



# SREE VENKATESWARA COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi and Affiliated to Jawaharlal Nehru Technological University – Anantapur)

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## DEPARTMENT OF HUMANITIES & SCIENCES

(I B. Tech CE)

### PROGRAMME EDUCATION OBJECTIVES (PEOS)

**PEO1:** Able to succeed in positions in Civil Engineering practice or research, and in other fields they choose to pursue and enrol in advanced studies.

**PEO2:** Analyse and design civil engineering systems with social awareness and responsibility.

**PEO3:** Provide socially responsible, environment friendly solutions to Civil Engineering related broad-based problems adapting professional ethics.

### PROGRAM OUTCOMES (PO'S)

**PO1: Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems

**PO2: 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

**PO3: 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

**PO4: 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

**PO5: 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.

**PO6: 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

**PO7: 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.

**PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**PO9: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10: 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.

**PO11: 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.

**PO12: 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.

### **PROGRAM SPECIFIC OUTCOMES (PSOs)**

**PSO1:** Ability to apply the Civil Engineering Knowledge for proposing solutions to real world problems through incubation of innovative ideas.

**PSO2:** To understand modern management and construction techniques to complete projects within stipulated time and budget.

**PSO3:** Graduates should be able to communicate effectively, use modern tools for cost effective solutions and have environmental consciousness.

**PSO4:** Develop engineers with ability to work in multi-disciplinary environment and have interest in lifelong learning.