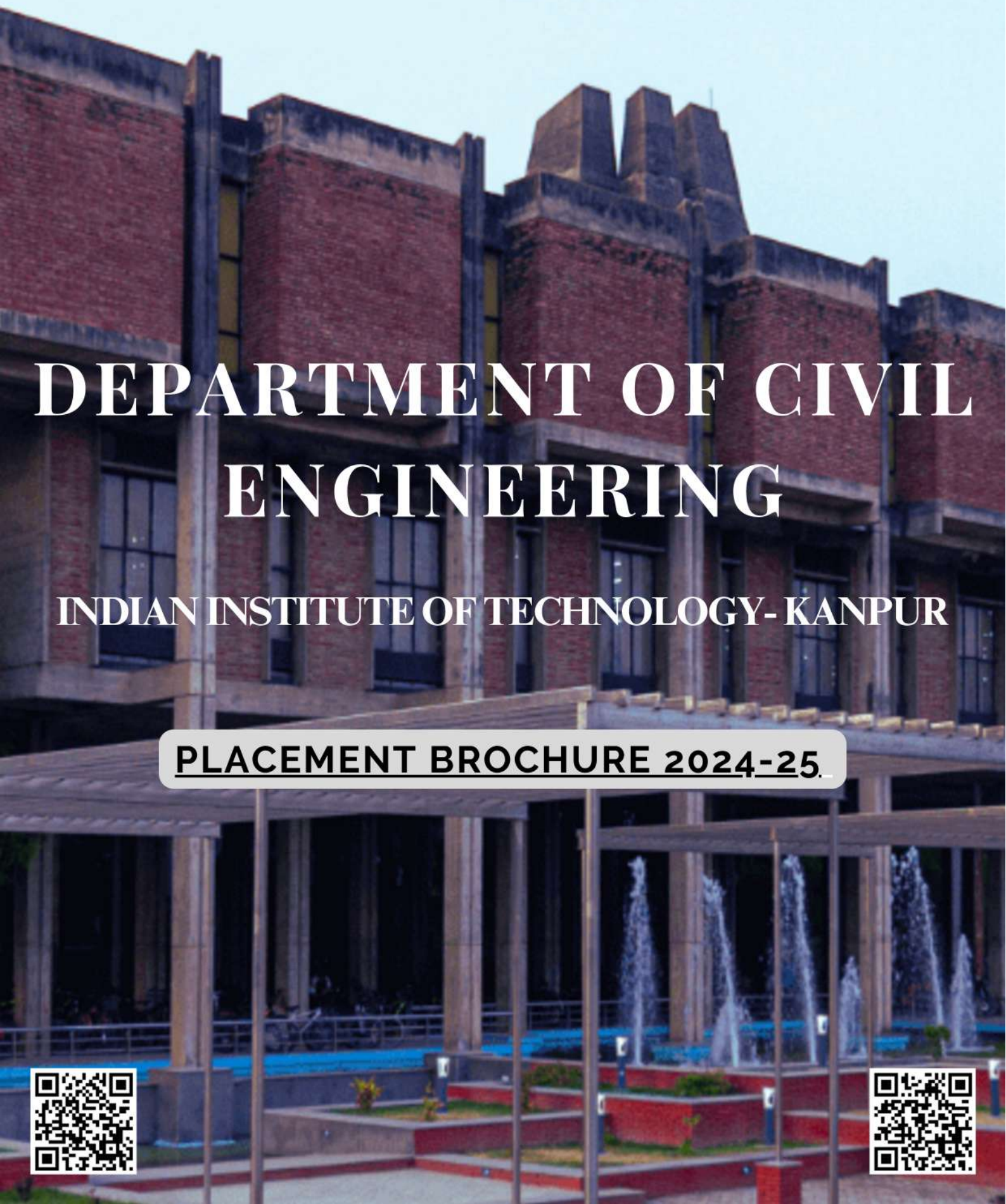
Students' Placement Office
Indian Institute of Technology Kanpur



