

DEPARTMENT OF CIVIL ENGINEERING

Programme Educational Objectives (PEOs)

Graduates of the programme B E Civil Engineering will

PEO 1: Gain knowledge and skills in Civil engineering which will enable them to have a career and professional accomplishment in the public or private sector organizations

PSO 2: Become consultants on complex real life Civil Engineering problems related to Infrastructure development especially housing, construction, water supply, sewerage, transport, spatial planning.

PSO 3: Become entrepreneurs and develop processes and technologies to meet desired infrastructure needs of society and formulate solutions that are technically sound, Economically feasible, and socially acceptable.

PSO 4: Perform investigation for solving Civil Engineering problems by conducting research using modern equipment and software tools.

PSO 5: Function in multi-disciplinary teams and advocate policies, systems, processes and equipment to support civil engineering

Program Outcomes (POs)

PO 1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO 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.

PO 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.

PO 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.

PO 5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.



PO 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.

PO 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.

PO 8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO 9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 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.

PO 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.

PO 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.

Program Specific Course Outcomes (PSOs)

On successful completion of the Civil Engineering Degree programme, the Graduates shall exhibit the following:

PSO1 Knowledge of Civil Engineering discipline: Demonstrate in-depth knowledge of Civil Engineering discipline, with an ability to evaluate, analyze and synthesize existing and new knowledge.

PSO2 Critical analysis of Civil Engineering problems and innovation: Critically analyze complex Civil Engineering problems, apply independent judgment for synthesizing information and make innovative advances in a theoretical, practical and policy context.

PSO3 Conceptualization and evaluation of engineering solutions to Civil Engineering: Issues Conceptualize and solve Civil Engineering problems, evaluate potential solutions and arrive at technically feasible, economically viable and environmentally sound solutions with due consideration of health, safety, and socio cultural factors