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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

NEWSLETTER
VIDYUT
(2021-2022)
(JAN-DEC)



FROM THE EDITOR'S DESK

As the Editor of “NRCM EEE DEPARTMENT VIDYUT” Newsletter, it is both an honor and a responsibility to curate and present the vibrant journey of our EEE DEPARTMENT through these pages. This publication is not just a collection of reports—it is a narrative of dedication, achievement, creativity, and collaboration that defines NRCM’s academic and cultural ecosystem.



V.PRADEEP KUMAR
ASSISTANT PROFESSOR EEE DEP.

I would also like to extend my sincere appreciation to the esteemed leadership of our institution.

Dr. A. Mohan, Director, is a dynamic and visionary academician whose mentorship and foresight have been instrumental in enhancing the academic and institutional excellence of NRCM.

Dr. R. Lokanadham, Principal, whose committed leadership, integrity, and unwavering focus on academic rigor and student development have consistently guided the institution towards greater achievements.

Their collective vision and encouragement have been vital in shaping this newsletter as an authentic reflection of NRCM’s vibrant academic and cultural environment. It is an privilege to serve as a conduit between the life of our campus and the readers of DEPARTMENT VIDYUT”

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

EMPLOYEES DETAILS



HOD EEE DEP *Dr. C. Sasikala (PROFESSOR)*



V. PRASHANTH

ASSOCIATE PROFESSOR



V. RAMUDU

ASSISTANT PROFESSOR



K. CH AITANYA

ASSISTANT PROFESSOR



V. PRADEEP KUMAR

ASSISTANT PROFESSOR



SABHARI NADH

ASSISTANT PROFESSOR



A. IMMANUEL

ASSISTANT PROFESSOR



CH. PRAS ANNA

ASSISTANT PROFESSOR



P. LALITHA MADHURI

ASSISTANT PROFESSOR



BHARATH

ASSISTANT PROFESSOR

Vision of the Department

To be recognized as a center of excellence to produce competent and ethical Electrical Engineers who can set a benchmark in finding solutions to benefit the society globally through innovative research and application of knowledge.



Mission of the Department

Mission 1: To provide outstanding technical education combined with rigorous academic learning and to nurture students' innovative skills in the field of Electrical and Electronics Engineering

Mission 2: to enhance the research among students and faculty, as well as develop a technologically inclusive, cost-effective real-time product for societal upliftment

Mission 3: To involve, monitor and collaborate with top industrial, intellectual and educational systems in order to structure technological and human resource development systems.



<i>Vision of the Institute</i>	<i>Mision of the Institute</i>
<p>To emerge as a destination for higher education by transforming learners into achievers by creating, encouraging, and thus building a supportive academic environment.</p>	<p>M1:Adapt continuousimprovementsininnovative teaching- To impart Quality Technical Education and to undertake Research and Development with a focus on application and innovation which offers an appropriate solution to the emerging societal needs by making the students globally competitive, morally valuable, and socially responsible citizens</p>

Program Educational Objectives (PEOs)

Program educational PEO1	Preparation: Graduates excel in higher education and become successful professionals in Electrical Engineering and its allied domains.
Program Educational PEO2	Core Competence: Graduates will have a strong foundation in engineering principles, scientific knowledge, and technical fundamentals, enabling them to address complex challenges in research, industry, higher education and entrepreneurship through rigorous learning.
Program Educational PEO3	Professionalism & Lifelong Learning: Graduates shall have effective communication, teamwork, leadership, social responsibility, and ethical values while fostering adaptability and a commitment to lifelong learning.

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Program Specific Outcomes

PSO1: Engineering Knowledge and Analysis: Apply principles of engineering, science and mathematics through differential and integral calculus, complex variables to solve Electrical Engineering problems.

PSO2: System Design: Ability to utilize logical and technical skills to model, analyze, design and realize physical systems, simulate, measure, control and experiment with the components or processes by using software/hardware tools related to Electrical and Electronics Engineering problems and other allied themes.