DEPARTMENT OF CIVIL ENGINEERING

INDIAN INSTITUTE OF TECHNOLOGY- KANPUR

PLACEMENT BROCHURE 2024-25

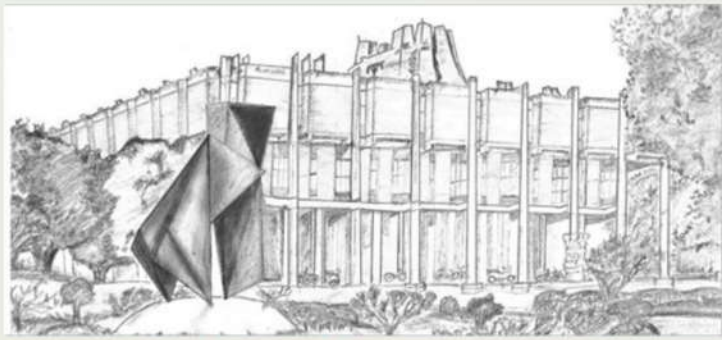
CONTENTS

OVERVIEW

Established in 1961, the Department of Civil Engineering at IIT Kanpur has a longstanding tradition of producing high-quality technical professionals who are essential to industry, R&D organizations, and academia. The Department offers a comprehensive range of Civil Engineering programs, including B. Tech., B. Tech.-M. Tech. Dual Degree, MS (Research), and M. Tech. degrees. The Master's program features six specializations: Environmental Engineering, Geoinformatics, Geotechnical Engineering, Hydraulics & Water Resources Engineering, Structural Engineering, and Transportation Engineering. Additionally, the Department boasts a vibrant Ph.D. program in these specializations as well as in Infrastructure Engineering and Management.

The Department's academic activities emphasize a deep understanding of fundamental principles, fostering the creative ability to tackle real-life Civil Engineering challenges, and developing the analytical skills necessary to solve interdisciplinary problems. Beyond academics, the Department encourages students to participate in extracurricular and co-curricular activities, promoting team spirit and organizational skills.

The Department's alumni hold prestigious positions globally across academia, research organizations, and industry. The faculty is actively engaged in applied research and consultancy, providing high-quality technical assistance to various organizations through numerous R&D projects and consultancy services. Recently, the Department has attracted substantial sponsored research funding from both government and private organizations, delivering excellent outputs that offer implementable solutions for societal benefit.



5th among Indian Universities

QS WORLD UNIVERSITY RANKINGS

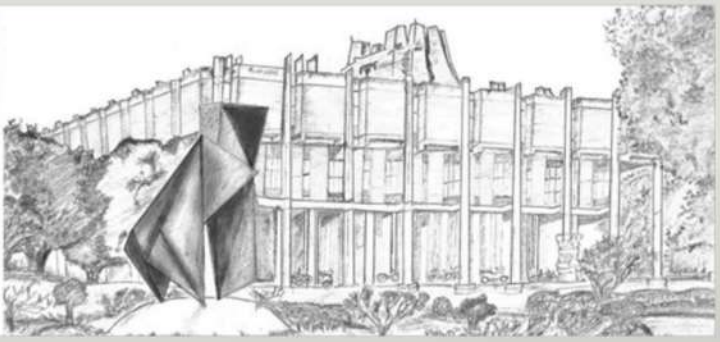
VISION

The Civil Engineering Department at IIT Kanpur aims to achieve international recognition for excellence in research and teaching, establishing itself as the top choice for students and faculty globally. Our vision is to lead the field of Civil Engineering by fostering innovation, sustainable practices, and smart technological solutions to address contemporary and emerging challenges.

We strive for excellence in research through high-quality publications in reputed journals and collaborative research projects. Our commitment to exceptional teaching is reflected in the performance and leadership of our graduates across industry, academia, and other sectors.

