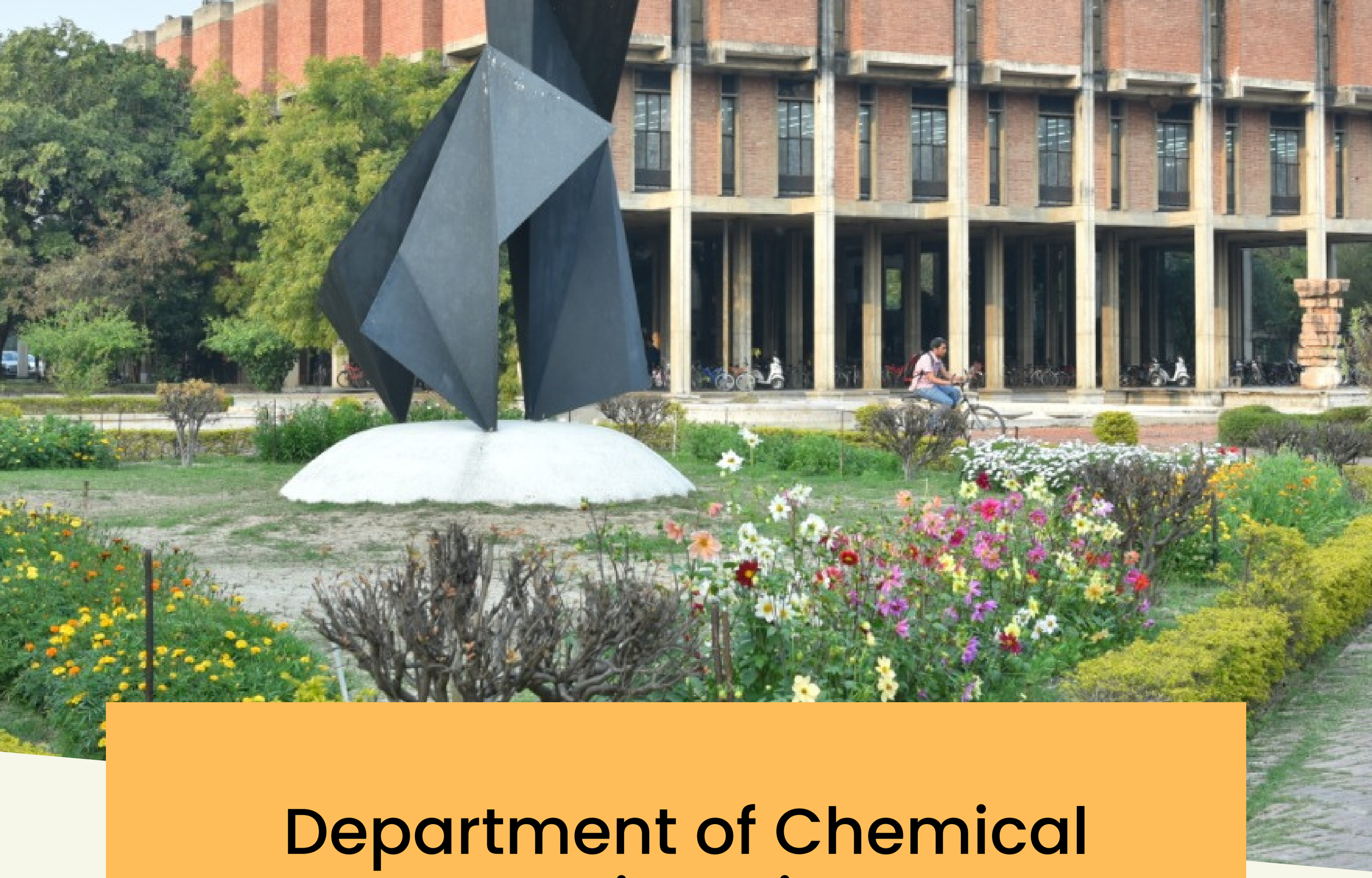


Department of Chemical Engineering

Indian Institute of Technology, Kanpur

Placement Brochure (2022-2023)

