भारतीय प्रौद्योगिकी संस्थान रूड़की
Indian Institute of Technology Roorkee

Placement Brochure 2014-15

Kulgeet

जयति जयति विद्या संस्थान,
हिम गिरि श्रृंगों से अभिनंदित,
गंगा जल करते कल गान।
जयति।।

शिक्षा आदर्शों में उन्नत,
जीवन शिल्पी भू रचना रत,
'श्रमं विना न किमपि साध्यम्' व्रत,
यन्त्र कला कौशल अभियान।
जयति ।।

जन जीवन प्रासाद उठाकर,
सेतु बाँध भू खण्ड जुड़ाकर,
अंतरिक्ष में यान उड़ाकर,
नव युग को देता आह्वान।
जयति।।

सर्जन हित जीवन नित अर्पित,
धरा स्वर्ग शोभा कर निर्मित,
वैज्ञानिक युग पट में मूर्तित,
भू पर लाता स्वर्ण विहान।
जयति।।

नयी प्रेरणा से दीपित मन,
नव स्वप्नों से हर्षित लोचन,
नए सत्य की उर में धड़कन,
ध्येय राष्ट्र जीवन कल्याण।
जयति।।

रचयिता–श्री सुमित्रानन्दन पन्त

Jayati jayati vidhya sansthaan
him giri shrungon se abhinandit
ganga jal karte kal gaan.
Jayati..

Shiksha adarshon mein unnat
jeevan shilpi bhu rachna rat
"shramam vina na kimapi sadhyam" vrat
yantra kala kaushal abhiyaan.
Jayati..

Jan jeevan prasad uthakar
Setu bandhkar bhu khand judakar
antariksh mein yaan udakar
nav yug ko deta ahvaan.
Jayati..

Sarjan hit jeevan nit arpit
dhara swarg shobha kar nirmit
vaigyanik yug pat mein moortit
bhu par laata swarn vihaan.
Jayati..

Nayi prerana se deepit man
nav swapnon se harshit lochan
naye satya ke urr mein dhadkan
dhyeya rashtra jeevan kalyaan.
Jayati..

Contents

Director's Note

After the famine of 1837, huge revenue losses were incurred by British East India Company and it was compelled to look for solutions. So, it then started to build large-scale irrigation systems. Sir Proby Cautley, a colonel of the Royal Artillery, proposed the construction of a canal on the region between Ganga and Yamuna river. It would divert the holy waters from Haridwar, for a distance of over 500 kilometres, to Kanpur. But in those days, it was easier for a cow to fly than to build such a canal.

The Company took a lot of convincing, and the project finally took off in 1843. But in Roorkee, due to the elevation of land, the project literally ran into the ground. Thus, it was to solve this engineering problem, the College of Civil Engineering came into existence. Even today the Solani aqueduct outshines as a marvel of engineering.

IIT Roorkee, the oldest technical institution in the country, was conceived in innovation and a moment of history.

In 1845, the supply of trained personnel was inadequate to solve the challenge the terrain of Roorkee posed. So, to support the project, experts gave informal instruction to young students and apprentices. The requirement of the Public Works Departmentt kept growing day by day. Then, in 1847, Lt. Governor James Thomason wrote to the Governor-General of India, with a solution. He proposed the establishment of a college at Roorkee to train civil engineers.

This proposal had no precedent. A college to train civil engineers as against military engineers was unusual, even in England. But, given the importance and urgency of the canal project, it was promptly approved.

The James Thomason Building, as it stands today, is 158 years old, and was completed in 1856.

In 1949, the institute was elevated to the status of a university - the first engineering university in the country. In 2001, it was declared an institute of national importance, and was turned to an Indian Institute of Technology.

IIT Roorkee derives huge pride in the contributions it has made in India's march to freedom and progress. There is not even one major undertaking around the country which has not gained from the depth of its knowledge.

History is adorned by this grand story, that spans seventeen decades of IIT Roorkee's commitment to tireless excellence. Truth be told, the story has just begun.

Dr. Pradipta Banerjee
Driector, IIT Roorkee

Professor in-charge's Address

From its inception as the first engineering college in India, IIT Roorkee has always been the front-runner in terms of providing the finest technical education in the country and building an environment for harboring research and technological advancement. While it boasts of a glorious heritage of 166 years, after getting the esteemed IIT status, it has taken a further leap and has provided students not only with the best technical expertise but also an overall growth opportunity to turn into confident individuals with excellent leadership and inter-personal skills.

