

PLACEMENT BROCHURE

2023-24



Department of
Mechanical Engineering

INDIAN INSTITUTE OF TECHNOLOGY PATNA
भारतीय प्रौद्योगिकी संस्थान पटना



About Us

Since its inception in 2008, the department has been advancing towards the frontiers in the field of Mechanical Engineering. Presently the department is offering B.tech, M.Tech, and PhD. degrees. Such activities are aptly supported by 16 state-of-the-art research cum teaching laboratories. Significant no. of patents and publications in various top multidisciplinary journals is evidence of the flourishing research environment in the department.

Our aim is to engage in the frontiers of the field and channelize the state of art knowledge to train personnel who can solve problems of relevance to the society at large. The department lays great emphasis on research and development.

The department has close interaction with industry and research institute agencies including Aeronautics Research Development Board (ARDB), Defense Research Development Organization (DRDO), Board of Research in Nuclear Science (BRNS), Department of Science and Technology (DST), Indian Space Research Organization (ISRO) and research labs have been set up in the department in collaboration with industry and government agencies.

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HOD'S MESSAGE

Dear Recruiters,

On behalf of the Department of Mechanical Engineering at IIT Patna, I would like to extend a warm invitation to your esteemed organization to participate in our campus placement program.

At IIT Patna, we understand the importance of not only academic excellence but also the holistic development of our students. Our Department of Mechanical Engineering is widely recognized for nurturing talent that goes beyond textbook knowledge. Our students have earned a reputation throughout India for their enthusiastic participation in prestigious professional organizations and events such as BAJA, SUPRA SAEINDIA, and ROBOCON. Their involvement in these practical platforms has honed their skills and instilled a passion for solving real-world engineering challenges.

Our Masters programs in Mechatronics, Fluids & Thermal, and Manufacturing have flourished, since its inception, into highly sought-after courses. We take pride in providing a stimulating environment for innovative research and offering a platform for quality education. As a result, the programs have gained immense popularity and are considered among the most successful master's degree programs at IIT Patna. As part of our program expansion, we are introducing revamped Masters programs in Mechanical Design, Advanced Manufacturing Technology, and Thermal and Fluids Engineering starting from this year. Additionally, we have industry experts from renowned organizations such as Indian Railways and TVS Motors who will be mentoring our Mechatronics Master's program this year.

Our curriculum is constantly evolving to cater to the dynamic needs of today's research and industry applications. The primary focus of our teaching approach is to equip our students with technical know-how, foster their problem-solving skills, and inspire the innovation of new technologies. We firmly believe in preparing our graduates to become industry-ready professionals who can seamlessly contribute to the advancement of the mechanical engineering field.

To facilitate their growth, our department places great emphasis on research and development. We actively collaborate with renowned research institutes, industry partners, and government agencies. These partnerships allow us to bridge the gap between academia and industry, encouraging knowledge exchange and the exploration of emerging trends. By recruiting talent from IIT Patna, your organization can tap into the wealth of expertise and novel ideas generated through these collaborations.

We invite you to witness the exceptional capabilities of our students firsthand by participating in our upcoming campus placement program. It will provide you with an excellent opportunity to engage with our bright minds, evaluate their skills, and identify individuals who can contribute to your organization's success.

We genuinely look forward to welcoming your recruitment team to our campus, where you can interact with our talented students and witness the vibrant ecosystem we have fostered within the Department of Mechanical Engineering.

Season's greetings and warm regards,

Dr. Mayank Tiwari

Head, Department of Mechanical Engineering

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COURSES OFFERED

Core Elective Courses

- Computational Fluid Dynamics
- Finite Element Analysis
- Refrigeration & Air conditioning
- Vehicle Dynamics
- Robotics and Robots Application
- Bio-inspired Robotics
- Aerodynamics
- Composite Materials and Engineering

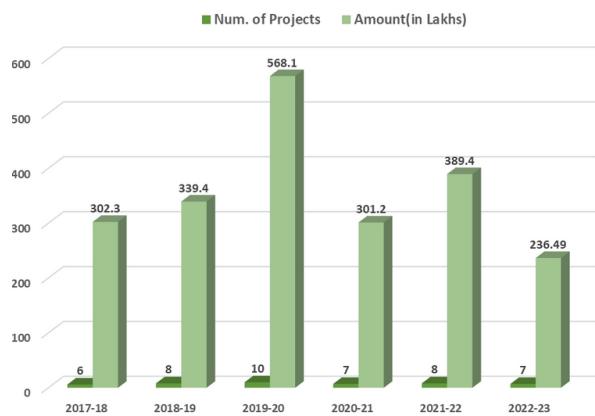
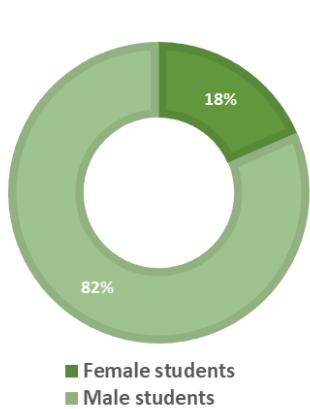
Open Elective Courses

