Department of Civil Engineering
Indian Institute of Technology Kanpur

Message from the Faculty Coordinator

Being part of IIT Kanpur right from its inception, Civil Engineering is one of the oldest departments here. Very recently, it has been ranked 38th in the world (as per QS World University Subject Rankings - 2011). This gives an indication of the high standards of excellence pursued at this place.

There are 40 highly qualified faculty members involved in teaching & cutting edge research for various state and private sponsored projects worth millions of dollars. Some of the most prestigious projects currently spearheaded by faculty, like the Ganga Action Plan, are funded by various organizations of the Government of India like DST (Department of Science & Technology, ISRO (India Space Research Organization), etc.

The department also boasts of several state-of-the-art research facilities which are almost non-existent in other institutes of the country. Some examples may be the 5-star TERI-GRIHA rated Centre of Environmental Science & Engineering and the Pseudo Dynamic Test Facility.

The department provides undergraduate, postgraduate (M.Tech and Dual Degree) and doctorate programs. All in all, there are about 183 students who were selected through, arguably, some of the most toughest examinations in the world - JEE and GATE - and will be graduating this year. I believe that the courses offered to these students provide ample practical & theoretical exposure to face the challenges of the industry with confidence. I take this opportunity to invite your company to recruit students who I strongly believe will become a invaluable asset to your organization.

Sincerely,
Mukesh Sharma

Contacts

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Student Placement Coordinators

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Relevant Courses

Basic Courses:

- Introduction to Construction Materials
- Structural Analysis
- Hydraulic Engineering
- Design of Steel Structure
- Design of RCC
- Geotechnical Engineering
- Geoinformatics
- Transportation engineering
- Water supply and Waste Water Engg.

Advanced Courses:

- Principles of Construction Management
- Concrete Engineering
- Hydraulic Structures
- Urban Transportation System
- Geotechnical Earthquake Engineering
- Advanced Design of RCC
- Remote Sensing
- Traffic Infrastructure
- Geospatial Data Processing

In addition to the above courses, the courses in basic sciences, technical arts, humanities & social sciences, and interdisciplinary electives helps in developing the overall aptitude of the students.

Research Area

STRUCTURAL ENGINEERING

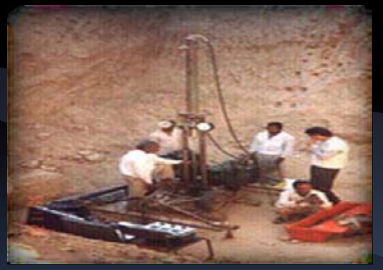
- Structural Damage and Health Assessment
- Energy dissipation devices: Aluminium shear link dampers, Buckling restrained brace
- Masonry and Steel-RC composite members
- Non-destructive testing
- Rehabilitation of Structures
- Construction materials
- Experimental seismic behaviour of structures
- Seismic evaluation and strengthening
- Stability of Structures
- Mechanics of Composite Laminates
- Seismic behaviour of confined masonry structures
- Structural Connections
- Pseudo Dynamic Testing
- Random vibrations

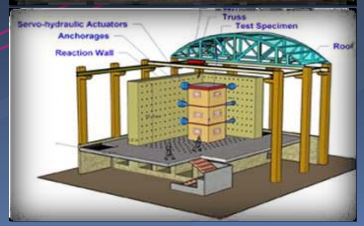
TRANSPORTATION ENGINEERING

- Pavement material characterization
- Bituminous mix design
- Pavement evaluation and design
- Traffic flow modelling and simulation
- Rail transportation system planning and design
- Transport system evolution and management
- Transit system and vehicle routing
- Highway financing and policy analysis

GEOTECHNICAL ENGINEERING

- Reinforced beds on soil
- Granular piles, Slope design
- Ground reclamation
- Micro piles
- Soil dynamics
- Geo-membranes and Geo-textiles Retaining Walls
- Seismic soil structure interaction
- Liquefaction Potential evolution
- Arching Effects
- Pile capacities, monitoring site conditions





Research Area

ENGINEERING GEOSCIENCES

- Remote Sensing of Earth resources & Environment
- Fluvial Geomorphology and Dynamics in Alluvial Plains
- Lacustrine Sedimentology & Mineralogy
- Tectonic Geomorphology & Paleo-seismology
- Fluvial Sedimentology & Stratigraphy

