement, NIKRos, a robotics club was established.

Dr C. V. Krishna Reddy, Director, NNRG inaugurated the event with a cordial greeting address. Dr S. Ravi Chand, HoD, ECE stated that the organization intends to establish a center of technological innovation and excellence by staging workshops, competitions, and seminars, with an emphasis on the significance of robotics in the contemporary technological environment and the club's objective to cultivate a culture of creativity and innovation among students. Dr G. Janardhana Raju, Dean, SoE, encouraged the society to organize events in collaboration with the IIIC and IIC. Dr C. V. Krishna Reddy, Director delivered a keynote address, emphasizing the strategic importance of robotics in future development.

Dr. C V Krishna Reddy, Director NNRG addressing the gathering.

Group photo along with students and delegates.

➤ NPTEL E-Workshop

The NNRG and Don Bosco Institute of Technology conducted a "NPTEL E-Awareness workshop" in collaboration with IIT Madras. On August 1, 2024, at 10:00 a.m., NPTEL team members addressed the faculty and students of NNREGSI & DBIT via Zoom. The significance of the meeting is underscored by NPTEL's SPOC, Madhavi K, and Director Dr C V Krishna Reddy. He spoke to the assembly, emphasized the importance of NPTEL, and greeted the expert.

Mrs. Bharathi, the NPTEL team coordinator at IIT Madras, explained the importance of NPTEL courses and their benefits.

Glimpse of program

➤ World Entrepreneurs Day

As a part of Institution's Innovation Council (IIC) a session has organized on "World Entrepreneurs Day Celebrations on 21st August 2024. The session was started by Dr. G Janardhana Raju, the Dean School of Engineering & Convener of IIC, by welcoming the chief guest Prof M L Sai Kumar Dean Academics (Rtd), Institute of Public Enterprise, Hyderabad and Resource Person Mr. Seetha Mounish Patel, CEO, Optimum Pvt Ltd, Hyderabad. The motive behind this event was to create the awareness regarding Innovation and Creativity, This event encouraged aspiring, Entrepreneurs, to Promote Entrepreneurship Education.

Dignitaries on the Dias

Students listening to the resource person

Token of a gifts to the Chief Guest Prof ML Sai Kumar and Guest of Honour Mr Seetha Mounish Patel by the Deans of various schools

➢ Accelerators/Incubation Opportunites for Students & Early-Stage Enterpreneurs
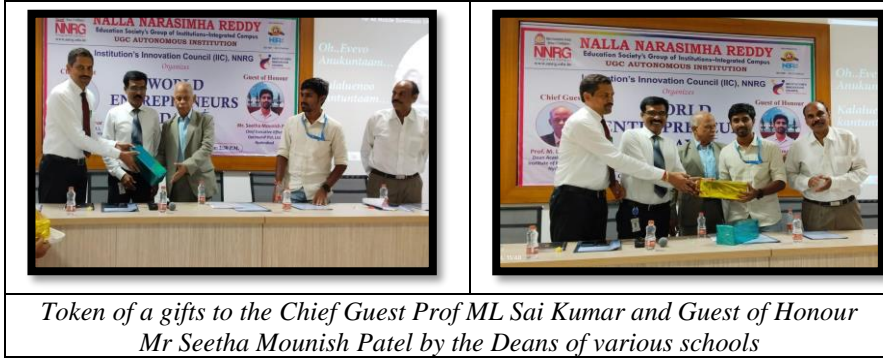
As a part of Institution's Innovation Council (IIC), Nalla Narasimha Reddy Group of Institutions organized a session on "Accelerators / Incubation Opportunities for Students & Faculties Early-Stage Entrepreneurs " by Prof. M.L. Sai Kumar, on 22nd August ,2024 from 11:00 AM to 1:00 PM. The session was started by Dr. G Janardhana Raju, the Dean School of Engineering & Convener of IIC, by welcoming the resource person Professor M L Sai Kumar. The Session started with an activity making the students understand the topic which was to be dealt. The motive behind this event is to spread the awareness regarding Entrepreneurship skill, Attitude and Behavior.