Student Placement Office

https://www.linkedin.com/company/che-iitk/

https://www.iitk.ac.in/che/

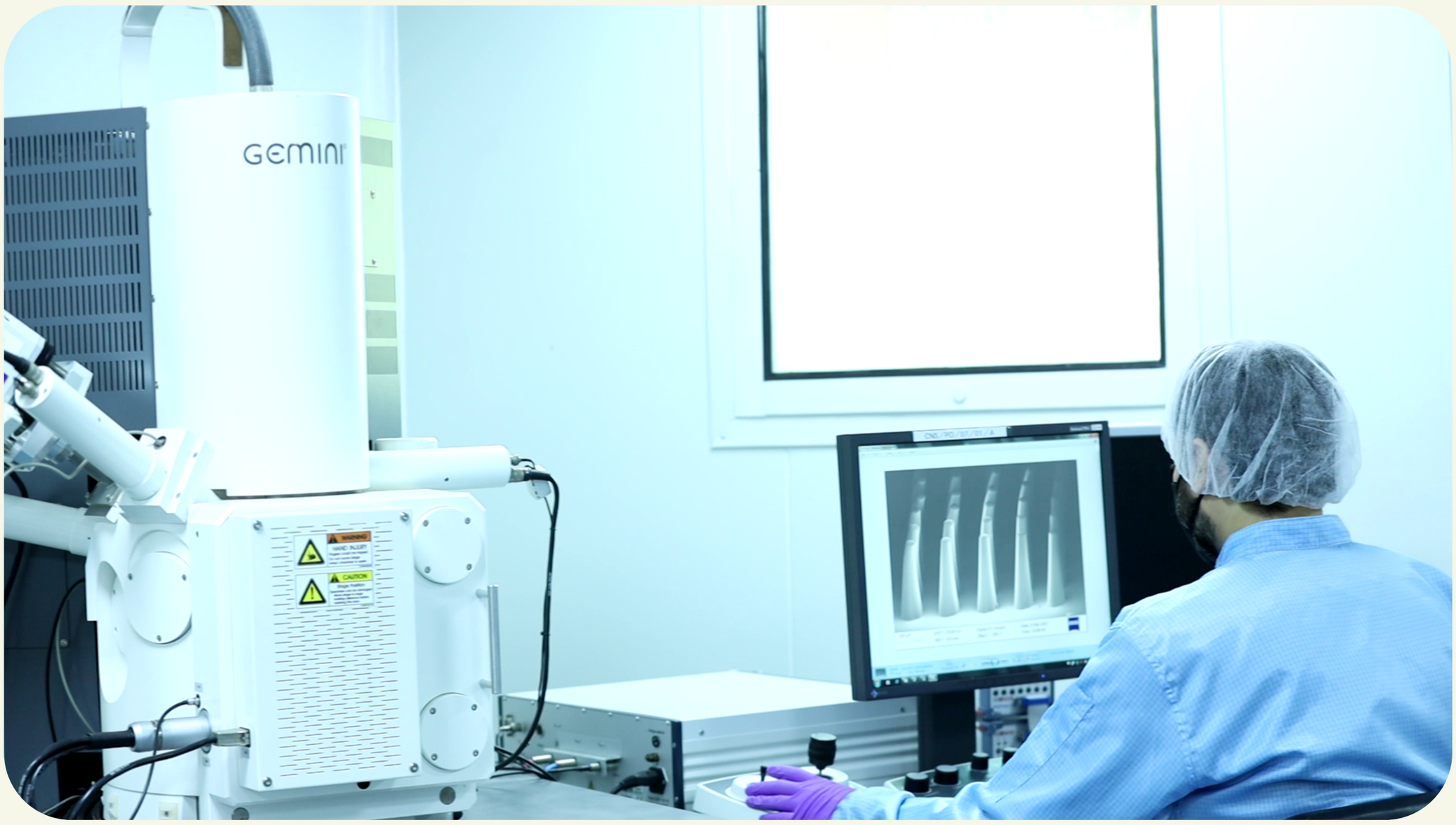
https://www.facebook.com/cheiitk/

Message from HOD

Prof. Jayant K. Singh

Ranked among the nation's top schools in Chemical Engineering, the department at IIT Kanpur is endowed with a highly competitive undergraduate program and a vibrant graduate program supported by state-of-the-art facilities and distinguished faculty members with both national and international recognitions. Our department's highly vibrant academic environment nurtures creativity, ethics, and out-of-the-box thinking. The students are guided by exceptional faculty, highly dedicated to research and teaching, and committed to providing cutting-edge knowledge and rigorous training to the students. Our students thus grow in an intellectually stimulating environment where the emphasis is on solving problems, allowing them to learn beyond the disciplinary boundaries. Thus, our alumni have made a remarkable impact in academia and industry. I heartily welcome companies to the campus recruitment at IIT Kanpur and become part of our extended community.

About Us



The Department of Chemical Engineering at IIT Kanpur is ranked among the nation's top schools in Chemical Engineering. Aside from excellence in fundamental research, the department has made significant contributions to the chemical industry through its expertise in chemical process engineering, simulation, optimization and control, polymers, interfacial phenomena, and separations. Experimental research in the department is supported by state-of-the-art facilities, which include Scanning Tunnelling and Atomic Force Microscopes, Ellipsometer, Rheometers, Optical Profilometer, etc.

IIT Kanpur was chosen by the Department of Science and Technology (DST) as one of the five places in India to have an operational state-of-the-art Nano-technology centre located in the Department of Chemical Engineering. Under the auspices of the FIST scheme of DST, several new facilities have been established. We take great pride in our alums, among whom we have recipients of almost all significant