PSO3: Application of the Knowledge on Society/Environment: Apply the Contextual knowledge of Electrical and Electronics Engineering with self-learning to assess societal, environmental, develop the leadership, economics importance with professional ethics in multidisciplinary environments

Program Outcomes

PO1: Engineering Knowledge

PO2: Problem Analysis

PO3: Design/Development of Solutions

PO4: Conduct Investigations of Complex Problems

PO5: Modern Tool Usage

PO6: The Engineer and Society

PO7: Environment and Sustainability *PO8:* Ethics

PO9: Individual and Team Work

PO10: Communication

PO11: Project Management and Finance

PO12: Life-long Learning

Knowledge and Attitude Profile

- **WK1:** A systematic, theory-based understanding of the natural sciences applicable to the discipline and awareness of relevant social sciences.
- **WK2:** Conceptually-based mathematics, numerical analysis, data analysis, statistics and formal aspects of computer and information science to support detailed analysis and modelling applicable to the discipline.
- **WK3:** A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline.
- **WK4:** Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline.
- **WK5:** Knowledge, including efficient resource use, environmental impacts, whole-life cost, re-use of resources, net zero carbon, and similar concepts, that supports engineering design and operations in a practice area.
- **WK6:** Knowledge of engineering practice (technology) in the practice the engineering discipline.
- **WK7:** Knowledge of the role of engineering in society and identified issues in engineering practice in the discipline, such as the professional responsibility of an engineer to public safety and sustainable development.
- **WK8:** Engagement with selected knowledge in the current research literature of the discipline, awareness of the power of critical thinking and creative approaches to evaluate emerging issues.
- **WK9:** Ethics, inclusive behavior and conduct. Knowledge of professional ethics, responsibilities, and norms of engineering practice. Awareness of the need for diversity by reason of ethnicity, gender, age, physical ability etc. with mutual understanding and respect, and of inclusive attitudes



Department of Electrical and Electronics Engineering

Program Outcomes (POs)

PO1:Engineering Knowledge: Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.

PO2:Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)

PO3:Design/Development of Solutions: Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

PO4:Conduct Investigations of Complex Problems: Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8)

PO5:Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)

PO6:The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).

PO7:Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)

PO8:Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

PO9:Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences

PO10:Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

PO11:Life-Long Learning: Recognize the need for, and have the preparation and ability for

- i) independent and life-long learning
- ii) adaptability to new and emerging technologies and
- iii) critical thinking in the broadest context of technological change. (WK8)

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Manamaguda (V), Kompally - 500100, Secunderabad, Telangana State, India.



www.nrcmec.org

COUNSELING CODE
NRCM



Department of Electrical and Electronics Engineering

 SUSTAINABLE DEVELOPMENT GOALS



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COUNSELING CODE

NRCM

NRCM VIDYUT

News Letter of NRCM EEE Department
AY (2021-2022)

ABOUT NRCM

Narsimha Reddy Engineering College (NRCM) is promoted & managed under the inspiring & dynamic Chairmanship of Sri. J. Narsimha Reddy and a fleet of dedicated members. This is the first institution belonging to JAKKULA EDUCATIONAL SOCIETY was established in 2007 to serve the people of this backward region of the state of Andhra Pradesh (India). The institute has total built up area of around 200000 sq ft., with well-designed airy Classrooms, Laboratories, Seminar hall, Conference hall & Administrative section. The built up area is well above the requirement, prescribed by the All India Council for Technical Education, New Delhi.



Mahatma Gandhi Block



IT Park



Mother Teresa Block



APJ Abdul Kalam Block

VISION

To emerge as a destination for higher education by transforming learners into achievers by creating, encouraging and thus building a supportive academic environment.

MISSION

M1: Adapt continuous improvements in innovative teaching, to and learning transform entrepreneurs in multi-disciplinary fields.
M2: Develop an innovative ecosystem with strong involvement and participation of students and faculty members.
M3: Impart a National development spirit among the students to utilize their knowledge and skills for societal benefits with ethical values.

QUALITY POLICY

To impart Quality Technical Education and to undertake Research and Development with a focus on application and innovation which offers an appropriate solution to the emerging societal needs by making the students globally competitive, morally valuable and socially responsible citizens.

