

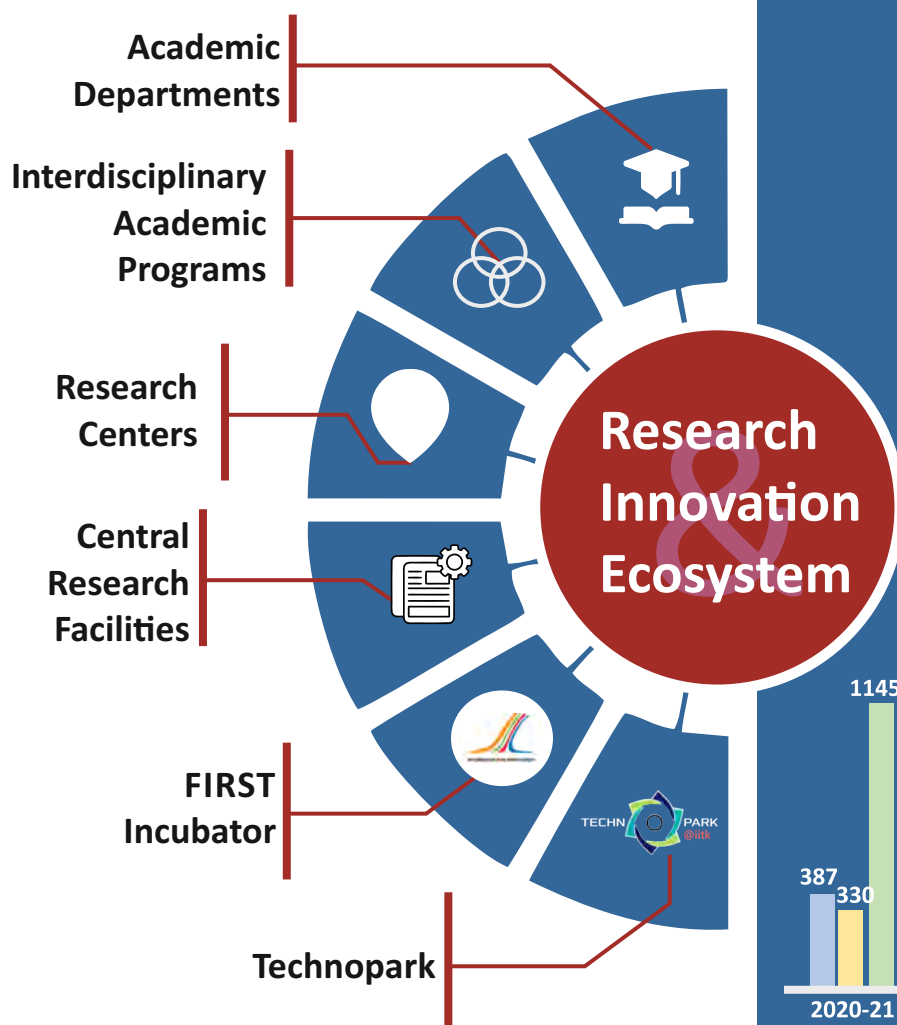


RESEARCH & DEVELOPMENT at-a-glance Indian Institute of Technology Kanpur



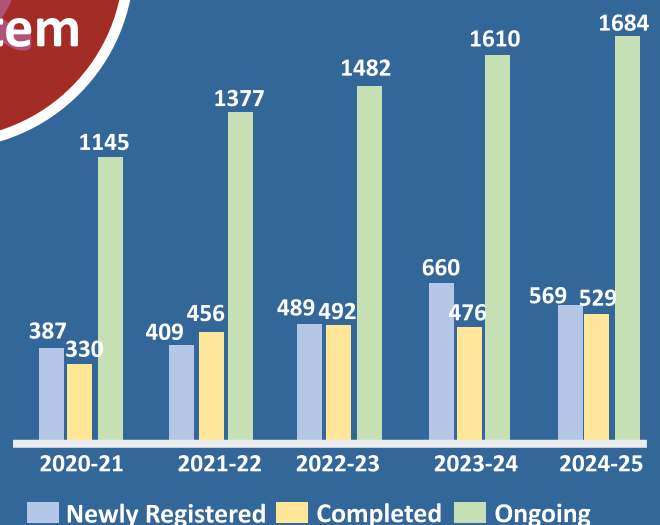
Research @ IITK

The Institute's research and development activity aims at innovation and technology development through interaction with universities, governments and industries to meet the needs of the society and industry. The Institute faculty, research staff and students conduct research with goals and objectives ranging from intellectual curiosity, addressing contemporary challenges, developing technology, societal benefits or writing scholarly publications.