national and international recognitions: National Science Medal by the President of the United States of America, Membership of the National Academy of Science (USA), National Academy of Engineering (USA), National Medal of Technology and Innovation (USA), Infosys prize, Shanti Swaroop Bhatnagar prize, TWAS prize and many more.

Student Demographics

B. TECH

- 108 students
- 4-year program
- Admission through JEE
- Basic engineering & departmental courses
- Undergraduate projects

M. TECH & MS(R)

- 50 students (42 + 8)
- 2-year program
- Admission through GATE
- Compulsory departmental courses & electives
- 1.5 years thesis

DUAL DEGREE

- 18 students
- 5-year program
- Admission through JEE
- Basic engineering & departmental courses
- 1.5 years thesis

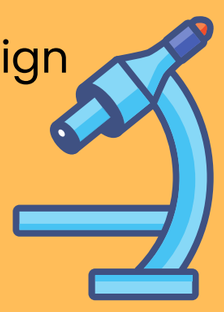
PHD

- 23 students
- Admission through written test and interview
- Compulsory departmental courses & electives
- PhD thesis

In addition to the Unit Operations & Process Control lab and Design Lab, course projects involving various tools, like **MATLAB**, **COMSOL**, **ASPEN PLUS**, **HYSYS**, and **FLUENT,** equip the students with sufficient practical skills.

Laboratory Courses

01 Chemical Process Simulation
02 Unit Operation and Process Control
03 Chemical Engineering Design



Fundamental Courses

01 Thermodynamics
02 Fluid Mechanics & its Applications
03 Heat Transfer & its Applications
04 Mass Transfer & its Applications
05 Chemical Process Industries
06 Process Dynamics and Control
07 Chemical Reaction Engineering
08 Biochemical Engineering
09 Chemical Engineering Design
10 Applied Numerical Methods in Engineering

Specialization Courses

01 Petroleum Refinery Engineering
02 Computer Aided Process Control
03 Molecular Modelling & Simulation
04 The Structure and Rheology of Complex Fluids
05 Process Engineering & Optimization
06 Chemical Plant Safety & Hazard Assessment
07 Reaction Engineering of Polymers
08 Advanced Fluid Mechanics
09 Environmental Pollution: Control & Modelling Mechanics of Soft Matter
10 Statistical Thermodynamics
11 Nano-sciences & Micro-fluids
12 Modelling & Simulation of Separation Processes
13 Hydrodynamic Stability