Chairman's Message

In today's dynamic world, engineering plays a pivotal role in shaping the future. Innovations and breakthroughs in science and technology are the driving forces behind global progress. As an engineering college, we are not just a place of learning but a hub for innovation and creativity. Our mission is to nurture and inspire the next generation of engineers, researchers, and problem solvers.

"Engineering is the art of directing the great sources of power in nature for the use and convenience of humankind."



Sri J NARSIMHA REDDY
Founder Chairman

Secretary's Message



Sri J TRISHUL REDDY
Secretary

Our college has a rich tradition of nurturing young minds and fostering innovation in the field of engineering. As we step into another academic year, I am filled with optimism and a sense of purpose. Our college is not just a place of learning; it's a community where dreams are shaped, ideas are born, and knowledge is transformed into real-world solutions.

"Behind every achievement, there's an intricate network of support. I'm here to ensure that the gears of NRCM turn seamlessly for your success."

Treasurer's Message

Our college has a rich history of academic excellence and innovation. As we embark on another academic year, I am excited about the opportunities and challenges that lie ahead. In today's world, a strong financial foundation is crucial to support our mission of providing the best possible education and resources to our students and faculty.

"Investing in knowledge to build a brighter future."



Sri J Thirlok Reddy
Treasurer

Director's Message



Dr A Mohan Babu
Director

Our college has a legacy of excellence in engineering education, research, and a tradition of nurturing exceptional talent. We have consistently strived to create an environment where ideas are born, dreams are realized, and the next generation of engineers is sculpted.

"Cultivating the minds of future engineers, we shape the blueprint of tomorrow's innovations and progress."

Principal's Message

Our college stands as a beacon of learning and innovation, where knowledge is cultivated, and dreams are realized. We have a legacy of producing engineers who have gone on to shape the world, and I am honored to lead this institution in continuing this tradition.

"Engineering is not just a profession; it's a passion, a commitment to shaping the future."



Dr R Lokanadham
Principal [Read More](#)

OUR EDITORIAL BOARD

This edition of the **NRCM PULSE** Newsletter is brought to you by a dedicated team of department heads who have meticulously curated, compiled, and refined their respective departments with passion and precision. Who worked collaboratively to bring you insightful updates and achievements from across the NRCM campus.

The helm of this initiative is our esteemed editorial heads, guiding the vision and quality of the newsletter.

Their commitment to excellence in content and presentation reflects the vibrant spirit of our institution. Together, the board ensures every edition reflects the spirit, achievements, and voice of the institution.

EDITORIAL BOARD MEMBERS



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Dr. P Dileep Kumar Reddy
Dean - IIC

Guided by precision and passion, the Newsletter Editorial Team ensures every word reflects clarity, purpose, and excellence.

- Editorial Team

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING (EEE)

About Electrical & Electronics Engineering

The Department of Electrical and Electronics Engineering (EEE) at NRCM is a vibrant center of innovation and excellence, Established in 2009 with the B.Tech program.

At NRCM , Department of EEE aim to create visionary engineers who can lead technological transformations across industries. Our programs are thoughtfully designed to balance strong theoretical foundations with practical experience. Students learn to design, develop, and implement systems that power the modern world — from smart electric grids and renewable energy sources to advanced control systems, power electronics, automation, and electric vehicles.

The B.Tech program in Electrical and Electronics Engineering is accredited by National Board of Accreditation two times i.e in 2019 and 2022, reflecting our commitment to maintaining of quality, innovation, and continuous improvement. Our curriculum encourages creativity, critical thinking, and hands-on learning through projects, internships, and research collaborations with industry leaders.

Department is equipped state of the art laboratories, provide students with a stimulating environment to explore and experiment. The department focusing on Advanced Power Engineering and Alternative Energy Systems, promoting interdisciplinary research and innovation.

At NRCM, we believe in “**Learning by Doing.**” Through industry visits, workshops, and technical competitions, students gain real-world exposure that enhances their technical competence and confidence. The department also places a strong emphasis on sustainability and clean energy technologies, preparing graduates to contribute meaningfully to Sustainable Energy with environmental consciousness.

