Institutional

VISION

To be recognised as institute of excellence, promoting value based education in computer science and engineering with multidisciplinary research, innovation and consultancy services to the society.

MISSION

- To provide holistic education through outcome based learning.
- To promote interdisciplinary learning and research for serving the needs of entire global community.
- To inculcate innovation in graduates using technological advancements for the development of computational solutions.
- To prepare graduates to be continuous learners by inculcating people skills.

Departmental

VISION

To be recognised as department of excellence, promoting value-based education in computer science and engineering with multidisciplinary research, innovation and consultancy services to the society.

MISSION

- To provide value based education by implementing outcome-based teaching and learning process.
- To promote inter-disciplinary research that for serving the needs of entire global community.
- To inculcate desire for innovation in graduates using technological advancements for the development of effective solutions.
- To prepare graduates as continuous learners by inculcating professional skills and ethical responsibilities.

Program Educational Objectives (PEOs)

- **Fundamental:** To prepare the graduates for career and proficiency in Computer Science and Engineering.
- **Industry Ready:** To imbibe technical and aptitude skills related to Computer Science and Engineering to provide the best solution to industrial and societal problems.
- **Continuous Learning:** To prepare graduates for pursuing higher education and life-long learning.
- **Entrepreneurship Skills:** To imbibe entrepreneurship, leadership, effective communication and business skills through innovation, incubation and start-up activities.
- **Social Responsibilities and Ecological Impact:** To develop awareness among the graduates about the various social responsibilities related to engineering ethics, human values and ecological understanding.

Program-Specific Outcomes (PSOs)

PSO – 1	Developing skills for creating computational solutions with emerging technologies, programming languages, mathematical foundations, algorithmic principles and open source platforms to solve complex engineering problems.
PSO – 2	Understanding the evolutionary changes in computing by applying standard practices and skills acquired through computer engineering to provide solutions with innovative ideas and interdisciplinary research.
PSO – 3	Applying modern computer languages, environments, and platforms in creating innovative career paths to be an entrepreneur and pursue higher studies in their respective domains.

Program Outcomes (POs)

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 analyse 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 for complex problems:

☞ that cannot be solved by straightforward application of knowledge, theories and techniques applicable to the engineering discipline as against problems given at the end of chapters in a typical text book that can be solved using simple engineering theories and techniques;

☞ that may not have a unique solution. For example, a design problem can be solved in many ways and lead to multiple possible solutions;

☞ that require consideration of appropriate constraints / requirements not explicitly given in the problem statement such as cost, power requirement, durability, product life, etc.;

☞ which need to be defined (modelled) within appropriate mathematical framework; and

☞ that often require use of modern computational concepts and tools, for example, in the design of an antenna or a DSP filter.

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.

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 lifelong learning in the broadest context of technological change.