





UGC AUTONOMOUS INSTITUTION

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SCHOOL OF ENGINEERING

Department

Electronics and Communication Engineering

NNRG EC Technocrats Ornate Report NECTOR



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

OF ELECTRONICS & COMMUNICATION ENGINEERING



NNRG EC Technocrats Ornate Report NECTOR 2023-24 (JAN-FEB)



NALLA NARASIMHA REDDY

Education Society's Group of Institutions - Integrated Campus



(UGC AUTONOMOUS INSTITUTION)

SCHOOL OF 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 methodsof 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 OF ELECTRONICS & COMMUNICATION ENGINEERING 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

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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 180 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 32 in number out of them 8 are doctorates, and 12 faculty are pursuing their PhD. Younger faculty of the department is having more than 4 years of teaching experience. Department is having nine 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 of ECE.

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. <u>DEPARTMENT EVENTS</u>

2.1 Faculty Development Programme

Emerging Technologies & entrepreneurship-Overseas Education

As a part of Institution's Innovation Council (IIC) a session has organized on "Emerging Technologies and Entrepreneurship- An Overseas Education: Plan & Perception" by Mr. Royadas (Roy) Manthena, on 05th January 2024. The session was started by Dr. G Janardhana Raju, the Dean School of Engineering & Convener of IIC, by welcoming the resource person Mr. Royadas (Roy) Manthena. The motive behind this event is to spread the awareness regarding Emerging Technologies and Entrepreneurship- An Overseas Education: Plan & Perception".



Mr. Royadas (Roy) Manthena sharing his thoughts



Students and Faculty listening to the speaker



Mr. Royadas (Roy) Manthena is being honoured

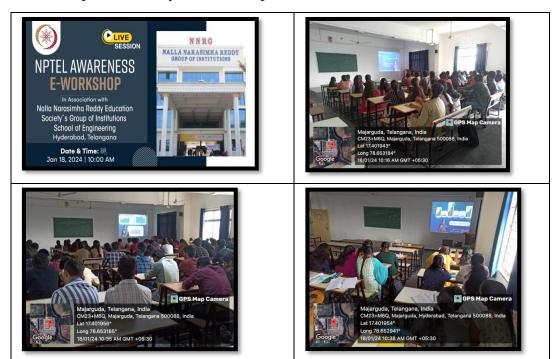


Mr. Royadas (Roy) Manthena & Dr. S.Ravi Chand, HoD ECE along with students

> NPTEL E Awareness Programme

The NPTEL -NNRG Local Chapter has organized a workshop on "NPTEL E-Awareness Program", IIT madras. NPTEL team members addressed the faculties and students on 18th January 2024 at 10 AM.

The SPOC of NPTEL, Madhavi K addressed the gathering and welcome the resource person. The Resource person Mrs.Bharathi, NPTEL team coordinator, IIT Madras, explained clearly about the importance of NPTEL courses and its benefits.



Glimpses of NPTEL E-Awareness

> In-House Training

Department has successfully organized a two week "In-House Training" for IV B.Tech students from 09th to 30th January 2024. The primary objectives of in-house training at our organization is to enhance Skills in students, to improve student performance, to transfer knowledge to the students. We boasted a team of highly qualified faculty members who are actively engaged to train the students.

The topics covered in in-house training can vary widely depending on the specific needs, goals, and focus areas of the department like basic concepts of Number systems, conversions among different number systems, Analog and Digital Communication, Antenna S parameters, description of Spectrum Analyzer, applications and numerical involved in communication etc and also trained the students to enhance soft skills.



Mr. P.K. Kulkarni, Asso. Prof. delivering lecture



Mrs. N. Lavanya, Asst. Prof. delivering lecture



Mr. K. Ramesh, Asst. Prof. delivering lecture



Mr. A Aravind ,Asst Prof. delivering lecture



Mr. B.Saidulu, Asst. Prof. delivering lecture



Assessment test at the end of the training program.

Overview of ISRO & Satellite Ground Station Technologies

The Department and in association with IETE has organized a Guest Lecture Programme on "OVERVIEW OF ISRO & SATELLITE GROUND STATION TECHNOLOGIES" on 24th January, 2024 (Wednesday) at Conference Hall.The management had thanked the resource person Dr. R.Srinivas, *Scientist-SF*, *Training Education* & Outreach Facility, NRSC/ISRO, Jeedimetla campus, Hyderabad for accepting our invitation for delivering a guest lecture for the benefit of budding engineers.