GEO-INFORMATICS

- Field practices using Robotic total stations, LiDAR and GPS
- Satellite image processing
- Mathematical and statistical approach to Geospatial data processing
- GPS Data collection and analysis
- Geospatial Information Studies using GIS
- Modelling using ArcGIS
- 3D Point cloud's processing
- INS and GPS/INS integration system
- Development of simulators for airborne and space borne altimetry LiDAR instrument

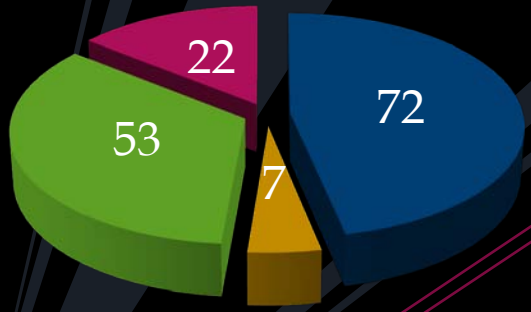
HYDRAULICS ENGINEERING

- Surface water hydrology
- Frequency response in pipe
- Statistical hydrology
- Eco hydrology
- Sediment transport
- Rainfall and runoff modelling
- Stochastic hydrology
- Flow and transport through porous media

ENVIRONMENTAL SCIENCES AND ENGINEERING

- Water treatment and pollution control
- Air Quality management & modelling
- Modelling and Simulations of environmental systems
- Heavy metal pollution
- Solid Waste Management
- Environmental Risk Assessment
- Bioremediation of hazardous substances

Students Profile



B.Tech. - M.Tech. Dual Degree (JEE Qualified)
5 Year Program

- Basic Engineering courses
- Compulsory departmental courses
- Elective (UG and PG)
- Summer internship after 3rd year
- M. Tech. Thesis (1.5 years)

B.Tech. (JEE Qualified)
4 Year Program

- Basic Engineering courses
- Compulsory departmental courses
- Elective (UG)
- Summer internship after 3rd year
- B.Tech. Project (1 year)

M.Tech. (GATE Qualified)
2 Year Program

- Compulsory departmental courses
- Elective (PG)
- M. Tech. Thesis (1 year)

Ph.D. (Selected through Interview)
5 Year (tentative) Program

- Ph.D. Electives
- Ph.D. Thesis

Projects

Internship:

- At the end second and third year most of the students go for a internship or take a project.
- This provides them an extra edge and a handful experience.

B Tech Project:

- All B Tech. Students are required to take a Project under a faculty advisor in any field as a part of their curriculum.
- This gives them a direction to their interest and enhances their skills

M Tech Thesis:

- It is compulsory for all M Tech and dual degree Students to submit a thesis in a topic of their choice and present it to the whole Department.
- It involves deep work in the field of their research area which is spread over a span of three semesters.

Nainital Camp:

- All B tech, dual degree and Mtech (Geoinformatics) students are required to camp in the city of Nainital.
- This Camp takes place in month of December and deals in the area of Geoinformatics and Geology.
- Student work in the adverse condition and weather to complete their work within time deadline.

Past Recruiters

AIRBUS AN EADS COMPANY

ARUP

Beca

GE imagination at work

dar al-handasah shair and partners

ANSYS FLUENT

Transocean

इंडियनऑयल IndianOil

Schlumberger

एनटीपीसी NTPC

Halcrow

Distinguished Alumni and Faculty

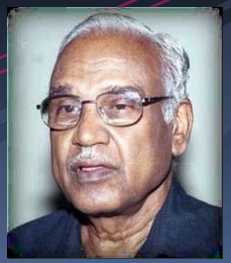
Satyendra Dubey
Project Director, National Highways Authority Of India

Dr. Udai P.Singh
President, EWRI, American Society of Civil Engineers

Priyaranjan Swaroop
Founder and Director, Construction Development Industry Council

R.K.Mishra
Founder, Indian Council for Public Private Partnership

Prabhat Singh
Director(Marketing), GAIL



M. Anandkrishnan
Chairman, IIT Kanpur

Dr. C.V.R. Murty
Former Head Of Department

Dr. Sudhir K.
Jain Professor, IIT Kanpur