भारतीय प्रौद्योगिकी संस्थान कानपुर
Indian Institute of Technology Kanpur

DESIGN

POST GRADUATE PROGRAM

Website: www.iitk.ac.in/design/

DEPARTMENT OF DESIGN

The Department of Design at IIT Kanpur is an interdisciplinary space which educates and conducts research in the area of design, and solves real-world problems. The Department fosters a highly collaborative work environment involving students, researchers, academicians and businesses for promoting knowledge-sharing and experience-exchange.

The Department of Design is centered around our students. Our students learn by doing, through experimentation, and through collaboration. They focus on innovation and on bringing new, practical, and cool ideas to the table. Our academic programs help them emerge as designers who can provide design leadership by conceptualizing and developing meaningful solutions for industrial and societal problems. We want our students to be the best in the world. Thus, we are always exploring creative ways to enhance our academic programs so that our students' quality and research output is of world-class level. Toward this we work on enhancing our students' capabilities along several dimensions; ability to conduct research and innovate, creativity and ideation, critical analysis, prototyping, decision making, and leadership. Our curriculum is multifaceted as well. It draws in knowledge from all areas relevant to a designer; design-thinking, science and technology, user experience, communication, business logic, and sustainability.
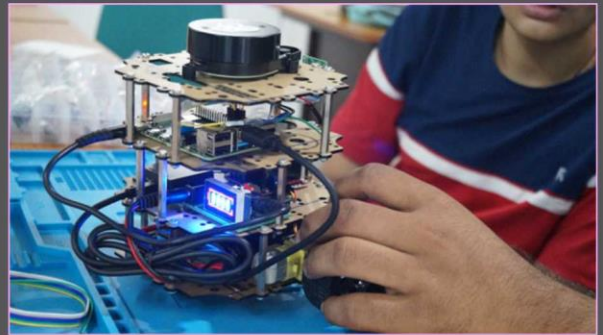
The Department of Design is all about creativity, innovation, human values, hands-on skills, and analytical acuity. We are seeking applications for our doctoral and master's programs from candidates who aspire to provide design leadership.

POST-GRADUATE PROGRAMMES OFFERED

Master of Design

- ❖ Product engineering design
- ❖ Communication design
- ❖ User experience design
- ❖ Interaction Design
- ❖ System, Strategic & Service Design
- ❖ Speculative Design

Doctor of Philosophy

- ❖ Product and industrial design
- ❖ Mobility design
- ❖ Visual communication
- ❖ Engineering design
- ❖ User Experience design
- ❖ Interaction design
- ❖ Film making
- ❖ Systems design
- ❖ Design theory
- ❖ Design management
- ❖ Human Machine Interaction
- ❖ Music Technology
- ❖ Robotics Interaction
- ❖ Automotive UI
- ❖ AR/VR/MR/XR Interaction
- ❖ New Media
- ❖ Human Factors
- ❖ Human System Integration
- ❖ Strategic design
- ❖ Service Design
- ❖ Human Robot Interaction
- ❖ Interaction Design

LABS/FACILITIES

The Department has an excellent suite of labs and facilities to help our students' design needs. These facilities can be clubbed into six groups.

PROTOTYPE FABRICATIONAND FINISHING

- 3-D printers: Zprinter650 and Raise 3D-pro
- CNC cutting machine
- Laser marking and etching machine
- Lathe, milling, drilling, and grinding machines
- Laser cutting machine
- Leather stitching, and component splitting machine
- Plant for phosphating, anodizing, and zinc plating
- A robust suite of large number of hand operated tools
- Hot Wire foam Cutter
- Sheet metal shear machine

METROLOGYAND REVERSE ENGINEERING

- Steinbichler 3D Scanner system
- Double pole height gage
- An entire suite of micrometres, vernier callipers, and other metrology equipment
- Three-point internal micrometer

DIGITAL DESIGN HARDWAREAND SOFTWARE

- Wacom Tablets 24.1
- HD 4K display computers- iMac with Retina 4K
- 3-D Digital Image Correlation System
- Desktops with a comprehensive suite of design software

Harmony, Interaction, and Versatile Exploration (HIVE) Lab

The HIVE Lab in the Department of Design, IIT Kanpur, provides the necessary facility to build a product and enable interaction by human users. It focuses on Human Machine/Computer Interaction research in the domains of Automotive, Robotics, Music, AR/VR and accessibility. The facility is equipped with SOTA sensors, actuators, trackers and simulators

LABS/FACILITIES

HUMAN FACTORS & SOCIO TECHNICAL SYSTEM STUDIOS

➢ Control Room Interaction Setup
➢ Display & Information Design facility
➢ Interaction Technologies & Devices

COMPLEX ENGINEERED SYSTEMS DESIGN STUDIOS

➢ Internet of Things
➢ Industry 4.0
➢ Robots - Robotic Arm setup

FACULTY LIST

Our faculties come from many different backgrounds and disciplines who contribute to teaching as well as research in the Department of Design. Additionally, we have several adjunct faculty members from the industry and academia. Finally, we also draw expertise in terms of development of courses, academic research and consulting from several other faculty members of IIT Kanpur. Given below is a list of our permanent and adjunct faculties.

Nachiketa Tiwari, Ph.D. (Virginia Tech)
Product Design, Systems Design, Design Management, Soundscapes, Acoustics and Noise Control, Composite Structures, Vibrations, Automotive Systems.

J Ramkumar, Ph.D (IIT Madras)
Micro/Nano Manufacturing and New product/process development, Tribology, composite, Manufacturing Process modelling, Medical Device Development

Satyaki Roy, Ph.D (Visva Bharati University)
Communication Design, Films and Media, Folk Art and Crafts, Creativity

Mainak Das, PhD (University of Central Florida)
Bio Design & Biomimetic

Koumudi P Patil, PhD (IDC, IITB)
Communication Design, Design Thinking and Research Methods, Frugal Innovation for creative Industry

Vivek Kant, Ph.D. (University of Waterloo)
Human Machine Interaction, Human Factors, Human Systems Integration, System Design, Strategic Design, Speculative Design

Amar Kumar Behera, Ph.D (KU Leuven)
Product design, Internet of Things (IoT), Industry 4.0 Engineering informatics, Multirobot systems, Smart manufacturing Flexible sheet metal forming, Bio-medical devices, Complex engineered systems

Gowdham Prabhakar PG, PhD (IISc Bangalore)
Human Computer Interaction (HCI), Robotics, Music Technology

Adjunct Faculties

Dr. Avinash Shende
Industrial Design

Dr. D. Udaya Kumar
Typography, and Design Principles

Dr. Nishant Sharma
Product Design

Dr. Raman Saxena
Design Thinking, Ergonomics

Dr. Jhumkee Iyengar
User Experience Design

Dr. Raj Gopal Verma
Product Design and Prototyping

BROAD RESEARCH AREAS

Our research areas are diverse and multifaceted and touch areas as diverse as: Product/Industrial Design, Mobility Design, Visual Communication, Engineering Design, User Experience Design, Interaction Design, Film Making, Systems Design etc.

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