Through the campus placement program, our institute provides an opportunity to undergraduate and postgraduate students to showcase their talent to the best organisations in the industry and get a head start for a career of achievement and excellence. We, at the training and placement office work to make sure that the recruitment process is smooth and hassle free not only for the benefit of the students but for the visiting organizations as well who can find the best match to fit their requirements and aspirations from a pool of highly talented young minds. We have excellent facilities to manage every phase of the recruitment process and an advanced online system in place to have efficient and transparent communication with the students. Apart from managing the whole process, we also guide the students and conduct workshops to train them so that they can be professionally ready for the industry environment.

It gives me immense pleasure to invite your esteemed organisation to our institute for campus recruitments 2014-15. Looking forward for a long lasting relationship.

Dr. N. P. Padhy
Professor In-charge
Training and Placement
IIT Roorkee

Past Alumni

Sumit Chandwani
Executive Director, ICICI Ventures

Mangu Singh
MD, Delhi Metro Rail Corporation Limited

Narendra Patni
Founder, Chairman and CEO of Patni Computer Systems

Ravi Sharma
CEO of Adani Power Limited & Former CEO of Videocon

R K Tyagi
Chairman of the Hindustan Aeronautics Limited (HAL)

Amit Singhal
Google Fellow, rewrote the Google search algorithm in 2000

Dr. Rakesh Agrawal
Microsoft Fellow & ex-IBM fellow widely known as the 'Father of Data Mining'

Amit Agarwal
Prominent technology columnist at Wall Street Journal

Subodh Bhargava
Former Group Chairman and CEO at Eicher

Ajay Shukla
Vice President & Managing Director of McGraw-Hill Financial

Amitabh Mohanty
Vice-President, Alliance Capital, India.

Ashok Soota
Chairman and Managing Director, MindTree Consulting

Jai K. Hakhu
Vice President, Technology and Manufacturing Group Intel Corporation

J.P. Gaur
Chairman, J.P. Group of Industries

Pervinder Johar
Vice President, Operations, Manhattan Associates

Pramod Saxena
Country President, India, Motorola.

Rajiv Kumar
Director, Microsoft India Development Center

Sanjay Goel
Senior Vice President and Business Leader, GE Capital International Services

Sanjay Gupta
CEO Infrastructure, Adnani Group

V. P. Agrawal
Chairman, Airports Authority of India

Vivek Agrawal
B.Arch in Architecture and Planning, Fellow, McKinsey Global Institute