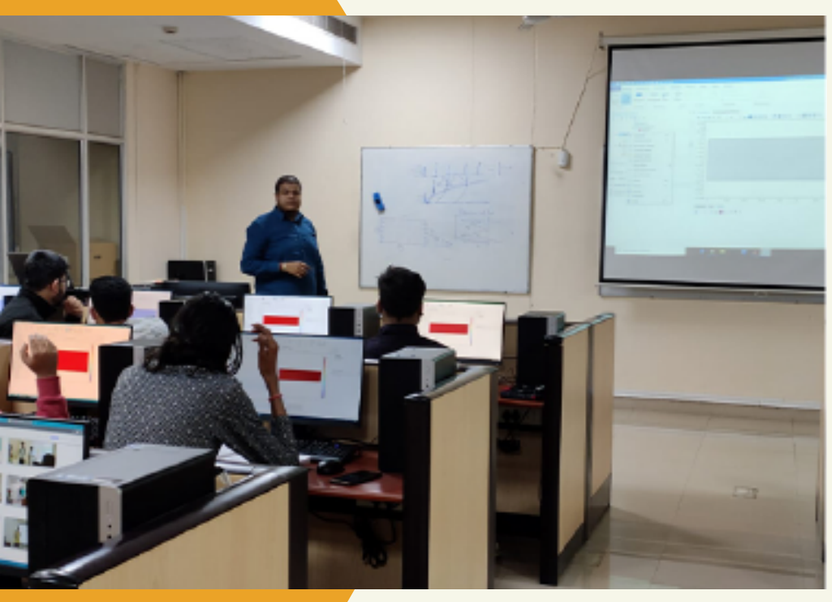
Departmental Activities

Chemineers society

- A student body aiming to promote intellectual and cultural activities of students of the Department of Chemical Engineering, IIT Kanpur.
- Helps students identify campus resources and foster harmonious relationships among students, faculty, staff, and administrators.
- The activities aim to groom student personalities to make them responsible citizens dedicated to the nation's development.

SimuTech group

- Conducts group workshops and offers projects related to the field of simulation in Chemical Engineering to students.
- Workshops introduce simulation and modeling softwares like Aspen Plus, Aspen Dynamics, Aspen HYSYS, and COMSOL.
- The group has also offered various projects to students on topics like Computational fluid dynamics, Computational heat transfer, Modelling of chemical reactors, and Plant control and design.



Faculty list and Expertise

Dr. Vishal Agarwal

Catalysis, Biofuels, Nucleation, Gas-Surface and Liquid-Surface Interactions, Molecular Simulation

Dr. Siddharta Panda

Chemical sensors, Lab-on-a-chip, Micro/nano fabrication, Microfluidics, Materials processing for microelectronic and display technologies

Dr. Pankaj A. Apte

Statistical Mechanics, Interfacial Thermodynamics, Phase equilibria and nucleation

Dr. Dipin S. Pillai

Stability Theory, Nonlinear Dynamics, Reduced-Order Modeling, Hydrodynamic Stability, Thin Films, Electrohydrodynamics, Multiphase flows

Dr. Goutam Deo

Catalysis and reaction engineering, Supported catalysts, Reaction kinetics

Dr. Raghavendra Ragipani

Carbon dioxide capture and mineralization, Resource recovery and solid waste utilization, Sustainable process engineering

Dr. Sanjeev Garg

Bioinformatics, Bioremediation, RNA Interference, Computer Aided Product and Process Design, Flexibility Analysis of Chemical and Biological Systems.

