

## B. Tech. - Computer Science Program Learning Objectives & Outcomes:

### Program Learning Objectives (PLOs):

To produce quality engineering graduates by imparting quality education and research in the field of computer science and information technology in order to respond swiftly the challenges of 21<sup>st</sup> century.

#### Program Objective 1

To provide students with mainstay in basic engineering fundamentals disciplines in order to plan, analyze and identify and to provide alternative solutions to solve hardware/software/firmware engineering issues and/or to lead a successful career in industries or pursue higher studies or entrepreneurial endeavors.

#### Program Objective 2

To train students with good extensiveness of information in the field of computer science and related multi-disciplinary engineering streams so as to formulate engineering principles, order to offer technologically feasible and socially acceptable solutions to real life engineering problems.

#### Program Objective 3

To provide graduates with learning environment awareness of the life-long learning needed for a successful professional career and to introduce them to write ethical codes and guidelines, perform excellence, leadership and demonstrate good citizenship.

### Learning Outcomes:

- a) Ability to apply knowledge of mathematics, science, engineering, computing to solve complex problems.
- b) Ability to identify, analyze and solve complex software and hardware engineering problems.
- c) Ability to design, implement and evaluate various computer based systems to meet the needs of the society by considering public health, safety, cultural, societal and environmental issues.
- d) Ability to design & conduct experiments and interpret data.
- e) Ability to use techniques, skills and modern engineering and IT tools to various relevant engineering practices.
- f) Ability to examine and understand the impact of societal, health, safety, legal and cultural concerns at local, national and international levels relevant to engineering practices.
- g) Ability to recognize the sustainability and environmental impact of the computer-based engineering solutions.
- h) Ability to follow prescribed norms, responsibilities and ethics in engineering practices.
- i) Ability to work effectively as an individual and in a team.
- j) Ability to communicate effectively through oral, written and pictorial means with the engineering community and the society at large.
- k) Ability to recognize the need for and to engage in life-long learning.
- l) Ability to understand and apply engineering & management principles in executing projects.

**Program Specific Outcomes:**

- An ability to design and develop hardware and software in emerging technology environments like cloud computing embedded products and real-time systems.
- An ability to work in multidisciplinary teams in small and large scale projects by utilizing modern software engineering tools and emerging technologies.
- To develop complex products for the societal and engineering needs with skills to communicate effectively in group discussions and report writing.