To be recognized as the premier Civil Engineering department in the country, we focus on balancing teaching, research, and consultancy, ensuring our graduates are highly sought after by employers. Our department emphasizes the integration of advanced technologies such as Artificial Intelligence, Machine Learning, and IoT in both teaching and research. This approach enables us to tackle challenges like smart traffic management, environmental monitoring, process controls, deployment of smart sensors, and the development of energy-efficient and sustainable construction materials.

Through these efforts, we aim to contribute to a sustainable future and maintain our status as the preferred destination for prospective postgraduate students, faculty, and industry partners seeking technical expertise and innovative solutions



MESSAGE FROM HOD

Greetings!

Step into a world of excellence and innovation at the Department of Civil Engineering, IIT Kanpur, where a legacy of over six decades meets the aspirations of the future. Since our inception in 1961, we have been crafting the finest technical minds that industry, research, and academia crave. In the midst of changing technological horizons and evolving industries, the need for brilliant youthful minds with exceptional analytical prowess, an open mind, and inventive problem-solving skills becomes more apparent than ever before. Our talented graduates embody this spirit and are actively seeking opportunities that will propel them to unleash their full potential upon the world.

Here, at the Department of Civil Engineering, our mission is to foster comprehensive skill development in students. Through a rigorous curriculum, we offer a wide array of undergraduate and postgraduate courses that cater to the evolving demands of the field. Furthermore, each UG student is also required to take 49 course-credits in Humanities and Social Sciences department which greatly enhances their outlook towards the society and its needs. PG students, who are admitted at IITK after a very tough entrance procedure, undergo advanced coursework and get exposure to research under the able guidance of faculties who themselves are renowned researchers in their respective fields. The department takes immense pride in encouraging students to participate in a plethora of extracurricular activities spanning sports, culture, dramatics, and music, among others. These endeavours enable them to refine their skills and even manage events within the IIT community, fostering a well-rounded personality.

I am confident that our team of placement coordinators will facilitate a smooth and pleasurable hiring process. We are committed to continuous enhancement and welcome any feedback from our esteemed recruiters. Recruiters are once again welcomed to the Department of Civil Engineering. We look forward to your participation in the recruitment drive and wish you the very best!

WARM REGARDS,
DR. PRIYANKA GHOSH
HEAD OF DEPARTMENT, CIVIL ENGINEERING
IIT KANPUR

SPECIALIZATION

Structural Engineering

The Structural Engineering department at IIT Kanpur is actively involved in a wide range of activities encompassing education, research, and advisory services across various domains, including design, testing, and health monitoring of structures. The faculty members, who bring extensive expertise in areas such as dynamics, finite elements, materials, and stability, play a crucial role in guiding both students and research initiatives.

The department features a state-of-the-art laboratory spanning 1,500 square meters, equipped with advanced technology for investigating the load-deformation characteristics of structures. This includes comprehensive studies on pre-peak behavior, post-peak strength, deformability, and failure mechanisms. A notable highlight is the pioneering Pseudo Dynamic Test Facility, which allows for the examination of seismic behavior in prototype structural models up to three stories high.

Geotechnical Engineering

The Geotechnical Engineering specialization at IIT Kanpur provides a comprehensive education in Foundation Engineering, Geotechnical Earthquake Engineering, Ground Improvement Techniques, and Rock Mechanics. This program equips students with both theoretical knowledge and practical skills, enabling them to understand soil behavior and its interactions with structures. Students explore foundation systems, seismic activities, and innovative soil enhancement methods, such as reinforced earth and geosynthetic techniques. They also study the mechanical properties of rock materials, crucial for designing safe tunnels, slopes, and other geological structures. By integrating experimental and analytical evaluations, the program prepares students to create effective engineering solutions, ensuring they are well-equipped to address real-world challenges in geotechnical engineering and making them valuable assets in the civil engineering industry.