Glimpse of the Program

➢ Lean Start-Up & Minimum Viable Product /Business -Boot Camp/Mentoring Session
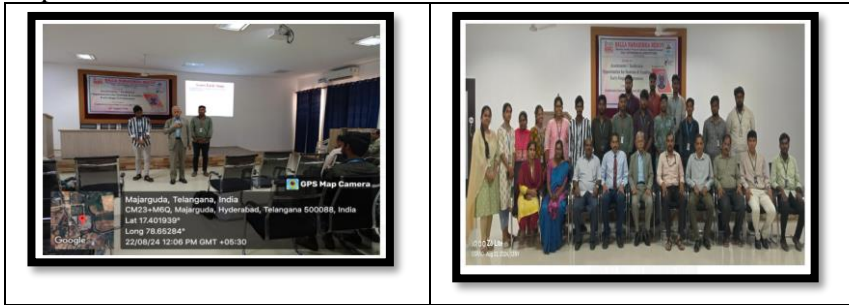
As a part of Institution's Innovation Council (IIC) a session has organized on "Lean Start-up& Minimum Viable Product/Business-Boot Camp (or) Mentoring Session" by Mr. Lingala Naresh, Founder: Tarunam, the Ecopreneur & Creamy Millet on 23-08- 2024. The session was started after the introduction of the resource person. Mr Lingala Naresh shared his insights about it has become central to the success of countless start-ups around the world: the Lean Start-up methodology and the creation of a Minimum Viable Product, or MVP. These concepts, along with the importance of business boot camps and mentoring sessions, are transforming the way we approach entrepreneurship, enabling more people to turn their ideas into successful businesses.

	Mr Lingala Naresh addressing the program	A token of appreciation	

	Interaction with the participants by the speaker	Group Photo along with students	

4. FACULTY ACHIEVEMENTS

4.1 Journal Editorial Board Member

➢ Dr. V. Sravan Kumar, Associate Professor became Editor of STM JOURNALS. He was also Invited as Reviewer for Journal of Electronic Imaging.

4.2 Publications – Journals, Conferences

➢ **Panati S. Sreenivas Reddy**, **P. Michael Preetam Raj**, **Sravan K. Vittapu**, K. Senthil Kumar, published a Scopus Indexed paper entitled "Memristor-Based Counters Circuits for Real-Time Petrol Bunk Applications" at Second International Conference on Intelligent Cyber Physical Systems and Internet of ICoICI 2024   IEEE   Scopus JCT College of Engineering and Technology, Coimbatore, India (Accepted).

➢ **Rambabu Kambhampati**, **Sravan K. Vittapu**, **Ravi Chand Sankuru**, Chennadi Thirumala, Gail Hemakanth, Ganagam Umeshchandra published a Scoupus Indexed Springer Journal entitled "IoT Enabled Multi-Purpose A9G Based Tracker for Enhanced Monitoring Applications" in 7th International Conference on Communications and Cyber-Physical Engineering at GNITS (Accepted).

➢ **S Rekha**, **Prashant K Kulkarni**, Lavanya Poluboyina, Jayaprakasan Veeragamoorthi ,Boda Anjali Asuram, Gone Satish, Boddupally Kavya has published a patent entitled "Design of single layered finger shaped microstrip antenna for sub 6GHz wireless communication" with application number 202441013950 A on 3/8/2024.

➢ Sharmila Ramasamy, Sujatha Loganathaeaswaran, Monisha M, Pooja Sharma, Kuldeep Agnihotri, Udayakumar Umapathy, Sathish Kumar Jayaraman, Gundemadugula Nelson Beena Bethel, **Prashant Kulkarni**, Anthony Savio Herminio da Piedade Fernandes has published a patent entitled" AI-powered data processing device for stock market forecasting" with an application number:6375487 on 8/5/2024.