Our exceptional placement record stands as a testament to our focus on employability and skill development. EEE graduates from NRCM have successfully established careers in core industries, IT sectors, PSUs, and leading research institutions, both in India and abroad.

The Department of Electrical and Electronics Engineering at NRCM — where passion meets purpose, learning meets innovation, and every student is empowered to light the world with knowledge, creativity, and excellence.

HOD PROFILE : EEE Department



Dr.C.Sasikala working as Professor & Head in the Department of Electrical and Electronics Engineering at Narsimha Reddy Engineering College, Hyderabad. She Received her Ph.D in Electrical and Electronics Engineering from S.V University, Tirupati, Andhra Pradesh, India. She is in Teaching Profession for more than 20 years. She has been presented more than 25 papers in National, International Journals and Conferences. She is a Life Member of Professional Bodies like ISTE, IAENG, FIE, CE etc.,

Her main area of interest includes Machines and Power Systems.

Members:

Student Coordinators:

(1). SHIVA 4Th year EEE,

(2). RISHI 3Rd year EEE

Faculty Co-ordinator

Dr .K.Eswaramoorthy Professor , EEE

Dr.B.Lekshmi Sree Professor , EEE



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Permanently affiliated to JNTUH



NEWS LETTER-VIDYUT

Department Vision

To be recognized as a centre of excellence by nurturing competent and ethical electrical engineers, fostering innovation, advanced research and setting global benchmarks in developing sustainable solutions for societal progress.

Department Mission

Mission-1: To impart high-quality technical education integrated with rigorous academic learning, while fostering innovation and creative problem-solving skills in the field of Electrical and Electronics Engineering

Mission-2: To promote a strong research culture among students and faculty to develop technologically advanced and cost-effective sustainable solutions for societal upliftment

Mission-3: To actively engage, collaborate, and build partnerships with leading industries, research and academic institutions to strengthen technological advancements



PSO1: Engineering Knowledge and Analysis:

Apply principles of engineering, science, and mathematics through differential and integral calculus, complex variables to solve electrical engineering problems.

PSO 2: System Design:

Ability to utilize logical and technical skills to model, analyse, design, realize physical systems, simulate, measuring, control and experimenting the components or processes by using software/hardware tools related to Electrical and Electronics Engineering problems and other allied themes.

PSO 3: Application of the knowledge on society/ environment:

Apply the knowledge of Electrical and Electronics Engineering with self-learning to address societal and environmental, challenges, while fostering leadership, economic understanding, and professional ethics in multidisciplinary environment.

PEO 1	Preparation: Graduates excel in higher education and become successful professionals in Electrical Engineering and its allied domains.
PEO 2	Core Competence: Graduates will have a strong foundation in engineering principles, scientific knowledge, and technical fundamentals, enabling them to address complex challenges in research, industry, higher education and entrepreneurship through rigorous learning.
PEO 3	Professionalism & Lifelong Learning: Graduates shall have effective communication, teamwork, leadership, social responsibility, and ethical values while fostering adaptability and a commitment to lifelong learning.

EEE DEPARTMENT NEWS LETTER

AY (2021-2022)

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ELECTION ACTIVITY

At NRCM, a student election took place, resulting in the process selected President, Vice President, and Treasurer. The EEE faculty played a pivotal role in ensuring a fair and equitable process, rendering their services to support the students in achieving an outcome. This collaborative effort highlights the commitment to a transparent and democratic selection of student leaders.



INDUSTRIAL VISIT TO NAGARJUNA SAGAR

An industrial visit was made in eee department NRCM to Nagarjuna sugar power plant along with our eee department HOD MR. seshadri sir ,Nagarjuna Sagar Right Canal Power House is Multipurpose (Irrigation & Power) by utilizing the irrigation releases into the Right Bank Canal for Power Generation,

Nagarjuna Sagar RCPH is a reservoir based project. The gross head and net head of the project are 33.95m and 25.59m respectively. The project generated 292.54 GWh of electricity. We gained much exposure in power plant operation and control techniques.