The Geotechnical laboratory is equipped with advanced testing apparatus and a dedicated computer center featuring cutting-edge software such as PLAXIS 2D, PLAXIS 3D, GEO5, and FLAC3D. These tools enable detailed analysis and simulation of geotechnical problems, enhancing the research capabilities of both faculty and students.

Static Cone Penetration Test

Transportation Engineering

The Transportation Engineering department at IIT Kanpur fosters a vibrant environment for innovation and expertise in the field. With a dedicated faculty of eight experts, the department engages in diverse research areas, including materials and pavement engineering, intelligent transportation systems, network optimization, road safety, and infrastructure management. This broad focus enables students and researchers to explore various facets of transportation engineering, ensuring a comprehensive educational experience.

The Transportation Engineering Laboratory is equipped with state-of-the-art facilities that support advanced research initiatives. Among its resources is an instrumented vehicle outfitted with LiDAR, video cameras, IMU GPS units, GSFS, and various other sensors, facilitating in-depth studies of transportation systems. These cutting-edge tools enhance the department's capability to conduct innovative research, ultimately contributing to the development of smarter and safer transportation solutions. Through its commitment to excellence, the department continues to play a pivotal role in advancing transportation engineering practices.

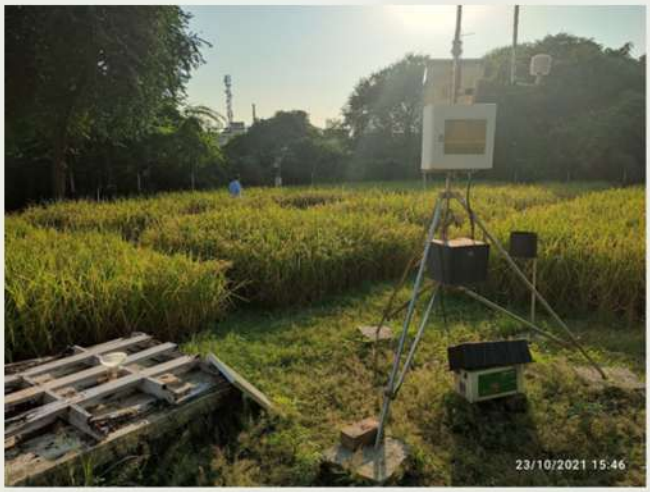
Environmental Engineering

The Environmental Engineering specialization at IIT Kanpur investigates the convergence of civil engineering and environmental sustainability. The focus areas include water resources, air quality, waste management, sustainable infrastructure, and emerging topics such as Environmental, Social, and Governance (ESG) criteria and Life Cycle Assessment (LCA).

The department's laboratory is equipped with advanced instruments for elemental analysis, including ICP-MS, ICP-OES, and MP-AES, as well as sophisticated analytical tools like the CHNOS Analyzer, GC-MS, and UV-Vis Spectrophotometers. Additional equipment includes PM samplers, weather monitoring stations, and zeta potential analyzers, among others.

Hydraulics and Water resource Engineering

The Hydraulics and Water Resources Engineering field at IIT Kanpur serves as a prominent research and consultancy center, focusing on critical aspects of water management and hydraulic structure design. This specialization encompasses flood and drought forecasting, irrigation optimization, and water quality management. The Hydraulics Laboratory is equipped with a wide array of experimental apparatus, including studies on energy losses in pipes, hydraulic jumps, and pipe fittings. The lab features advanced instruments such as current meters, echo-sounders, and 3D flow measurement equipment, along with an Experimental Agriculture Plot and a Porous Media Flow Lab, enhancing its research capabilities.



Notable projects within the department include innovative fog prediction models using data science and the establishment of a Critical Zone Observatory in the Ganga Basin for monitoring water balance and quality. The department also conducts hydraulic and geotechnical investigations of river bridges and performs hydraulic model studies for infrastructure projects like the Pipra Ghat Bridge. Through these initiatives, the Hydraulics and Water Resources Engineering field addresses pressing water-related challenges, promoting sustainable practices and resilient infrastructure development.