Vineet Taneja
CEO, Micromax

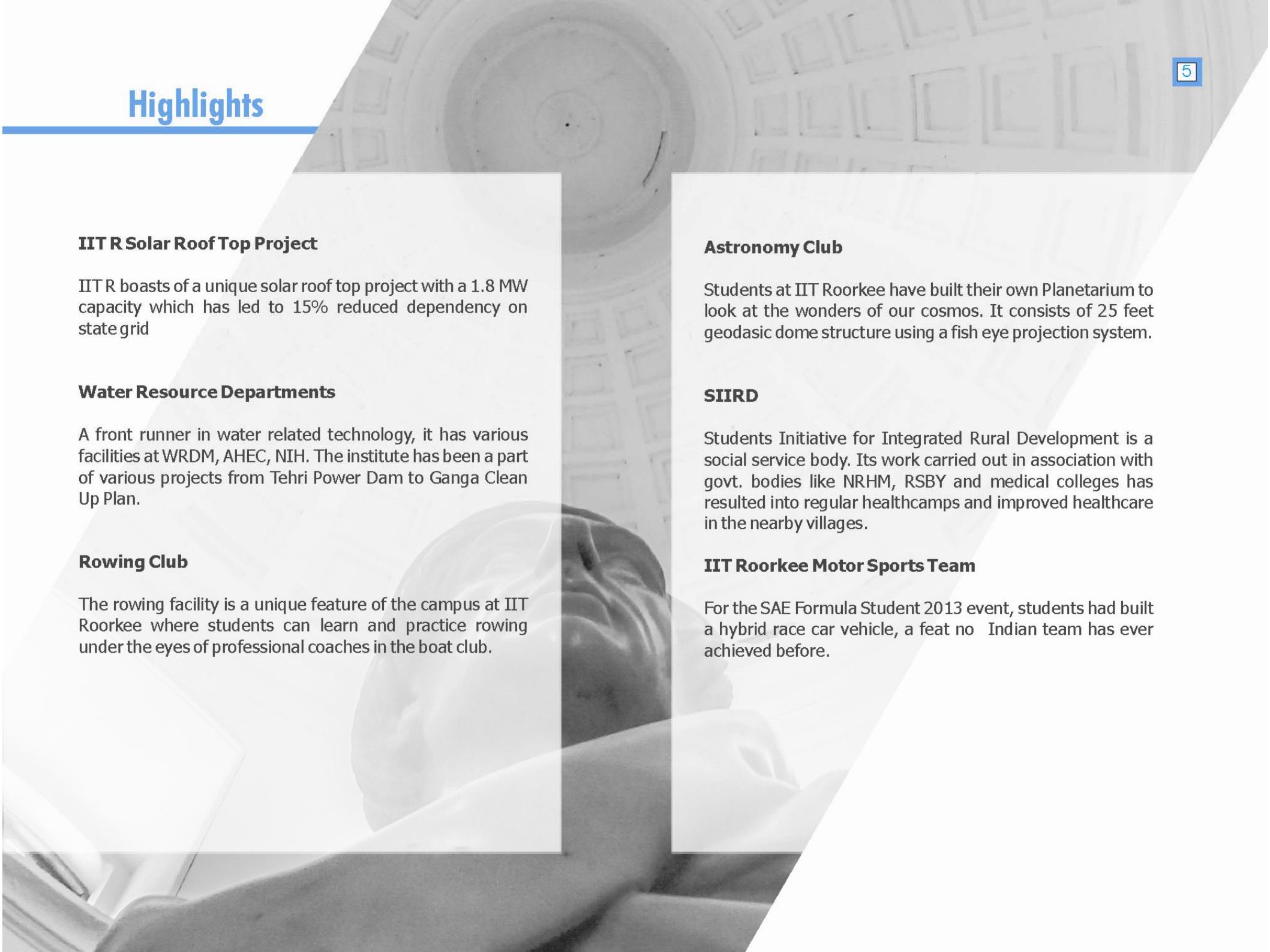
International Alumni

India	16957
USA	2965
UK	301
Canada	207
UAE	201
Australia	168
Germany	82
Malaysia	44
Korea	35
France	31
Hong Kong	28
Switzerland	24
Sweden	22
New Zealand	17
Japan	15
Finland	14
Italy	11
South Africa	9

Important Milestones

- 10 Padma awards
- Chairman of the Railways Board (including the current one)
- Chairman, TRAI
- More than 1000 secretary Level
- Officers in Govt. of India
- Two Presidents,CII
- Six Directors of IITs
- 25 S.S.Bhatnagar Award
- Presidents of IE(India), INSA and INAE
- Directors of R&D Laboratories.

Highlights



IIT R Solar Roof Top Project

IIT R boasts of a unique solar roof top project with a 1.8 MW capacity which has led to 15% reduced dependency on state grid

Water Resource Departments

A front runner in water related technology, it has various facilities at WRDM, AHEC, NIH. The institute has been a part of various projects from Tehri Power Dam to Ganga Clean Up Plan.

Rowing Club

The rowing facility is a unique feature of the campus at IIT Roorkee where students can learn and practice rowing under the eyes of professional coaches in the boat club.

Astronomy Club

Students at IIT Roorkee have built their own Planetarium to look at the wonders of our cosmos. It consists of 25 feet geodasic dome structure using a fish eye projection system.

SIIRD

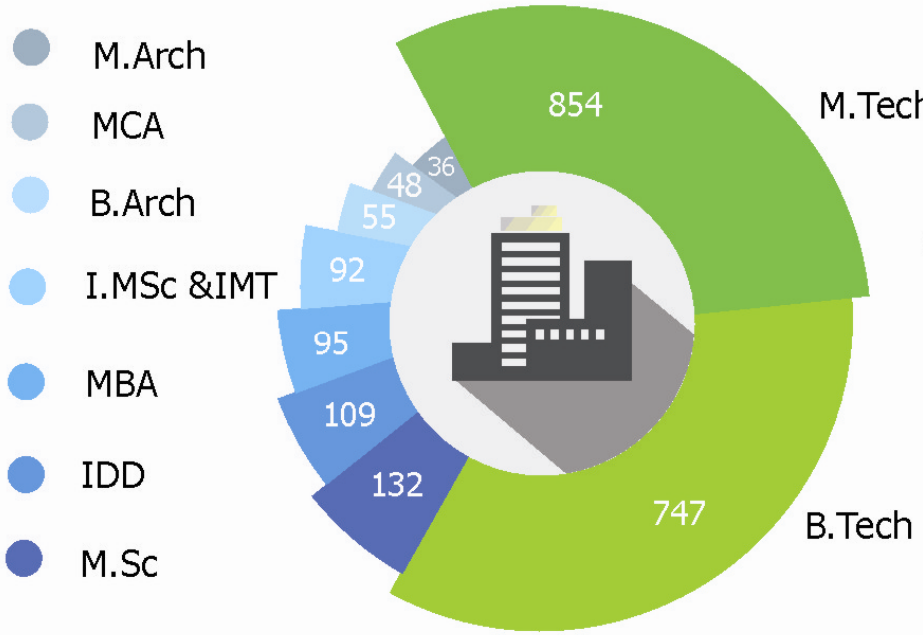
Students Initiative for Integrated Rural Development is a social service body. Its work carried out in association with govt. bodies like NRHM, RSBY and medical colleges has resulted into regular healthcamps and improved healthcare in the nearby villages.

