Madanapalle Institute of Technology and Science, Madanapalle

Department of Civil Engineering

VISION AND MISSION OF THE DEPARTMENT

Vision

Provide quality education to the students to excel in research and academics in the field of Civil Engineering and thereby to contribute to technological and socio-economic development of the nation.

Mission

- Impart quality education to create and develop research culture with deep sense of commitment and enable the industries to adopt the research outputs;
- Produce engineers with scientific temperament and moral values in the field of Civil Engineering; and
- Develop innovative solutions for problems in Civil Engineering for the welfare of all sections of the society.

Programme Educational Objectives (PEOs)

Graduates will:

- PEO1: Contribute to the development of sustainable infrastructure.
- PEO2: As part of an organization or as Entrepreneurs, will continue to learn to harness evolving technologies.
- PEO3: Be professional Civil Engineers with ethical and societal responsibility.

Programme Outcomes:

Graduates will be able to:

PO1: Fundamentals: Apply the knowledge of mathematics, science, engineering fundamentals, and Civil Engineering principles to the solution of complex problems in Civil Engineering.

PO2: Problem analysis: Identify, formulate, research literature, and analyze complex Civil Engineering problems reaching substantiated conclusions using first principles of mathematics and engineering sciences.

PO3: Design: Design solutions for complex Civil 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: Investigation: 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 related to Civil Engineering problems.

PO5: Tools: Create, select, and apply appropriate techniques, resources, and modern engineering tools such as CAD, FEM and GIS including prediction and modelling to complex Civil Engineering activities with an understanding of the limitations.

PO6: **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 Civil Engineering practice.

PO7: Environment: Understand the impact of the professional Civil 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 Civil Engineering practice.

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

PO10: Communication: Communicate effectively on complex Civil 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: Management: 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 Civil Engineering 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.