WORK SHOP ON PCB DESIGN

PCB DESIGN

Date: 09-06-2024

Venue:
NRCM,MAISAMMAGUDA
MT-SEMINAR HALL-201.
Time: 10 AM

Workshop Agenda:

- Welcome & Introduction**
 - Registration of participants
 - Welcome address by the host
 - Inaugural speech by chief guest
- Overview of Embedded Systems & IoT**
 - Introduction to Embedded Systems & IoT
 - Role of IoT in modern industries
 - Importance of Embedded Systems in automation & smart devices
- Industry Trends & Career Opportunities**
 - Key industries hiring Embedded & IoT professionals
 - Essential skills for Embedded Systems & IoT careers
 - Job roles & growth opportunities in the field
- Technical Sessions & Hands-on Activities**
 - Overview of microcontrollers & IoT devices
 - Working with sensors, actuators, and communication protocols
 - Hands-on session: Building an IoT-enabled embedded system
 - Live demonstration of data collection, cloud integration & real-time monitoring
- Panel Discussion & Q&A**
 - Open discussion with industry experts & trainers
 - Insights from professionals on how to build a career in Embedded & IoT
 - Addressing participant queries & career guidance
- Closing Ceremony**
 - Certificate distribution
 - Vote of thanks
 - Group photo & networking session



WORK SHOP ON EARTHING IN PRACTICE DESIGN TESTING & MAINTENANCE

Objective

To provide practical and theoretical knowledge on electrical earthing (grounding) systems, including proper design methods, testing procedures, and maintenance practices for safe and reliable electrical installations.



Department of Electrical and Electronics Engineering

The Department Advisory Committee (DAC) of the EEE Department, comprising the HoD, academicians, industry experts, alumni, and senior faculty, guides curriculum improvement, research development, and industry collaboration to prepare students for real-world challenges.

Members of the Department Advisory Committee:

S. No.	Name of the Member	Designation	Role
1	Dr. R. Lokanadham	Principal, Narsimha Reddy Engineering College	Chairman
2	Dr. C. Sasikala	Professor & Head, Department of Electrical and Electronics Engineering, Narsimha Reddy Engineering College.	Convener
Subject Experts nominated by the Academic Council			
3	Prof. Dr. P. Satish Kumar	Professor and HOD of Electrical Engineering, University College of Engineering, Osmania University	Member
4	Dr. Danduprolu Kiran Kumar	Assistant Professor, EEE, JNTUH University College of Engineering, Science & Technology, Kukatpally, Hyderabad	Member
Industry Representative			
5	Mr. E. Sahadev	Executive Electrical Engineer, Sabari Electrical Pvt. Ltd, Hyderabad	Member
Department Senior Faculty Members			
6	Mr. V. Prashanth	Assistant Professor, Department of Electrical and Electronics Engineering, Narsimha Reddy Engineering College.	Member
7	Mr. K. Chaitanya	Assistant Professor, Department of Electrical and Electronics Engineering, Narsimha Reddy Engineering College.	Member
Representative			
8	Thalari Raghuraman	Electrical Design Engineer, Thermopads Pvt. Ltd, Jeedimetla, IDA Phase II	Alumni
9	Abbu Balaji	Student, (23X05A0201)	Nominee

Central Library



NRCM's Central Library stands as a hub of knowledge and innovation, housing an impressive collection of over 32,180 volumes including textbooks, reference books, and handbooks. The library subscribes to more than 66 national journals and offers a vast range of e-resources such as DVDs, CDs, reports, theses, and dissertations. Fully automated and equipped with reprographic facilities, the library ensures seamless access and convenience for both students and faculty. As a modern digital-age library, it provides unrestricted access to information in multiple formats and from diverse sources, fostering an environment ideal for research, innovation, and academic exploration. Keeping pace with technology, the Central Library integrates both print and digital collections. It provides access to premier online databases such as NLIST,NDL, and also holds memberships with DELNET and other professional bodies—creating abundant opportunities for learning and discovery.



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