

## **Department of Information Technology**

### **Program Outcome (PO)**

Engineering Graduates will be able to:

- 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 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 life-long learning in the broadest context of technological change.

#### **Programmed Specific Outcomes of Information Technology (PSO)**

1. Graduates will be able to apply basic engineering knowledge to understand and analyze basic-complex problems in the field of Information Technology.
2. Graduates will be able to provide optimized solutions for organizations and individuals through Information Technology specific skills.
3. Graduates will be able to work in a group to manage projects and human resources in the field of Information Technology.
4. Graduates will be able to contribute in the research and development field of Information Technology through the lifelong learning to serve the society and nation.

#### **Program Educational Objectives (PEOs) (5)**

**PEO1:** To prepare students to excel in graduate school or technical careers through a world-class, rigorous and competitive program in the field of Information Technology.

**PEO2:** To train students across the spectrum of basic and applied science, recognizing and exploiting common descriptions in disparate systems.

**PEO3:** To train students with sufficient scientific and Information Technology breadth to design and create novel solutions to real-life problems in computing domain.

**PEO4:** To develop student's professional and ethical attitudes, effective communication and teamwork skills, and an ability to place science and computational issues and solutions within the broader societal context.

**PEO5.** To provide students with an academic environment committed to excellence and innovation that contributes for developing role ready individual with leadership, professionalism, and life-long learning for professional careers in the field of Information Technology