Infrastructure Engineering & Management

The IEM Department at IIT Kanpur specializes in various aspects of construction and infrastructure management. Key Areas of Focus:

Construction Management

The department covers essential elements such as scheduling, contract management, quality assurance, safety protocols, economic considerations, and financing of construction projects. It also emphasizes automation, procurement, project controls, and building information modeling.

Infrastructure Asset Management

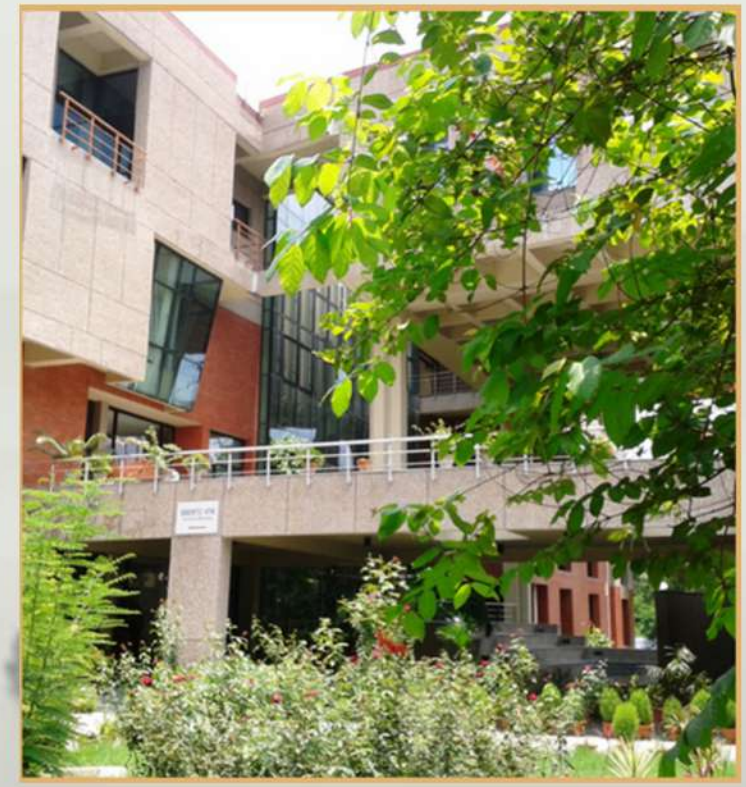
This area includes the management of infrastructure assets like roads, bridges, and dams. The department focuses on maintenance strategies, risk analysis, resilience, performance monitoring, and condition assessments to ensure the longevity and effectiveness of these assets.

Sustainable Infrastructure Creation

The department is dedicated to sustainable design practices, quality control, and assessing environmental impacts. This involves promoting green building techniques and life-cycle cost analysis to support sustainable smart city initiatives.

Concrete Engineering

Expertise in concrete engineering encompasses durability assessments, repair strategies, and non-destructive testing methods. The department aims to enhance the performance and lifespan of concrete structures through rigorous quality control and innovative repair techniques.