4.3 FDP's & Webinar's attended

S.No.	Name of the Faculty	Topic	Organization & Place	Duration
1	Dr. B. RAVI	Transforming Education OBE & NEP-2020	CVR College Of Engineering	22-07-2024 to 02-08-2024
		Exploring computational intelligence	VIT-AP university, Amaravati	16-07-2024 to 20-07-2024
2	Dr. S. KARTHICK	One-Week Faculty Development Program on Recent Trends in Wireless Communications and	School of Electronics Engineering (SENSE), VIT-AP University	23-07-2024 to 27-07-2024

		Networks		
3	Mr. A ARAVIND	Empowering Educators with AI and ML: Strategies and application	Department of CSE, Koneru Lakshmaiah education foundation, Hyderabad	08-07-2024 to 12-07-2024
		Exploring computational intelligence	VIT-AP university, Amaravati	16-07-2024 to 20-07-2024
		Cutting Edge Research and Technology in signal processing using MATLAB	MLRIT, Hyderabad	12-08-2024 to 17-08-2024
		NEP 2020 OSP	UGC MMTTC	05-08-2024 to 14-08-2024
4	Mrs. N LAVANYA	Transforming Education, OBE & NEP-2020	CVR College Of Engineering	22-07-2024 to 02-08-2024
		21st Century Competencies for Effective Teaching	H&S, NNRG	31-07-2024 & 02-08- 2024
		Latest developments in RF Technologies in 5G and Beyond	Rajalakshmi Engineering College	30-07-2024 to 06-08-2024
		Exploring Computational Intelligence	VIT-AP university, Amaravati	16-07-2024 to 20-07-2024
		NEP 2020 Orientation & Sensitization Programme	UGC-MMTTC, JNTUH	19-07-2024 to 27-07- 2024.
		NPTEL E-Awareness workshop	NNRG	01-08-2024
		Cutting Edge Technologies in Research and Signal Processing using MATLAB	MLRIT, Hyderabad	12-8-2024 to 17-8-2024
		Empowering Entrepreneurs: unlocking potential, Fastering innovation, Driving growth	Aurora University, AICTE-ATAL	26-08-2024 to 31-08-2024
		Next Gen Communications	Malla Reddy College of engineering for women, AICTE-ATAL	05-08- 2024 to 10-08- 2024
5	Mrs. SWETHA TARIGOPPULA	Transforming Education: Integrating OBE and NEP 2020	Department of Electronics and Communication Engineering, CVR College of Engineering	22-07-2024 to 02-08-2024
		21St Century Competences for Effective Teaching	Department of Humanities and Sciences, NNRG	31-07-2024 to 02-08-2024
		Latest Developments in RF Technologies in 5G and Beyond	Rajalakshmi Engineering College	30-07-2024 to 06-08-2024
6	Mrs. ANURADHA KOTAKADI	Empowering Educators with AI and ML: Strategies and application	Department of CSE, Koneru Lakshmaiah Education foundation, Hyderabad	08-07-2024 to 12-07-2024
		Exploring computational intelligence	VIT-AP University, Amaravati	16-07-2024 to 20-07-2024
		NEP 2020 Orientation & Sensitization Program-14	UGC MMTTC JNTUH	19/07/2024 to 27/08/2024
		NPTEL E-Awareness workshop	NNRG	01/08/2024
		Industrial Applications of Embedded systems and IOT	Rajalakshmi Engineering College	22/08/2024 to 28/08/2024
		Cutting edge Technologies in Signal Processing using MATLAB using MATLAB	MLRIT, Hyderabad	12/08/2024 to 17/08/2024
7	Mr. NITESH GAIKWAD	Cutting Edge Research and Technology in signal processing using MATLAB	MLRIT, Hyderabad	12-08-2024 to 17-08-2024
		Empowering Educators with AI	Department of CSE,	08-07-2024 to

		and ML: Strategies and application	Koneru Lakshmaiah Education foundation, Hyderabad	12-07-2024
8	Mrs. SHIVA PRASANNA K	Empowering Educators with AI and ML: Strategies and application	Department of CSE, Koneru Lakshmaiah Education foundation, Hyderabad	08-07-2024 to 12-07-2024

5. STUDENTS' ACHIEVEMENTS

Assam. Sai Priya bearing Roll Number (227Z5A0409) has got an opportunity to participate In Internship on Full Stack Java from Intern Certify

6. PLACEMENTS

The following IV B. Tech students received interns in the academic year 2023-24.