Dr. C.Krishna Mohan, Dean, School of Pharmacy and Dr.S.Ravi Chand, Head, ECE Department had been other dignitaries on the dias with Dr. R.Srinivas on the lecture day program. Strength of about 165 students along with the ECE departmental faculty has witnessed the program that was must for the engineering students.

The main purpose of organizing this session was to bring together the learners of ECE to the world of subsystems, systems, sensors, actuators which are the main elements of any communication system, in particular satellite communication system. Dr.

R.Srinivas, *Scientist-SF has* highlighted mainly on recent ISRO achievements in Space with vide diasporas of scientist, researchers, engineers and many hard-workers behind the missions it launches.



Dr. S. Ravi Chand, HoD, ECE addressing the gathering



Dr. R.Srinivas, Senior Scientist Speaker delivering his talk



Audience patiently listening the lecture



Resource Person being honoured

OBE and NBA Accreditation

School of Pharmacy at NNRG organized a two week workshop on "OBE and NBA Accreditation" from 19.02.2.204 to 02.03.2024 to enlighten the pharmacy faculty and students. Dr.S.Ravi Chand, Head of ECE Department acted as one of the resource person, explained about Outcome-Based Education (OBE)

Dr.S Ravi Chnad has explained about the importance of OBE and emphasized by defining clear learning outcomes or objectives, designing instruction to help students achieve those outcomes, and assessing whether students have met. NBA is a rigorous evaluation process based on criteria such as curriculum design, faculty qualifications, infrastructure, student performance, and industry interactions. NBA accreditation is an important benchmark for technical education programs in India and is recognized by employers, government agencies, and other stakeholders.









Glimpses of workshop

3. FACULTY ACHIEVEMENTS

3.1 Publications - Journals & Patents

- Ravi Chand S, entitled with "An Improved Low-Carbon Intelligent Agriculture System with Energy Optimization Principles using Wireless IoT Environment." in Transactions on Emerging Telecommunications Technologies, has been accepted in Web of Science, ISSN / eISSN:2161-3915.
- Madhavi K, entitled with "Obstructive sleep Apnea Detection using Optimsed Bi-LSTM with Random Forest based Exhaustive Feauture Selector" *Multimedia Tool and Applications* has been accepted in SCI
- ➤ Ravi Chand Sankuru, published a paper entitled with "Security & privacy concern of mobile cloud computing." In AIP Conference Proceedings, vol. 2942, no. 1. AIP Publishing, 2024. https://doi.org/10.1063/5.0199802
- Ravi Chand Sankuru, published a paper entitled with "PRAT: A secured and reliable pathway for remote accessibility." In *AIP Conference Proceedings*, vol. 2942, no. 1. AIP Publishing, 2024. https://doi.org/10.1063/5.0199805
- Rekha. S.published a paper "Design of a Low-Profile Meander Antenna for Wireless and Wearable Applications." in International Conference on Soft Computing and Signal Processing, pp. 537-545. Singapore: Springer Nature Singapore, 2023. Part of the Lecture Notes in Networks and Systems book series (LNNS, volume 840)
- ➤ Rekha.S published a paper entitled with "Optimization Techniques in cooperative and Distributed MAC Protocols: A Survey" in International Journal of Intelligent Information Technologies (IJIIT) in SCI .volume :20 Issue-1,pages -23,ISSN no:1548-3657 DOI:10.4018/IJIIT.335523
- Anuradha K has published a patent entitled "Enhancing the Power by Reducing the Harmonics in Grid Connected Inverters using Deep Learning Technique" with application number 202441002428 A on 09/02/2024.