2024-25

Projects Registered —• **569**
Projects Completed —• **529**
Projects Ongoing —• **1684**
Total Fund Received —• **₹ 477 cr**
Technology Licensed —• **6**
Patents Filed —• **156**



Number of Projects over last 5 years

Research Centre

- Advanced Centre for Material Science
- Advanced Centre for Electronic Systems
- Advanced Imaging Centre
- Centre for Mechatronics
- Centre for Lasers and Photonics
- Center for Cyber Security of Critical Infrastructure
- NCFlexE
- Central Experimental Animal Facility
- Centre for Nanosciences
- EMI/EMC and Electrical Safety Testing Facility
- Ion beam facility
- Mehta Family Centre for Engineering in Medicine
- National Wind Tunnel Facility
- National Aerosol facility
- Centre for Developing Intelligent Systems
- Centre for Energy Regulation
- Center for Ganga River Basin Management and Studies
- Center for Education Research and Teaching Excellence



Centre of Excellence

- Integrated Computational Materials Engineering (ICME) National Hub
- ICMR- DHR-COE Medical Research and Innovation
- Centre for Excellence in Advanced Technologies for Monitoring Air quality indicators
- Centre of Excellence for Media and Broadcasting Technologies
- Centre for Geodesy
- DRDO Industry Academia Centre of Excellence (DIA-CoE), IIT Kanpur
- IIT Kanpur-UB Joint Centre of Excellence in Biomedicine and Bioengineering
- Centre of Excellence for UAV/Drone.
- Nmtronics Centre of Excellence for Electronics Manufacturing and Skills Development
- Centre of Excellence in Specialty Chemicals
- Centre of Excellence in Antimicrobial Resistance

Major Govt Funding Agency

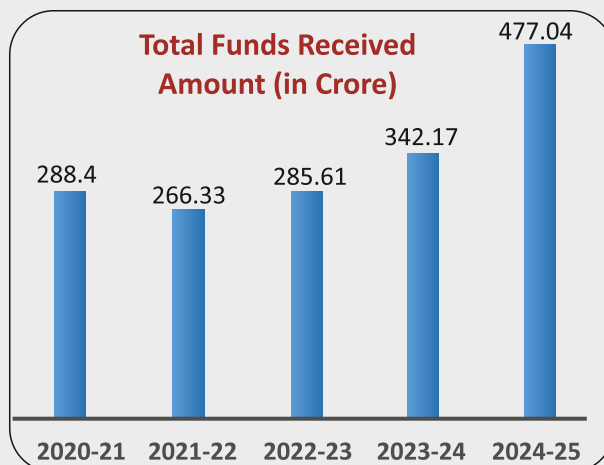
- Aeronautics Research and Development Board
- Board of Research & Nuclear Sciences
- Central Power Research Institute
- Council of Scientific & Industrial Research
- Defence Research & Development Organisation
- Dept. of Science & Technology
- Dept. of Biotechnology
- Dept. of Atomic Energy
- Dept. of Electronics and Information Technology
- Dept. of Scientific and Industrial Research
- Dept. of Ocean Development
- Dept. of Space
- Indian Space Research Organisation
- Ministry of Human Resource & Development
- Ministry of Earth Sciences
- Ministry of Communications & Information Technology
- Ministry of Environment, Forests & Climate Change
- Ministry of Power
- Ministry of Coal & Mines
- National Aerospace Laboratory
- Science and Engineering Research Board

Leading Funding Agencies

2024-25

Dept. of Science & Technology -----	₹269.93 cr
National Mission for Clean Ganga ---	₹ 47.12 cr
Dept. of Biotechnology -----	₹ 19.89 cr
National Security Council Secretariat -----	₹16.38 cr
Samagra Shiksha Dept. of Education, Govt. of Uttarakhand-----	₹9.20 cr

Table capturing five major funding agencies
with sanctioned amount



Key Roles of R&D Office

- Management of funds for sponsored consultancy and testing projects
- Appointment of project staff from R&D funding
- Facilitating the purchase of equipment and consumables from R&D funding
- Legal consultation for MoU vetting
- Providing initiation grants to new faculty members
- Promoting Institute-Industry interactions
- Distribution of salaries for all project staff
- Accommodation arrangements for project staff at the Institute
- Outreach for R&D through newsletters, research magazines, posters, and convocation reports
- Hosting delegates and facilitating lab visits, Institute lectures, and faculty interactions
- Providing logistical support to faculty members for preparing large grant proposals
- Organizing Institute lecture series, Research Event

