

• M.Tech Civil Engineering – HITS

VISION OF THE DEPARTMENT

To be a globally competent Premier Academic Centre for quality education and research in the diverse areas of Civil Engineering with social commitment.

MISSION OF THE DEPARTMENT

- To inculcate comprehensive principles to produce highly competent and technologically capable professional engineers, academicians and entrepreneurs.
- To impart quality education with strong emphasis on social commitment and sustainability, with ethical standards.
- To provide a scholastic environment for state-of-the-art research.
- To conduct knowledge transfer programmes to enhance technical knowledge.

SALIENT FEATURES

- Highly qualified and well experienced faculty involved in research projects funded by government agencies and consultancy.
- Over 28 patents filed by faculty and students in areas of Sustainable Concrete, Health Monitoring of Structures, Hydrogen Sequestration and Solid Waste Management.
- Guest lectures by practicing Engineers and Academicians of repute on a wide range of topics at different junctures of the course under professional body student chapters.
- Visits to various construction sites, state and national research organizations.
- One faculty-one industry partnership platform for student to enhance internships and job opportunities for students.
- MoUs with core industries and international institutes for student exchange programmes, international visits and cultural exchange.
- Well-established Centre for Sustainable Technology (CENSTEC) in collaboration many industries and national and international institutes

PG PROGRAMMES

Programme offered	Eligibility
M.Tech SECM	A Pass in B.E. / B.Tech. (Civil) / AMIE
M.Tech SEE	A Pass in B.E. / B.Tech. (Civil / Bio-Technology / Geo-Informatics / Industrial Bio-technology / Energy and Environmental Engg. / Mechanical) / A

PROGRAMME OUTCOMES (PO)

1. Scholarship of Knowledge:

Acquire in-depth knowledge of specific discipline or professional area, including wider and global perspective, with an ability to discriminate, evaluate, analyse and synthesize existing and new knowledge, and integration of the same for enhancement of knowledge.

2. Critical Thinking

Analyse complex engineering problems critically, apply independent judgement for synthesizing information to make intellectual and/or creative advances for conducting research in a wider theoretical, practical and policy context.

3. Problem Solving

Think laterally and originally, conceptualise and solve engineering problems, evaluate a wide range of potential solutions for those problems and arrive at feasible, optimal solutions after considering public health and safety, cultural, societal and environmental factors in the core areas of expertise.

4. Research Skill

Extract information pertinent to unfamiliar problems through literature survey and experiments, apply appropriate research methodologies, techniques and tools, design, conduct experiments, analyse and interpret data, demonstrate higher order skill and view things in a broader perspective, contribute individually/in group(s) to the development of scientific/technological knowledge in one or more domains of engineering.

5. Usage of modern tools

Create, select, learn 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.

6. Collaborative and Multidisciplinary work

Possess knowledge and understanding of group dynamics, recognize opportunities and contribute positively to collaborative-multidisciplinary scientific research, demonstrate a capacity for self-management and teamwork, decision-making based on open-mindedness, objectivity and rational analysis in order to achieve common goals and further the learning of themselves as well as others.

7. Project Management and Finance

Demonstrate knowledge and understanding of engineering and management principles and apply the same to one's own work, as a member and leader in a team, manage projects efficiently in respective disciplines and multidisciplinary environments after consideration of economical and financial factors.

8. Communication

Communicate with the engineering community, and with society at large, regarding complex engineering activities confidently and effectively, such as, being able to comprehend and write effective reports and design documentation by adhering to appropriate standards, make effective presentations, and give and receive clear instructions.

9. Life-long Learning

Recognize the need for, and have the preparation and ability to engage in life-long learning independently, with a high level of enthusiasm and commitment to improve knowledge and competence continuously.

10. Ethical Practices and Social Responsibility

Acquire professional and intellectual integrity, professional code of conduct, ethics of research and scholarship, consideration of the impact of research outcomes on professional practices and an understanding of responsibility to contribute to the community for sustainable development of society.

11. Independent and Reflective Learning

Observe and examine critically the outcomes of one's actions and make corrective measures subsequently, and learn from mistakes without depending on external feedback.

Duration: 2 Years