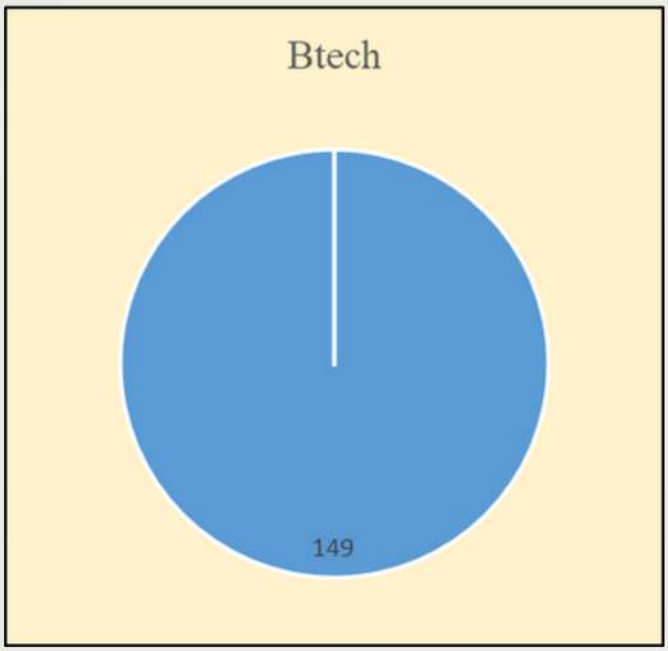


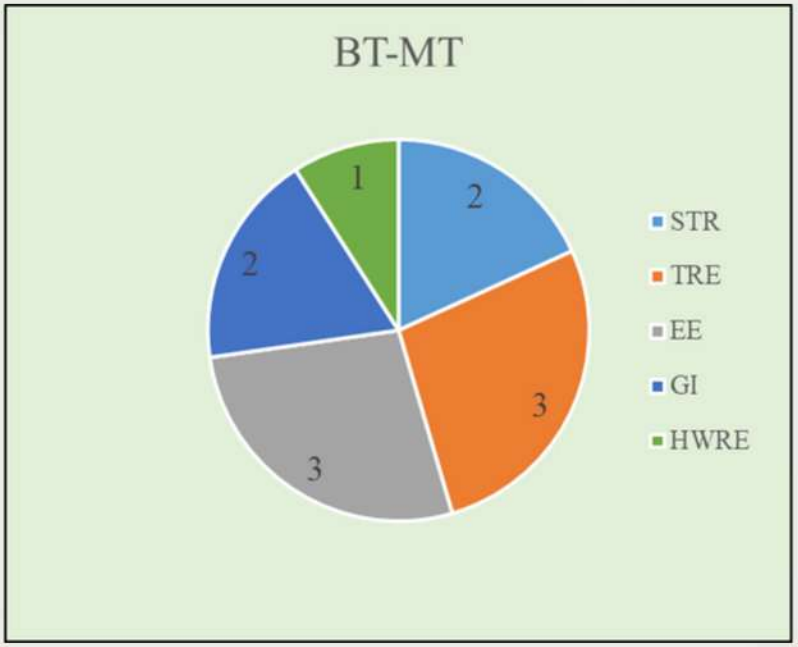
Geoinfomatics Engineering

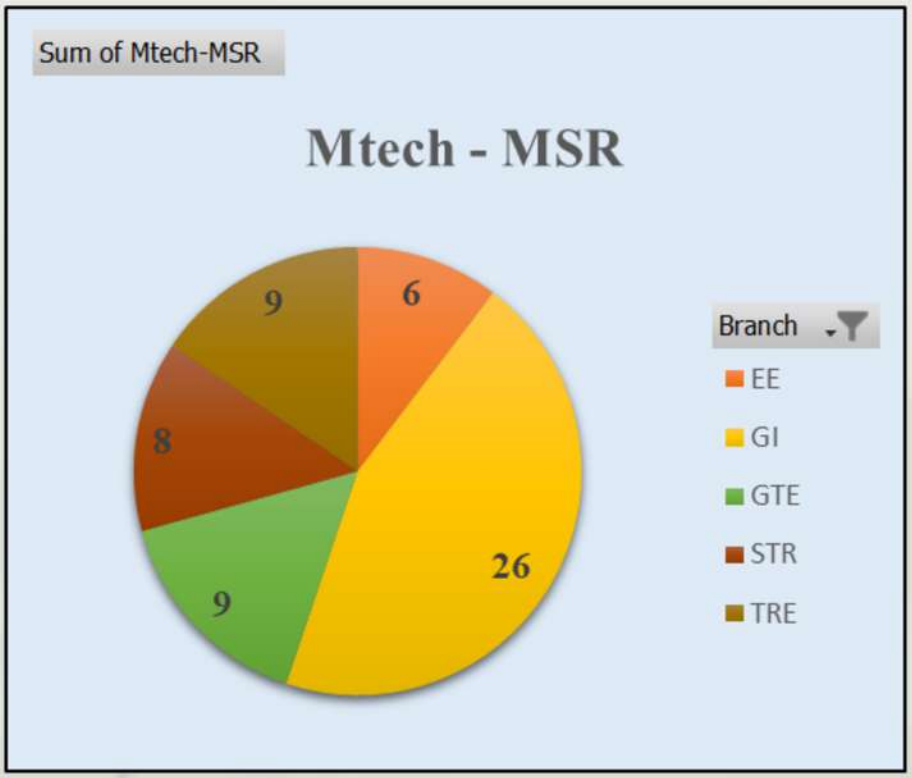
Geoinformatics at IIT Kanpur is a multidisciplinary and prominent field, featuring a team of experienced faculty specializing in geodesy, LiDAR, photogrammetry, and satellite systems. The department manages the National Centre of Geodesy, supported by the Department of Science and Technology (DST), to enhance geodetic activities across the nation. Additionally, it hosts an IGS station for satellite data collection and utilizes GNSS processing software such as Bernese and GAMIT/GLOBK, along with mapping tools like ARCGIS and QGIS. The laboratory is equipped with advanced instrumentation, including Velodyne LiDAR, Trimble GNSS receivers, and various surveying tools.