S. No	Name of the Student	Roll Number	Company
1	E. Nikitha Reddy	207Z1A0443	Containe Technologies
2	T. Pooja	207Z1A04C7	Containe Technologies
3	S. Nandhini Reddy	207Z1A0485	Containe Technologies
4	D. Goureeshwar Reddy	207Z1A0440	Containe Technologies
5	B. Sairam Chakravarthi	207Z1A0422	Containe Technologies

7. EVENTS

➢ Independence Day

78th Independence Day was celebrated on 15-08-2024 in the campus. The celebrations started with unfurling of the flag by our Vice Chairman Nalla Prashanth Reddy & Director Dr. C. V. Krishna Reddy. The students took active participation in program. The Deans of SOE, SOP and SOMS had recalled about great freedom fighters. The program was continued by singing the Patriotic Songs and speeches of the faculty members students.

Glimpse of the program

➢ Orientation Programme-Diploma Students

A student Induction Program was conducted for the II B. Tech Lateral Entry students on 07th Aug, 2024. In induction program head and faculties of the department addressed the students and explained about the role and importance of the electronics branch for their career growth.

Ms. E. Suneetha, Associate Professor addressing the gathering.	*With all the dignitaries, Parents Students.*
Dr. C.V. Krishna Reddy, Director addressing the gathering	*Dr. B. Ravi HOD-ECE addressing the gathering*

Glimpse of the Program

➢ Orientation Programme

NNRG organized Orientation Programme for the upcoming students, joining I B.Tech. ECE, CSE (AIML), IT & Civil into the Academic Year 2024 – 2025.Sri. Nalla Prashanth Reddy, Vice Chairman, NNRG addressed the students to utilize the facilities in the college and support will be extended to them for their career.

Dr. C.V. Krishna Reddy, Director of the Institution, briefed the students about discipline, academic regulations, credit system& punctuality. NNRG is a Ragging Free College & No Drug Abuse in College.

Dr. C.V. Krishna Reddy, Director addressing the gathering.

Dr. B. Ravi, HOD-ECE addressing the gathering.

With all the dignitaries, Parents Students

Prize Distribution to Topper G. Akshitha

Prize Distribution to Topper G. Hemanth

Prize Distribution to Topper P. Dharani

Prize Distribution to Topper Sd. Majeed

Event Publicity in paper

8.ALUMINI

	Hi , I'm Niharika working at Astra microwave products Ltd as Trainee . I'm a 2024 passed out. Nalla Narasimha Reddy is the Best. One of the most memorable experiences during my college life was MUN, NSS These activities helped me in improving my communication and having a knowledge in social affairs and social service & Anchoring, performing with fellow students not only brought joy and creativity into my daily routine but also helped me form lasting friendships. Thanks for the college for all these memories.
	Hi , I'm Chaithanya working at Astra microwave products Ltd as Trainee. Nalla Narasimha Reddy is the Best. One of the most memorable experiences during my college life was MUN. Anchoring, Singing and performing with fellow students not only brought joy and creativity into my daily routine but also helped me form lasting friendships, rehearsals and impromptu jam sessions brought a sense of camaraderie and spontaneity that defined my college years. These versatile events provided a perfect balance to the academic rigors, making my college life truly enjoyable and unforgettable. Thanks for the college for all these memories .

WISHING YOU ALL SUCCESS AND GOOD HEALTH!