SREE VIDYANIKETHAN ENGINEERING COLLEGE

(AUTONOMOUS)

Sree Sainath Nagar, Tirupati – 517 102

Department of Civil Engineering

B.Tech.Civil Engineering (CE)

The Department is offering B.Tech. Civil Engineering (CE) with an annual intake of 120, besides an additional 10% though Lateral Entry scheme. The B.Tech. program was accredited by NBA.

Program Educational Objectives:

After few years of graduation, the graduates of B. Tech (CE) will be:

PEO1. Pursue higher education in civil engineering or other fields ofengineering or management or other areas of interest.

PEO2. Address the contemporary issues in Civil Engineering or related field and provide appropriate solutions through professional careerin industry/teaching/research.

PEO3. Engage in 'technology innovation and deployment' andengineering system implementation, as an entrepreneur.

PEO4. Exhibit leadership qualities, participate in continuing education programmes for lifelong learning and contribute individually andas a member in multidisciplinary teams to meet social and ethicalconstraints.

Program Outcomes:

On successful completion of the Program, the graduates of B. Tech. (CE) will be able to

PO1. Apply the knowledge of mathematics, science, engineering fundamentals, and anengineering specialization to the solution of complex engineering problems. **(Engineering Knowledge)**

PO2. Identify, formulate, review research literature, and analyze complex engineeringproblems reaching substantiated conclusions using first principles of mathematics,natural sciences, and engineering sciences. **(Problem Analysis)**

PO3. Design solutions for complex engineering problems and design systemcomponents or processes that meet the specified needs with appropriateconsideration for the public health and safety, and the cultural, societal, andenvironmental considerations. **(Design/Development of Solutions)**

PO4. Use research-based knowledge and research methods including design ofexperiments, analysis and interpretation of data, and synthesis of the informationto provide valid

conclusions. **(Conduct Investigations of Complex Problems)**

PO5. Create, select, and apply appropriate techniques, resources, and modernengineering and IT tools including prediction and modeling to complexengineering activities with an understanding of the limitations. **(Modern Tool Usage)**

PO6. Apply reasoning informed by the contextual knowledge to assess societal, health,safety, legal and cultural issues and the consequent responsibilities relevant tothe professional engineering practice. **(The Engineer and Society)**

PO7. Understand the impact of the professional engineering solutions in societal andenvironmental contexts, and demonstrate the knowledge of, and need forsustainable development. **(Environment and Sustainability)**

PO8. Apply ethical principles and commit to professional ethics and responsibilities andnorms of the engineering practice. **(Ethics)**

PO9. Function effectively as an individual, and as a member or leader in diverse teams,and in multidisciplinary settings. **(Individual and Team Work)**

PO10. Communicate effectively on complex engineering activities with the engineeringcommunity and with society at large, such as, being able to comprehend andwrite effective reports and design documentation, make effective presentations,and give and receive clear instructions. **(Communication)**

PO11. Demonstrate knowledge and understanding of the engineering and managementprinciples and apply these to one's own work, as a member and leader in a team,to manage projects and in multidisciplinary environments. **(Project Management and Finance)**

PO12. Recognize the need for, and have the preparation and ability to engage inindependent and life-long learning in the broadest context of technologicalchange. **(Life-long Learning)**

Program Specific Outcomes:

On successful completion of the Program, the graduates of B. Tech. (CE) will be able to

PSO1. Plan, draw, analyze, design, construct, valuate, manage, maintain, retrofit and rehabilitate civil engineering systems and processes by applying suitable materials, tools and techniques.

PSO2. Identify minerals, rocks, structural geology problems andunderstand geological maps; characterize soil; choose foundations; select ground improvement techniques; and plan and design transport systems.

PSO3. Perform land survey; plan, design, construct, maintain and manage water resources systems; analyze water and wastewater; manage solid waste; plan, design and execute environmental systems and processes.