DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

VISION

- "To strive for excellence in education, research, and entrepreneurship, with the ultimate goal of becoming a global hub for innovation. Committed to advancing scientific and technological services, we aim to contribute meaningfully to society. “

MISSION

1. To provide high-quality education that nurtures innovation, entrepreneurship, and ethical values, shaping future professionals equipped for a globally competitive landscape.

2. To collaborate with stakeholders by sharing institutional expertise in education and knowledge, fostering mutual growth in technical learning.

3. To cultivate an environment that encourages fresh ideas, ground breaking research, and academic excellence, paving the way for future leaders, innovators, and entrepreneurs.

4. To drive socio-economic progress by offering impactful scientific and technological solutions to society.

Program Outcomes (POs)

PO-1:	**Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO-2:	**Problem analysis**: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO-3:	**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.
PO-4:	**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.
PO-5:	**Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO-6:	**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.
PO-7:	**Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO-8:	**Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO-9:	**Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO-10:	**Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO-11:	**Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO-12:	**Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

Upon completing the B.Tech. in Electrical and Electronics Engineering, graduates will be capable

PSO-1: Higher Education

Graduates will be able to apply the fundamental principles of Mathematics, Science, and Electrical and Electronics Engineering to pursue advanced studies in specialized fields such as Electrical Machines, Electrical Drives, Power Electronics, Control Systems, and Power Systems.

PSO-2: Employment

Graduates will be equipped to enter both public and private sectors, utilizing their expertise in the design, operation, and management of electronic systems, microprocessor-based control systems, power systems, and energy auditing.

Programme Educational Objectives (PEOs)

The PEOs for the B.Tech. (Electrical and Electronics Engineering) program are as follows:

PEO-1: **Strong Foundation in Core Principles**
Graduates will possess a solid foundation in mathematics, science, and engineering principles, enabling them to analyse, model, and solve complex engineering challenges.

PEO-2: **Multi-disciplinary Expertise and Innovation**
Graduates will have a broad understanding of Electrical & Electronics Engineering and related fields, equipping them with the creative and technical skills necessary to design and develop electrical and electronic systems and products.

PEO-3: **Advanced Technological Competency and Research Motivation**
Graduates will gain proficiency in cutting-edge technologies and will be motivated to pursue higher education and research to stay ahead in their professional careers.

PEO-4: **Professionalism and Continuous Growth**
Graduates will develop strong communication skills, work effectively in teams, and uphold ethical standards while using modern tools. They will be dedicated to life-long learning, supporting a successful and evolving professional career.