

## **Department of Electrical and Electronics Engineering**

### **B. Tech.( Electrical and Electronics Engineering)**

#### **Program Educational Objectives (PEO'S)**

**PEO 1:** Apply knowledge and skills to provide solutions to Electrical and Electronics Engineering problems in industry and governmental organizations or to enhance student learning in educational institutions.

**PEO 2:** Work as a team with a sense of ethics and professionalism, and communicate effectively to manage cross-cultural and multidisciplinary teams.

**PEO 3:** Update their knowledge continuously through lifelong learning that contributes to personal, global and organizational growth

**PEO 4:** To develop overall personality and character with team spirit, professionalism, integrity, and moral values with the support of humanities, social sciences and physical educational courses.

#### **Program Outcomes**

**1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

**2. Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural science and engineering sciences.

**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.

**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.

**5. Modern tool usage:** create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

**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.

**7. Environment sustainability:** understand the impact of the professional engineering solutions in the societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**8. Ethics:** apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**9. Individual and team work:** function effectively as an individual and as a member or leader in diverse teams, and in multidisciplinary settings.

**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.

**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.

**12. Lifelong learning:** recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broader context of technological change.

### **Program Specific Outcomes (PSO'S)**

**1. Problem Solving Skills:** Apply the engineering fundamental knowledge to identify, formulate, design and investigate complex engineering problems of electric circuits, power electronics, electrical machines and power systems and to succeed in competitive exams.

**2. Professional Skills:** Apply appropriate techniques and modern engineering hardware and software tools in various electrical and electronics applications to engage in life-long learning and to get an employment in the field of Electrical and Electronics Engineering.

3. **Successful Career:** To produce engineers with a solid foundation in Electrical & Electronics Engineering who will pursue lifelong learning and professional development including post-graduation.
4. **The Engineer and Society:** Understand the impact of engineering solutions in societal and environmental context, commit to professional ethics and communicate effectively.