Department of Civil & Infrastructure Engineering

The Department of Civil & Infrastructure Engineering was established in the year 2022. The department offers a four-year B.Tech. programme in Civil & Infrastructure Engineering at an undergraduate level. At the postgraduate level, the department offers the Ph.D. program.

Undergraduate Program (Civil & Infrastructure Engineering)

The Department's B.Tech. curriculum is carefully designed considering the requirements of subjects/courses that would make a wholesome engineering student. The entire focus has been to transfer knowledge on engineering principles, concepts, current developments & practices in a structured manner providing ample opportunity to take electives from a basket of courses permitting interdisciplinary learning and provision for internship, industry interaction, etc. The knowledge transfer should facilitate the student to enhance their skills, opportunities for employment, and self-sustaining factors. All of the above is embedded by balancing the number of modules per course and the number of hours of classroom teaching, laboratory, and tutorials.

The first year (First & Second semesters):

The first year of study can build the basic science and mathematical skills needed for the practice of civil & infrastructure engineering. Physics, chemistry, and mathematics/numerical methods through the concepts of differential equations and mechanics give a solid foundation in problem-solving and analytical thinking, which are essential for civil & infrastructure engineering students. This interdisciplinary approach, favored by industry, facilitates switching to another engineering discipline at the end of the first semester if needed.

The second year (Third & Fourth semesters):

The second year offers students a range of courses within civil engineering and engineering economics & HSS electives. Courses like fluid mechanics, mechanics of materials, building & construction materials, and building planning & drawing introduce fundamental principles & practical applications of civil engineering. Considerable emphasis to be placed on laboratory & testing leading to understanding & appreciation to practice. It includes site visits, laboratory classes, physical modelling, & surveying fieldwork (carefully planned during non-monsoon days) using the most modern tools, instruments, and applications.

The Third Year (fifth & sixth semesters):

The third year is built on basic civil engineering design courses. These courses provide fundamental knowledge in areas of civil engineering such as structural design, water resources, geotechnical, transportation, and environmental engineering. Hands-on

laboratory tests will build practical skills and strengthen the concepts from these design courses.

The Final Year (seventh & eighth semesters):

The final year facilitates the students to pick up from a basket of elective courses corresponding to the specialized tracks & other department electives. Seven separate specialization tracks are available. Civil & Infrastructure engineering students may configure their electives to provide specialization in the seven sub-disciplines, as detailed below:

- Structural Engineering
- Geotechnical Engineering
- Transportation Engineering & City/Urban Planning
- Construction Engineering & Facilities Management
- Environmental Engineering
- Water Resources Engineering

Students may pursue this by choosing any relevant technical electives. These elective courses provide students with a deeper understanding of some of the topics he/she would like to further pursue. The experience that will be gained by eligible students through projects being taken up by associating with either an industry or an organization will open up opportunities to plan and pursue the interest of the student with confidence.

Faculty and Research Activities

The faculty of the Department work on various core research areas and also on an expansive list of interdisciplinary research areas. The research areas of all institute faculty members are available here. The problems to be investigated are from the domains such as Geotechnical Engineering (Prof. Giridhar Rajesh Bande), Transportation Engineering (Prof. Aniket Vasantarao Kataware), and Environmental Engineering (Prof. Narasamma Nippatlapalli). The Department is poised to take on both global as well as local issues such as foundation stability, geotechnical earthquake engineering, utilization of industrial by-products, pavement engineering, and sustainable and resilient pavement.
For faculty details click here.

Currently, the department has two Research Scholars: R Mahender Reddy (222111002) in the area of Geotechnical Engineering and Ahtisham Gull Bhat (222111001) in the area of Transportation Engineering.