# For UG

# PO's:

- 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 sciences, 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 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.
- 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. 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.

## **Mechanical Engineering**

**PSO 1:** Develop an ability to acquire and implement technical knowledge and practices in core areas of Mechanical Engineering domain.

**PSO 2:** Incorporate the skills to use professional tools and techniques in emerging areas of Mechanical Engineering and Industrial Management.

## Graduates will be able to

PEO1 : Apply principles of advanced mathematics and science to analyse and solve Mechanical Engineering problems.

PEO2 : Design and execute ethically multidisciplinary projects in a dynamically changing environment.

PEO3 : Develop professional leaders in Design, Thermal and Manufacturing fields.

PEO4 : Provide exposure to the emerging techniques for lifelong learning.

PEO5 : Create sustainable environment to plan and implement Computerized Numerical Control (CNC) technique for social concerns.

### **Civil Engineering**

**PSO1:-** Educating the graduates of this program with fundamental mathematical, scientific, and engineering knowledge in the Civil Engineering Stream.

**PSO2:-** To Analyse, Design, Plan, Estimate the construction activities such as buildings, industries, irrigation and hydraulic structures, highways, railways, airports.

**PSO3:-** Cognizance of social, environmental responsibilities and Safety along with ethical responsibility to have a successful career and to become an entrepreneur.

**PEO1:-** Apply principles of advanced Mathematics and Engineering Sciences to analyze and solve Civil Engineering problems.

**PEO2:-** Create sustainable environment to plan infrastructure for social needs

PEO3:- Design and execute civil engineering projects

PEO4:- Develop as a leader and to inculcate team spirit to execute ethically the projects.

**PEO5:-** Adopt emerging technologies for lifelong learning.

#### **Electrical Engineering**

PSO-1: Ability to work comfortably with Electrical Machines, Electrical Drives and their control techniques.

PSO-2: Ability to design Electrical Power Systems with adequate protection in different voltage levels.

**PEO1:** Acquire fundamental knowledge of mathematics, science and engineering to analyze, design and implement solutions to the Electrical Engineering problems

**PEO2:** Understand emerging concepts and trends in Electrical Engineering.

**PEO3:** Apply software tools to develop innovative computational systems.

**PEO4:** The students are encouraged to develop the habit of lifelong learning to face the challenges.

**PEO5:** The students will be embedded as a responsible individual having ethical and social values to lead the society and to nurture team spirit.

### **Computer Science & Engineering**

**PSO 1:** The Ability to design, construct, and analyse Computer Science and Engineering system.

**PSO 2:** The Ability to use associated software to develop and improve performance of Computer Science and Engineering domain.

**PEO1:** Apply knowledge with mathematics, logical programming to frame engineering solutions in the computing domain.

PEO2: Able to analyze, design, implement, and validate for software development.

**PEO3:** Apply emerging technology by communicating effectively as a team.

PEO4: Improve the security, cost, utility, etiquette, and ethics by their computing abilities.

**PEO5:** Adopt emerging technology and advance in career for fulfilling the societal needs by lifelong learning.

#### Information Technology

**PSO-1:** Ability to design, construct, and analyze Information Technology systems.

**PSO-2:** Ability to use associated software to develop and improve performance of Information Technology domain.

**PEO-1:** Acquire fundamental knowledge of mathematics, science and engineering to analyze, design and implement solutions to the Information Technology problems

**PEO-2:** Understand emerging concepts and trends in Information Technology.

PEO-3: Apply IT tools to develop innovative computational systems.

**PEO-4:** The students are encouraged to develop the habit of lifelong learning to face the challenges.

**PEO-5:** The students will be embedded as a responsible individual having ethical and social values to lead the society and to nurture team spirit.

#### **Electronics Engineering & Electronics & Communication Engineering**

**PSO 1:** The ability to design, Construct and analyze Electronics & communication Engineering systems.

**PSO 2:** The ability to use associated Electronics tools to improve performance of Electronics system.

#### Graduates will be able to:

**PEO 1 :** Students will apply basic fundamentals in mathematics, physics, and electronic engineering discipline to build sound foundations.

**PEO 2:** Students will design, analyze and solve engineering problems to develop them as the professional leaders in the field of Electronics & communication Engineering.

**PEO 3:** Students will get exposure by providing technical training to execute the multidisciplinary projects as a team.

**PEO 4:** Students will channelize their knowledge through lifelong learning to assist in the development of the society.

**PEO 5:** Students will acquire work ethics and concern for society.