IIT Roorkee Motor Sports Team

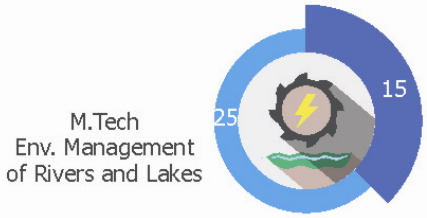
For the SAE Formula Student 2013 event, students had built a hybrid race car vehicle, a feat no Indian team has ever achieved before.

Academic Demography

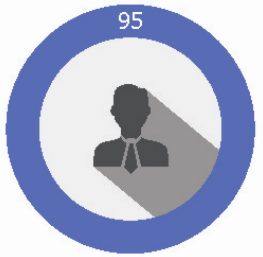
Graduating batch of 2015



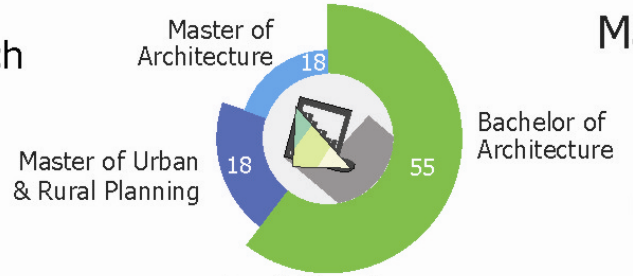
Total Students



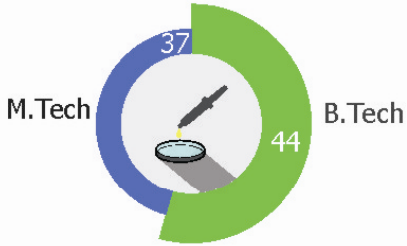
Alternate Hydro Energy Centre



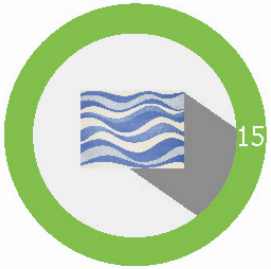
Department of Management Studies



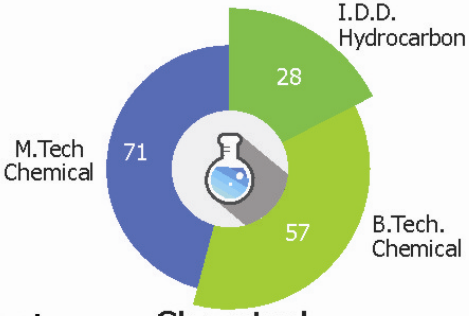
Architecture & Planning



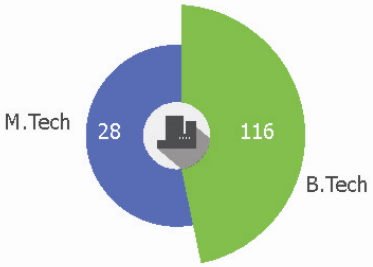
Biotechnology



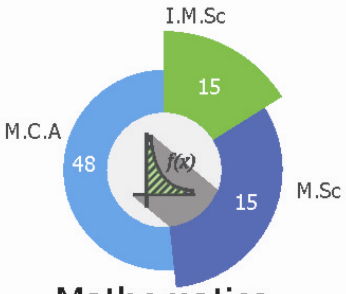
Water Resources Development & Management