3.2. Achievements

Dr. Sravan Kumar Vittapu Appointed as Editoral Board member for two MAT Journals, two SCIENXT Journals, Editor for special issue in Characterization and Application of Nano Materials and as Guest Editor in two STM Journals

3.3 Faculty Development Programs attended

S. No	Name of the Faculty	Торіс	Organization & Place	Duration (From -To)
1	Dr.S. Ravi Chand	NPTEL E-Awareness Workshop	NNRG	18-01-2024
2	Dr.S.Karthick	AI/ML and Data Science for Industry 4.0	National Institute of Technical Teacher Training and Research, Chandigarh.	29-01-2024 to 02-02-2024
3	Dr. Ravi	Generative AI in Education	ACE ENGINEERING COLLEGE	05-02-2024 to 10-02-2024
	Bolimera	NPTEL E-Awareness Workshop	NNRG	18-01-2024
4	Mr. Alampally Aravind	NPTEL E-Awareness Workshop	NNRG	18-01-2024
		Research paper writing and journal publishing	Vishaka Institute of Science and Technology, Vidshakapatnam	22-02-2024
5	Ms. Madhavi.K	Integrating artificial intelligence into health care: empowering professionals for the Future	SRM Institute of Science and Technology, Vadapalani, Chennai.	19-02-2024 to 24-02-2024
6	Ms. Edavaluri Suneetha	NPTEL E-Awareness Workshop	NNRG	18-01-2024
	Ms, Shiva	Reasearch Methodologies - Quantative and Qualitative Reasearch	CVR College of Engineering, Hyderabad.	05-02-2024 to 09-02-2024
7	Prassanna	NPTEL E-Awareness Workshop	NNRG	18-01-2024
		Generative AI in Education	ACE Engineering College, Hyderabad.	5-01-2024 to 10-01-2024
		Research methodologies - quantitative and qualitative research	CVR College of Engineering, Hyderabad.	05-02-2024 to 09-02-2024
	Ma Laurana	AI Driven Communications in Modern wireless Communications	SRM Institute of science & Technology, Vadapalani, Chennai.	23-1-2024 to 24-1-2024
8	Ms. Lavanya Nalla	NPTEL E-Awareness Workshop	NNRG	18-01-2024
		Optical System & Optical Communications	K.C.College of engineering and management studies, Thane.	23-02-2024
		Integrating Artifical Intelligence into Healthcare :Empowering Professional for the Future	SRM Institute of Science and Technology, Vadapalani, Chennai.	19-02-2024 to 24-02-2024
9	Ms.V.V.Nandini	Reasearch Methodologies Quantative and Qualitative Reasearch	CVR College of Engineering, Hyderabad.	05-02-2024 to 09-02-2024
10	Mrs.Anuradha	AI Driven Communications in Modern wireless Communications	SRM Institute of Science & Technology, Vadapalani.	23-01-2024 to 24-01-2024
10	K	NPTEL E-Awareness Workshop	NNRG	18-01-2024

		Optical System & Optical Communications	K.C.College of Engineering and Management Studies, Thane.	23-02-2024
		NPTEL E-Awareness Workshop	NNRG	18-01-2024
		Generative AI in Education	ACE ENGINEERING COLLEGE	05-02-2024 to 10-02-2024
		Optical System & Optical Communications	K.C.College of Engineering and Management Studies, Thane.	23-02-2024
11	Mrs. Swetha.T	Research methodologies - quantitative and qualitative research	CVR College of Engineering, Hyderabad.	05-02-2024 to 09-02-2024
		Outcome Based Education	CVR College of Engineering, Hyderabad.	29-01-2024 to 02-02-2024
		AI Driven Communications in Modern wireless Communications	SRM Institute of Science & Technology, Vadapalani.	23-01-2024 to 24-01-2024
		AI Evolution:From Foundations to Generative AI	TechSaksham	22-01-2024 to 27-01-2024
12	Bharadwaj	AI Driven Communications in Modern wireless Communications	SRM Institute of Science & Technology, Vadapalani.	23-01-2024 to 24-01-2024
		Optical System & Optical Communications	K.C.College of Engineering and Management Studies, Thane.	23-02-2024

4. STUDENTS' ACHIEVEMENTS

4.1 Students publications

S.N o	Roll Number	Name of the Student	Title	Name of the journal/Confer ence	ISSN/ ISBN/ Publisher/ Accepted	Date
1	207Z1A0403	A.Naveena	Identifying the Stock at	TIJER - International	Volume no	1/15/2024
	207Z1A0441	D.Shiva,	Faults of Full	Research		
	207Z1A0430	Ch.Sahithi	Adder using	Journal		
	207Z1A0403	S.Abhiram	FPGA as a testing device			