Dr. Indranil Dalal Saha

Modeling and simulation of the dynamics of polymer chains in flow, Mesoscale and molecular dynamics simulations

Dr. Animangsu Ghatak

Adhesion and friction on soft interfaces, Fracture of soft thin sheets, Bio-inspired approaches in design of engineering materials

Dr. V. Shankar

Stability of fluid flows, Rheology of complex fluids

Dr. Raju K. Gupta

Photocatalysis, Green synthesis of nanomaterials, Surface chemistry, High dielectric constant materials, Perovskite solar cells, Supercapacitors

Dr. Ashutosh Sharma

Confined Soft Materials, Nanomechanics, Meso-Patterning, Colloids and Interfaces, Wetting and Adhesion, Functional Interfaces

Dr. Yogesh M. Joshi

Rheology, Polymer science and engineering and Fluid mechanics

Dr. Himanshu Sharma

Flow through porous media,Enhanced oil recovery, Colloids & interfaces,Nanotechnology

Dr. Nitin Kaistha

Process modeling, Simulation and control, Plantwide control system structure synthesis, Control of reactive distillation columns

Dr. Jayant K Singh

Thermodynamics, Selective adsorption and separation, Energy storage materials, Wetting transition, Self assembly and crystallization at nanoscale

Dr. Harshwardhan H. Katkar

Soft matter, Biophysics, Nanopores, Bacterial Assemblies, Fluid Mechanics, Multiscale modeling, Bottom-up coarse-graining, Enhanced sampling

Dr. Raghvendra Singh

Signal transduction, Systems biology, Biophysics

Dr. K. P. Krishnaraj

Flow, structure and stress transmission in granular media, structure and transport in spatial networks

Dr. Sri Sivakumar

Synthesis and characterization of nanomaterials, Layer-by-Layer (LbL) assembly, Polymer capsules, Thin films, Drug delivery, and Photonic crystals

Dr. Rahul Mangal

Polymer physics, colloids, complex fluids, nanocomposites, active matter, liquid crystals

Dr. Naveen Tiwari

Transport Phenomena, Instabilities in micro-scale free surface flows, Flow through porous media

Dr. Raj Ganesh Pala

Electrochemical and reaction engineering, Sustainable energy and environment, Photoelectrochemical systems, CO_2 Capture

Dr. Anurag Tripathi

Modelling and simulation of complex fluids, Rheology and segregation of granular mixtures, Wet granular flows

Dr. Nishith Verma

Adsorption, Synthesis of nanomaterials including adsorbents and catalysts, Environmental pollution control (air/water purifications)

Past recruiters

A Navratna Company

Navin Fluorine International Limited

Dr.Reddy's

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HP

ITC Limited

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Honeywell

Technip

JINDAL STEEL & POWER

L&T

MCDERMOTT

Petrofac

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Secretary DST
Government of India

Dr. K. Vijay Raghavan
Principle Scientific Advisor
Government of India

Nitash Balsara
Faculty Senior Scientist
University of California, Berkeley

Dr. Rakesh Agrawal
Professor
Purdue Uniiversity

Dr. Kamal Kishore Sharma
Vice Chairman
Lupin Limited

Dr. Rakesh K. Jain
Professor,Tumor Biology
Harvard Medical School

Mr. Jagjeet Singh Bindra
Former president
Chevron Global Manufacturing

Dr. Ashok Mishra
Former Director
IIT Bombay

Dr. Santosh K. Gupta
Distinguished Professor
UPES, Dehradun

Mr. Kushal Chand Sacheti
Founder and CEO
Galaxy, USA, Inc

Smt. Vartika Shukla
Chairperson & Managing Director
Engineers India Limited (EIL)

Mr. Hemant Jalan
Founder Indigo Paints

and many more...

Collaborators and Sponsors

Department of BioTechnology, Government of India

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03 Micro PIV

04 Atomic Force Microscope

05 Optical Profilometer

06 Real time PCR

07 Confocal laser scanning microscope

08 Atomic Absorption Spectroscopy

09 Dispersive Raman Spectrometer

10 Nano Imprint Lithography

11 3D Bioprinter

12 ICP Mass Spectrometer

13 Surface Area Analyzer

14 Universal Testing Machine

and many more.....

Contact Us

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