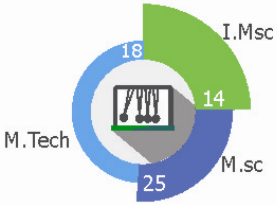
Chemical Engineering



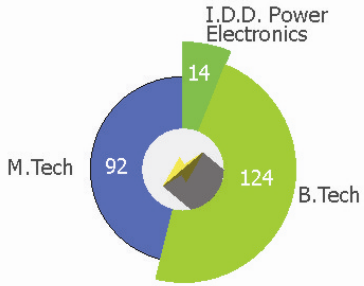
Civil Engineering



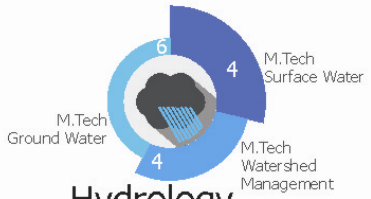
Mathematics



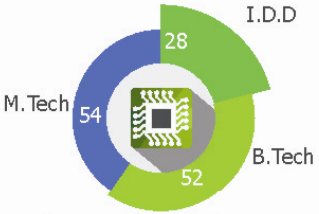
Physics



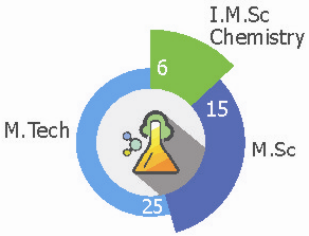
Electrical Engineering



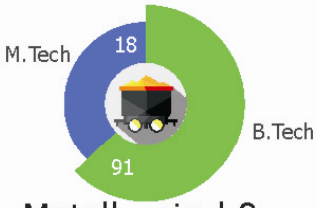
Hydrology Department



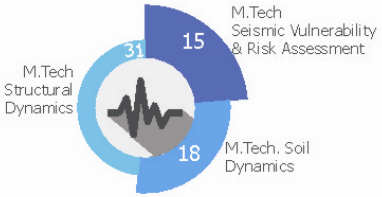
Computer Science and Engineering



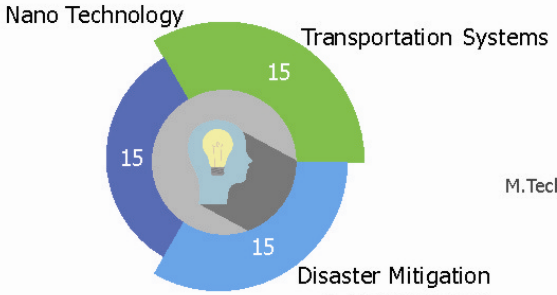
Chemistry



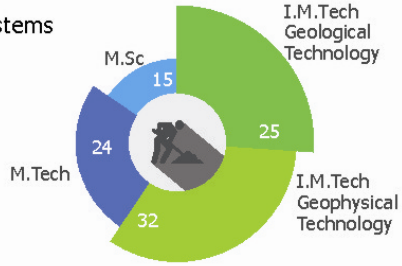
Metallurgical & Materials Engineering



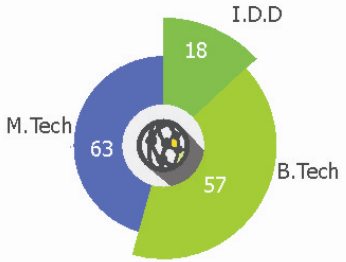
Earthquake Engineering



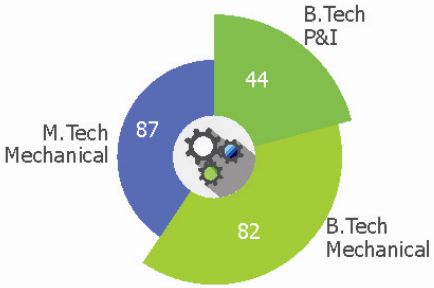
Centre of Excellence



Earth Sciences



Electronics & Comm. Engineering



Mechanical Engineering

Academic Structure

Undergraduate Programmes

The UG course structure broadly consists of Institute Core, Departmental core, Departmental electives, Institute electives.

Bachelor's degree (B.Tech./B.Arch)
B.Tech - 4 years, B.Arch - 4 ½ years
Offered in 11 fields
Admission on the basis of JEE

- Architecture & Planning
- Biotechnology
- Chemical Engineering
- Civil Engineering
- Computer Science and Engineering
- Electrical Engineering
- Electronics & Communication Engineering
- Mechanical & Industrial Engineering
- Metallurgical & Materials Engineering
- Paper & PulpTechnology
- Production & Industrial Engineering

The curriculum includes a two semester B.Tech Project aimed at developing research aptitude among students along with summer training program to help students gain valuable industrial experience.