Notable projects undertaken by the department include the determination of geoid models, studies on Earth rotation and polar motion, and LiDAR data simulation. The research also focuses on developing positioning algorithms for satellite systems and processing LiDAR point clouds, with applications in solar energy, water harvesting, and 3D city modeling. Collaborations with universities such as Curtin University and NCTU Taiwan further enhance research efforts, fostering innovation and advancing the field of geoinformatics.

STUDENT DEMOGRAPHICS







OUR ALUMS

Founder of Innovative Technical Solutions (ITSI), one of the strongest infrastructure & environmental businesses in USA.

Dr. Devendra Shukla BT-1967

Found & revolutionized the white cement industry in the India, first ever to computerize operations kiln with JK Cements using fuzzy logic system.

Mr. Yadupati Singhania BT-1977

He is credited with putting India on the world gas map. He currently serves as the CEO and MD of Petronet LNG. His notable contribution is worlds longest LNG Pipeline.

Mr. Prabhat Singh BT-1980

Mr. Vikas Kumar, a highly acclaimed IPS officer of Rajasthan cadre, credited with uprooting the menace of illegal mining in Eastern Rajasthan region

Mr. Vikas Kumar BT-1997

He was the Project Director in the National Highways Authority of India (NHAI) at Koderma, Jharkhand. He was murdered for allegedly for his anti-corruption related actions in the Golden Quadrilateral highway construction project.

Mr. Satyendra Kumar Dubey BT-1994

Secretary General ACECC, consisting of 15 countries. He was the VP of CH2M HILL. First Indian American elected as the President of ASCE EWRI

Dr. Udai P. Singh BT-1972

EXTRACURRICULARS

Society of civil engineers, IIT Kanpur (SOCE) is a non-profit organization. It serves as a link between enrolled civil engineering students, alumni and professors at IIT Kanpur.

Society of Civil Engineers
Indian Institute of Technology, Kanpur

Students at IIT Kanpur actively plan, manage, and execute various events and festivals throughout their time at the institute, engaging with the broader campus community. These activities provide valuable opportunities for skill development and foster a sense of camaraderie among students beyond their academic pursuits.

- Students Gymkhana
- Science & Tech. Councik
- Sports Council
- Media & Cultural Council
- Entrepreneurship Cell
- Vox Populi
- Antragini
- Techkriti
- Udghosh

PAST RECRUITERS

A Navratna Company

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STUDENT PLACEMENT OFFICE

CIVIL ENGINEERING DEPARTMENTAL WEBSITE