Industrial Collaboration

The focus of research at IIT Kanpur is to generate new ideas, to create innovative solutions and to reveal basic principles of matter with an emphasis on using all this knowledge in developing practical engineering and technological applications. In this process institute works closely with the industry partner with the objective of adding value to their products and services and bringing novel solutions for the society at large

Collaborations

- Industry Sponsored Projects
- Licensing of Patents & Technology Transfer
- Advanced Material Testing Facility
- Short term and Long term internship programme
- Industry Oriented Workshops, Seminar, Conference

Industry Partners

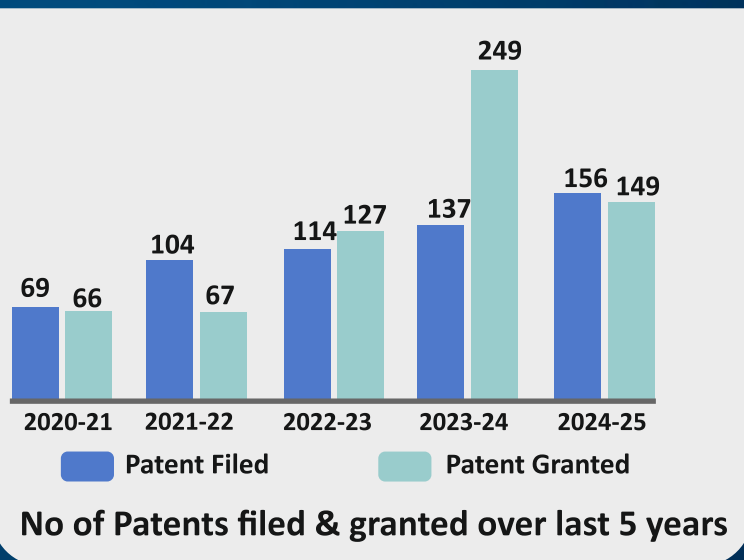


Industrial Cell @ IITK

- Integrated Computational Materials Engineering (ICME) National Hub
- Railway Research Cell
- Unilever Research Cell
- Space Technology Cell
- SAMTEL Center for Display Technology
- BSNL-IITK Telecom Center of Excellence
- Syndicate Bank Entrepreneurship Research & Training
- ONGC Cell



National Intellectual Property (IP) Award 2024





Ventilator



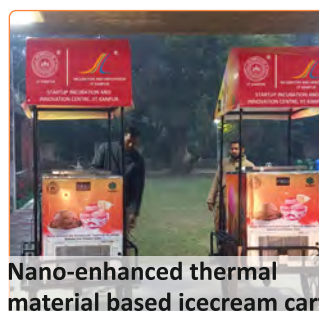
Haptic smartwatch



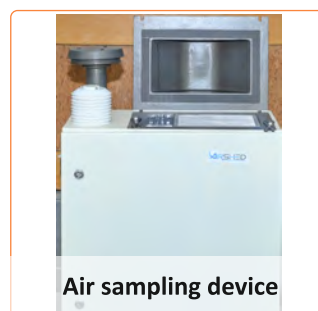
LiDAR-based intelligent sprayer



UAV



Nano-enhanced thermal material based icecream cart



Air sampling device



Shape-morphing quadcopter drone

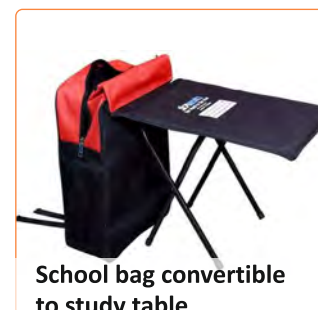
Innovation Highlight



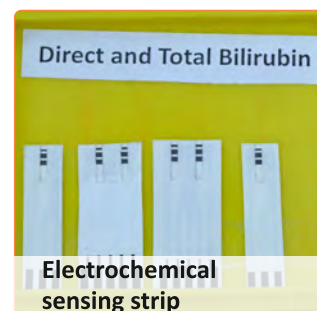
Soil nutrient sensing device



Svan M2: quadruped robot



School bag convertible to study table



Electrochemical sensing strip



Lateral flow immunoassay strip



System for detecting oral cancer



IIT Kanpur at a Glance

Campus Area	1055 acres
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Academic Departments	20
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Inter Disciplinary Programmes	3
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Current Faculty Members	567
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Research Publications <i>(total for last 5 years as per Scopus)</i>	11,633
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Total number of Patent Filed (till date)	1300
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Total Number of Patent Granted (till date)	898
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Technologies Transferred (till date)	154
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Contact

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