- Data Science
- Python
- Computational Topology
- Humanities and Social Sciences :
- Economics& Financial Analytics
- Sociology
- Diasporic Literature
- Media &Linguistics
- Entrepreneurship

Compulsory Courses

- Solid Mechanics
- Fluid Mechanics and Machinery
- Basic &Applied Thermodynamics
- Machine Design
- Material Sciences
- Manufacturing Technology
- Heat &Mass Transfer
- Kinematics of Machines
- System Dynamics& control Sysytems
- Industrial Engineering& Operation Research

PLACEMENT STATISTICS



Ratio of students placed

Sponsored Projects over the years



Placement trend over the years

RESEARCH FACILITIES

Advanced Manufacturing Laboratory

CAD/CAM Laboratory

Dynamics Of Machine Laboratory

Fire Research Laboratory

Fluid Mechanics Laboratory

Heat and Mass Transfer Laboratory

IC Engine Laboratory

Material testing laboratory

Measurement and Process Analysis Laboratory

Mechanical Engineering workshop

Mechatronics Instrumentation and Controls Laboratory

Metrology Laboratory

Micro-Fabrication Laboratory

Robotics Laboratory

Thermal Fluid and Transport Laboratory

Tribology Lab

SPONSORED PROJECTS

- Controlling the vibrational dynamics of fluid-carrying flexible tubes via acoustic irradiation.
- Design of an Integral Squeeze Film Damper
- Design of Asperity for Textured Metal Surfaces to Improve Tribological Characteristic in Sliding
- Design of Novel SMA bearing Supports and Retrofit for Enhanced Performance of Rotating Machinery
- Developing Interfacial Characterization Facilities
- Development of an agricultural waste-based off-the-grid climate control unit for storage and processing of agricultural production.
- Development of an Ionic Liquid-based Ultra-High Heat Dissipation Module for Energy-Efficient Boiling Systems
- Development of cryogenic micromachining for fabrication of soft and stretchable polymer-based artificial skin with multi-modal sensing capability.
- Development of a Lizard-like Robotic Spy Surveillance System
- Development of low-friction rolling element bearings for enhanced Reliability and Efficiency.
- Development of novel SMA bearing performances and durability of rotating machinery.
- Direct Metal Laser Sintering of C103 Refractory Alloy.
- Effect of burnup and ballooning and burst behavior of Zircaloy-4 cladding tubes under simulated LOCA.
- Hybrid 3D printing with GMAW-twin wire-based additive layer enhanced by friction stir processing.
- Influence of hydrogen on fatigue and fracture performance of ferritic-martensitic steel (P91) both at room and elevated temperature
- Interaction of vesicles with the deformable boundary mimicking cell-wall interaction in cardiovascular diseases.

PATENTS & MOU'S SIGNED

PATENTS

- A cutting tool (Application No.: 202031032781)
- A hybrid tracking system for portable parabolic trough collector (Application No.: 202031022971)
- A method of joining polymer rods through the deformation technique; (Application No.: 201831007503)
- Cryogenic micromachining apparatus and method thereof(Application No.: 202031020431)
- Curved Serpentine Flow Inverter (Application No.: 201931031533)
- High Concentration Fresnel Lens with Spherical Facets(Application No.: 202031047971)
- Stepped Microchannel Heat Sink for Cooling an Electronic Device; (Application No.: 201931000706)
- Variable frequency driven biaxial testing device(Application No.: 202031020867)

MOU'S SIGNED

- LOI(Letter of Intent) with the University of Denver: IIT Patna has signed up a Letter of Intent (LOI) with the University of Denver, to further research collaboration and student & staff exchange in the field of Computer Science, Electrical & Computer Engineering and Mechanical & Material Engineering. This LOI was signed by Dr. Probir Saha, Associate Dean Resource, IIT Patna, and Professor JB Holston, Dean, Ritchie School, University of Denver on 20-02-2018.

STUDENT ACTIVITIES

IITP Motorsports

ITP Motor sports is a reputed team to design and manufacture one of the finest formula racing cars from India. This project puts forward the task of designing, manufacturing, raising funds, marketing, logistics, extensivities ting and racing, on the shoulders of our dedicated, skilled and determined team members .



Team Phoenix

In Robocon we built a quadruped robot that is capable of walking, crossing the rope, and can climb a hill. And another omnidirectional manually controlled robot capable of picking cuboids from the game field and throwing them to cross a certain line. For Robocon 2020 we are building a Rugby ball-kicking robot.