4.2 Extra-Curricular Activites

5.N o	Roll Number	Name of the student	Name of the event	Name of the Host institutions	Participatio n/ Prize Details	Date(5)
1	225Z7A043 7	K.Shashi Kumar	1-Day Online workshop on Navic: Development, scope and applications	Indian Radio Science society(InRa SS)	Participatio n Certificate	25 th Jan 2024

4.3 Results : B. Tech - IV Year I Sem Examination

Rank	Roll No	Name of the Student	SGPA
I	207Z1A0423	V.TEJASVI	8.86
II	207Z1A04C7	T.POOJA	8.81
III	217Z1A0405	C.SNEHA	8.67

5.PLACEMENTS

Logik Works On Campus Drive (24.11.2023)

Ī	S.NO	Name of the Student	Roll Number
	1	Dondla Srutha Keerthi	207Z1A0439

UNISTRING TECH SOLUTIONS (UTS) Campus Drive(20.10.2023)

S.NO	Name of the Student	Roll Number
1	P Manasa	217Z5A0419

ASTRA MICROWAVE Pvt.Ltd Campus Recruitment Drive (08/12/2023)

S.NO	Name of the Student	Roll Number
1	C Chaitanya	207Z1A0428
2	G.Hemakanth	207Z1A0449
3	G Chandra Vardhan Reddy	207Z1A0451
4	Goli Varshitha	207Z1A0452
5	K Madhu Ramudu	207Z1A0479
6	P Dilip	207Z1A04A3
7	Sriram Jayakrishna	207Z1A04C1
8	V Ajith Reddy	207Z1A04D1
9	V Mahender	207Z1A04D4
10	Sai Srujana Yadav	217Z5A0406
11	K Pavan Kumar	217Z5A0408
12	K Sri Satya Tanush	217Z5A0409
13	B Sai Nithin	19 th batch Student

EXCELR Campus Recruitment Drive (22/01/2024)

S.NO	Name of the Student	Roll
		Number
1	Dondla Srutha Keerthi	207Z1A0439
2	Goli Varshitha	207Z1A0452
3	M.JansiRani	207Z1A0487
4	S.Nandhini Reddy	207Z1A04B5
5	Sreeram Jayakrishna	207Z1A04C1
6	Thumukunta Pooja	207Z1A04C7

7	B Vaishnavi	217Z5A0404
8	K.Pavan Kumar	217Z5A0408
9	P.Nikitha	217Z5A0418

SUTHERLAND Campus Recruitment Drive (21/12/2024)

S.NO	Name of the Student	Roll
		Number
1	Sanjana	207Z1A0401
2	Anjali	207Z1A0419
3	Akhil	207Z1A0437
4	Dondla Srutha Keerthi	207Z1A0439
5	G Hemakanth	207Z1A0449
6	G.Chandra Vardhan Reddy	207Z1A0451
7	Goli Varshitha	207Z1A0452
8	Laxmi Bhavani	207Z1A0471
9	SiriChandana	207Z1A0478
10	Thumukunta Pooja	207Z1A04C7
11	Mahith Reddy	207Z1A04D3
12	Rishika	217Z5A0411
13	ShivaPrasad	217Z5A0421
14	V Tejasvi	217Z5A0423

UNISTRING TECH SOLUTIONS (UTS) Internship

S.NO	Name of the Student	Roll Number
1	Sreeram Jayakrishna	207Z1A04C1
2	T.Vamshi	207Z1A04C2
3	K Pavan Kumar	217Z5A0408
4	K Sri Satya Tanush	217Z5A0409

6.EVENTS

National Youth Day is organized in commemoration to remember the 162nd birth Anniversary of Swami Vivekananda. On this occasion our students shared their thoughts as National Youth Day is celebrated in various countries around the world to recognize the importance and potential of young people in society.

Swami Vivekananda was a key figure in the introduction of Indian philosophies of Vedanta and Yoga to the Western world. He is also remembered for his role in the revival of Hinduism in India and his emphasis on youth empowerment and education. National Youth Day is often marked by events, seminars, workshops, and discussions aimed at t serves as a reminder of the potential of youth and encourages them to take on leadership roles, pursue education, and work towards the betterment of their communities and the world at large.