Integrated Programmes

(IDD, IMT, I.MSc)
5 year Duration
Offered in 9 fields]
Admission on the basis of JEE

Integrated dual degree (B.Tech+M.Tech)

- Chemical Engineering
- Computer Science and Engineering
- Electrical Engineering
- Electronics & Communication Engineering
- Paper Technology

Similar to the B.Tech. course a summer training program is included to help students gain valuable industrial experience. Final year is research driven and and comprises of seminar and a dissertation.

Integrated Master of Technology

- GeoPhysical Technology
- Geological Technology
- Polymer science Technology

The curriculum includes a two semester dissertation where students undertake a research project aimed at developing solutions to various scientific and industrial problems.

Integrated Master of Science

- Chemistry
- Maths
- Physics

Students work on an original thesis in the final year.

The curriculum includes a 2 semester Dissertation at the end of fourth year which involves in-depth study of the topic and the creation of new knowledge base in the field.

Post Graduate programmes

The PG course structure broadly consists of Institute Core, Program core, Program electives, Dissertation, projects and seminar.

M. Tech./M.Arch. Degree (2 years) - admitted on the basis of GATE score and/or on the basis of the written test and interview.

Offered in 18 fields

- Alternate Hydro Energy Centre
- Architecture & Planning
- Chemical Engineering
- Civil Engineering
- Earthquake Engineering
- Electrical Engineering
- Electronics and Computer Engineering
- Computer Science & Engineering
- Hydrology
- Mechanical and Industrial Engineering
- Metallurgical and Materials Engineering
- Paper Technology Pulp and Paper Engineering
- Water Resources Dev. & Management
- Chemistry
- Physics
- Centre of Nanotechnology
- Centre for Transportation Systems Infrastructure Systems
- Center of Excellence in Disaster Mitigation and Management

M.Tech. program consists of 2 semesters of specialised courses to develop a theoretical base. The final year is dedicated to developing a dissertation under the guidance of a faculty member.

M.Tech Degree Programmes (3 Years)

- Earth Sciences

Lateral entry in the 3rd year of respective Integrated M.Tech programmes.

M.Sc. Degree Programmes (2 years) - admitted through JAM
Lateral entry in the 4th year of respective integrated M.Sc. programmes.

- Biotechnology
- Chemistry
- Physics
- Mathematics
- Earth Sciences

The curriculum is aimed at developing an integrated knowledge of the recent developments in research as well as training catering to the industry requirements.

M.C.A. Degree Programme (3 years)- admitted through JAM
Master of Computer Applications

This is a 5 semester course pursued by computer science and mathematics graduates followed by a 6 month industry internship.

M.B.A. Degree Programme (2 years)- admitted through CAT
Master of Business Administration

The programme is aimed at giving the students a sustainable competitive advantage and prepare a breed of managers who have the courage, skills and resilience to excel in the corporate world.

Note: Ph.D. Programmes are offered in all the departments including Department of Humanities & Social Sciences.

Infrastructure and R&D

Student projects
As part of coursework, students have to work on projects with the guidance of professors. They also assist and collaborate with faculty members in several ongoing research and industry projects of the Institute.

Publications
Students are encouraged to sate their curiosity and think deeply about the challenging problems of the day. Their solutions often find ways to peer-reviewed international journals and conferences.

Chapters of International societies
The guest lectures, activities, projects and competitions conducted by the various professional organizations like SAE, ACM, ASME, IEEE and SharE enrich and enable the students to gain practical skills.

Exposure to the global community
Students gain exposure to the wider scientific and engineering community via DAAD , MoUs, student exchange programs, and international research.

Mahatma Gandhi Central Library
Started in 1848 with a few hundred donated books, its collection has grown to more than 3,50,000 documents. The new three storey building was completed in 2005. It has around 90,000 sq. ft. of fully air conditioned space and can accommodate more than 1,000 readers.

Sponsored Research & Industrial Consultancy
Students are exposed to real-world problems through sponsored research and industrial consultancy projects carried out by the Institute.

Patents
Some solutions were wildly original and even received patents.

Institute Instrumentation Centre
Established in 1978, the Institute Instrumentation Centre (IIC) houses some of the most advanced and state-of-the-art machineries available in the world, some of them unique in India.These analytical facilities which amount to several crores, are available to the faculty and students of this institute and to the researchers from other organizations of the country as well.