Team Alacrity IITP

A team who designs and manufactures Human powered vehicles every year. We have been participating in HPVC since last 6 years. Team Alacrity is growing and looking forward for new achievements in near future .



Team Invincibles IITP

A team of 30 members who create an All-Terrain Vehicle(ATV) from ground zero, starting with only basic technical knowledge but unfathomable passion and dedication.

ACHIEVEMENTS

- Best B.Tech. project awards by INAE, 2011, 2012, 2014, 2015
- 'Biaxial Testing Device' by Sujit Sahu and Dilshad Ahmad was selected among the top six best business ideas in Business Plan Competition 2018, organized by BIA and Venture Park, Patna, Bihar.
- A paper by Mr. Nirbhay Kumar and Md. Qaisar Raza received the best poster award at the 10th International Conference on Boiling and Condensation Heat Transfer, Nagasaki, Japan, 2018.
- M.E. Department (IITP) team "INVINCIBLES IITP (Baja)" awarded 2nd position in the national level quiz conducted by Enduro Student India 2017.
- Mr. Binayak Krishna Swami was the winner in the "Intel Higher Education Challenge -2017" on Cyber & Physical Systems. An innovation challenge Organized by Intel India in association with FICE India at SJBIT, Bangalore. (October-2017).
- Best paper award to Mr. Siddharth Suman in 2017 5th International Conference on Energy Engineering and Environmental Engineering, 2015-16 April, China.
- IITP student team secured 2nd runner-up in ASME HPVC 2017.
- Best paper award is to two final years B.Tech. mechanical students Mr. Vishal Nagarkoti, and Mr. Omprakash Sahu in the 6th International and 43rd National Conference on Fluid Mechanics and Fluid Power (FMFP2016) held in MNNIT, Allahabad, India during December 15-17, 2016.
- Biaxial planar tensile testing device, patent no. 378451 dt. 30.09.2021 [Granted]

- Paper by Kumar Nishant Ranjan Sinha, Durgesh Ranjan, Nirbhay Kumar, Md Qaisar Raza received Prof. P K Sharma best paper award in IHMTC, 2019.
- A biaxial stretching device for simultaneously stretching an elastomer sample, patent no. 378456 dt. 30.09.2021 [Granted] [Team included two Btech Students Chennamalla Mahender, and Devapujula Siddhartha]
- Best poster award to Mr. Deepak Kumar Prajapati, Ph.D. scholar, Mechanical Engineering Department in National Tribology Conference (NTC 2016) IIT BHU, India during December 8-10, 2016.
- Final year student Prateek Kumar got selected for the Code for GovTech (C4GT) '23 program, under Samagra | Transforming Governance, Karmayogi Bharat.
- Final year student Farhaan Alam got selected for MITACS Globalink Research Internship in Canada.



OUR ALUMNI



Vishal Yadav
Deputy Director, Indian Railways



Raghavendra Mohan
Vice President, Goldman Sachs



Ram Agarwal
CFO Raspa Pharma



Abhijeet Agnihotri
Toyota Research Institute



Arpit Bansal
Co-Founder Topper Notes



Bhavesh Mendhekar
Scientist, ISRO



Luhana Prashant
Educational consultant at MHRD



Chirag Jain
StartUp EdureAir

PLACEMENT PROCEDURE

1

Companies are contacted by the Placement office or Placement cell (authorized student representatives) and invitations are extended, providing relevant information.

2

Companies are given an exclusive login id in the website after they submit the filled-in Job Announcement Forms (JAF) via email or fax. The JAFs are made available online, which helps the willing students to register for the company.

3

The Placement Cell and the Company confer and finalize the date for pre-placement talks if necessary.

4

Each student who has registered for a particular company submits resume so that the company can shortlist the students accordingly.

5

A detailed schedule is prepared by the Placement Cell evaluating the job offer, prospects, student intake and the like. The schedule is confirmed with all the companies.

6

The companies/organizations visit the campus, meet the registered (or shortlisted) students, and conduct the interviews, tests or group discussion sessions in accordance with their respective recruitment process. The date of the interview and other sessions should be in compliance with the mutually confirmed schedule discussed earlier.

7

The companies are required to prepare and submit, with a written confirmation letter the list of students who are selected after the interview process, on the day of the interview itself.

8

The job offer letters are to reach the Placement Cell, in due course of time. In case a student gets a job offer, he/she is not entitled to appear for further tests/interviews by any other company.

PAST RECRUITERS



Axxela



Cognizant

Capgemini



Deloitte.



SIEMENS



CONTACT US



Kripa Shankar Singh
Training and Placement Cell
+91-6115-233 091
kripa@iitp.ac.in | tpc@iitp.ac.in



Ashwini Kumar
Professor-In Charge
pic_tnp@iitp.ac.in



Punit Jain
Student Representative
8278661215
punit_2001ME56@iitp.ac.in