Dr. C V Krishna Reddy, Director sir sharing his insights



K.Sreeja delivering her speech



C.Manisha delivering her speech



C.Pallavi delivering her speech

Elite Gathering

As a part of Elite Gathering (Public Speaking Club) our student delivered his speech on the "Duties of a Citizen: Balancing Rights and Responsibilities" 24 January 2024.



D.Hemadelivering his speech



K.Rakshitha delivering his speech



D.Sreeja delivering his speech



D. Vaishnavi delivering his speech



A. Sai chandana delivering his speech



Courtyard with all the Students and Faculty

Republic Day

75th Republic day was celebrated on 26-01-2024 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.









Glimpses of Republic Day celebrations

Unveiling the Statue of Buddha

Lord Buddha is one of the most important Asian thinkers and spiritual masters of all time, and he contributed to many areas of philosophy, including epistemology, metaphysics and ethics. The Buddha's teaching formed the foundation for Buddhist philosophy, initially developed in South Asia, then later in the rest of Asia. The unveiling of a Buddha statue is not only a momentous occasion but also a time for reflection, renewal, and spiritual reconnection for those who participate in the ceremony. This event was honored by Dr Chantigari Eswara Reddy Homeopathic doctor and International Yoga teacher. On this auspicious day he initiated spirituality of Budha teaching and encouraged the all the members to perform meditation. The event is graced by The chairman Sri Nalla Narasimha Reddy, Vice Chairman Sri Nalla Prashanth Reddy, Director Dr.CV Krishna Reddy accompanied by Deans, HODs and the faculty members.



Glimpses of unveiling the Statue of Buddha

Alumini Meet 2024

The Alumni Association of has organized a programme "ALUMNI MEET 2024" to facilitate, consolidate and coordinate Alumni Activities at Auditorium on 27th Jan 2024. The alumni meet is to reconnect with the Alumni and celebrate their success and various achievements.

Our Director Dr.C.V.Krishna Reddy, welcomed all the dignitaries and all the alumni. Dr.S.RaviChand, Head of ECE Department; Mr.P.S.Sreenivasa Reddy, COE of Autonomous, Ms.B.Suneetha, Assoc.Prof greeted the alumni of ECE-NNRG. All alumni felicitated by giving a token of gift to alumni.



2012-16 passed out P.Anantha Reddy interacting with juniors



2012-16 passed out Himabindu interacting with juniors



Year wise Group photo



Year wise Group photo 2018-2022



Year wise Group photo 2019-2023



Year wise Group photo 2019-2023



Virtual mode of intercation with alumni



Alumni with diginataries

7. ALUMINI



Hello, I'm Anudeep Katam. Currently working at Midwest Energy Pvt Ltd as an embedded engineer. My best experience in College life is a vibrant tapestry of experiences, but few moments rival the exhilaration of delving into robotics and engaging in National Service Scheme (NSS) activities. Immersed in the world of robotics, every day was a new adventure of tinkering with circuits, fostering creativity and problem-solving skills. NSS, on the other hand, offered a profound sense of fulfillment through community service initiatives, igniting a passion for social responsibility and making a tangible difference in people's lives. Together, these experiences sculpted not just a professional path but also a deeper understanding of teamwork, compassion, and the power of innovation.

I would say I learned a lot. Thanks for the college and faculty who supported me throughout my college life. It was a great experience.!!!



Hello, I'm Hima Bindu, working at Infosys in the Dot Net stream as a senior associate consultant. I'm a 2016 graduate. Nalla Narasimha Reddy is the best. There are many memorable movements. One of the most memorable experiences during my college life was being elected vice president of TITA (Telangana IT Association) and going to government schools to interact with those students. I also participated in TV channels (Maa music) and talked about the students ideas. Singing and performing with fellow students not only brought joy and creativity into my daily routine but also helped me form lasting friendships. Jam sessions brought a sense of camaraderie and spontaneity that defined my college years. These musical adventures provided a perfect balance, making my college life truly enjoyable and unforgettable. Thanks to the college for all these memories.

WISHING YOU ALL SUCCESS AND GOOD HEALTH!



