



Indian Institute
of Technology Patna
भारतीय प्रौद्योगिकी संस्थान पटना

Elevate your career
graph in the most
emerging tech
space

BATCH – 9
2026/28

M.Tech

In Blockchain Technology And Big Data

24-Month Full-Time Master's Degree Programme
Online Hybrid Learning | Immersive Sessions

Cybersecurity
Ledgers Technology Administration Regulatory
Enterprise Distributed Governance Learning Privacy Development
Records Networks It Data Developer Contract
Dapp Analytics Policy Career Cross-chain Roles Smart Blockchain Design Premium
Predictive Data-centric System Future Contract Digital Trust
Security Engineering Cloud Secure System Logic Enterprise Growth
Governance Logistics Quantum-resistant Architecture Transparency Decentralized Security Advanced
Validation Solidity Emerging Decentralised Real-world Technology Tokenisation Smart Innovation
Immutable Web3 Social Scalable And Application Legal
Chain Platform Roles Lakes Impact
Potential Design Consensus Theoretical Mechanisms Architect Cryptocurrencies Analyst Systems Impact Privacy Issues
Earning Platforms Emerging Tech Frameworks Platforms Visualization Development Knowledge Engineering in Finance Transaction Mining Efficiency Cryptocurrency Contracts Distributed Big Processing Backend
Cloud Cryptography Contracts Space Dapps Systems Scientist
Machine Engineer Computing Pipelines Trustless
Economic Regulation Junior Assets



Why Choose **IIT Patna**



19th in NIRF Engineering

Ranked **19th in India** in the Engineering category of the NIRF Rankings 2025, marking a significant rise from 34th position in the previous year.



9th in IIRF Engineering Rankings

Ranked among India's top engineering institutions in the **IIRF Engineering Rankings 2026**, recognising its academic quality, research capabilities and student outcomes.



Top 5 in Technology & AI Education

Ranked **5th across India** in the Technology & AI Education Rankings 2026 by Chronicles of India, recognising IIT Patna's strength in AI, emerging technologies, research and innovation.



6th Among All IITs in THE Rankings

Ranked **6th among India's 23 IITs** in the Times Higher Education World University Rankings 2026 and placed in the **601–800 global band**.



9th in India Today Rankings

Ranked **9th among engineering institutions in India** in the India Today–MDRA Best Colleges Rankings 2026, rising from 11th position in 2025



Learn from the **best** **minds in the country**

Get the IIT Patna advantage

Established in 2008, IIT Patna is the newest and fastest-growing premier institution in India. IIT Patna operates ten departments - Computer Science & Engineering, Electrical Engineering, Mechanical Engineering, Chemical and Biochemical Engineering, Civil & Environmental Engineering, Materials Science & Engineering, Chemistry, Physics, Mathematics and Humanities & Social Science.

The institute has developed modern facilities that are fully equipped with the state-of-the-art facilities (equipment software and machines) that are routinely used to train and educate students. The institution has published high quality and peer-reviewed national and international journals.

The faculty members of IIT Patna have a wide range of academic and research experience. They have been trained in the top-ranked institutes within the country and abroad.

IIT Patna – **Credentials**



Ranked 2nd

In Emerging Government Colleges
in a Best College Ranking 2022 by
India Today-MDRA



2500+ Alumni

Serving national and
international institutions at
leadership positions



Ranked 10th

Best Government Engineering
College in the performance
category overall



Ranked 9th

For placement
records



100+

M.Tech
Students



10+

Operating
Departments



100+

Faculty
Members

A portrait of Prof. A. K. Thakur, a middle-aged man with glasses and a mustache, wearing a dark suit and a patterned shirt. He is positioned on the left side of the page, with a dark blue background behind him. The right side of the page features a white background with a dark blue diagonal stripe.

KEY PERSONNEL

PROF. A. K. THAKUR

Dean Admin & Registrar, IIT Patna

Prof. A. K. Thakur is currently the Professor of Physics at the Department of Physics at Indian Institute of Technology, Patna, and Dean Academics, IIT Patna. He is a Gold Medalist in M.Sc. (Physics) and a recipient of the coveted "Nehru Fellowship" for pursuing Doctoral Research at the National University of Singapore (QS Rank 8).

Currently, he is the Vice President of the Asian Society for Solid State Ionics. The research expertise of Prof. Thakur is in experimental condensed matter physics and applied physics, with specific experimental research interests comprising:

- Renewable clean and green energy,
- Solid-state ionic devices,
- Storage cells,
- Solar photovoltaics,
- Dielectrics and ferroelectrics,
- Processing and fabrication of nanomaterials,
- E.M.I. shielding,
- Battery Management System (BMS) design and fabrication for operational safety of battery packs for EV applications
- Product design simulation and development for commercialization.



KEY PERSONNEL

DR. N. K. TOMAR

Associate Dean Resource, IIT Patna

Nutan Kumar Tomar received his B.Sc. degree from Chaudhary Charan Singh University, Meerut, in 2001, and his M.Sc. degree in Applied Mathematics from Indian Institute of Technology Roorkee (IIT Roorkee) in 2003.

After completing his Ph.D. at IIT Roorkee, he became a DAAD research fellow at the University of Bayreuth, Germany, in 2008. He joined the Department of Mathematics at Indian Institute of Technology Patna as a faculty member in December 2008 and is currently an Associate Professor.

His research activities are supported by the Science and Engineering Research Board, Department of Science and Technology, and Defence Research and Development Organization, India.

His main research interests include estimation, observer design, and controllability and observability properties of control systems. He is a member of the Institute of Electrical and Electronics Engineers (IEEE), Indian Mathematical Society (IMS), and Indian Society of Industrial and Applied Mathematics (ISIAM).

Program Overview

The demand for skilled blockchain professionals is transforming industries worldwide. With a carefully crafted curriculum that combines theoretical knowledge and real-world application, **M.Tech in Blockchain Technology and Big Data** is designed to shape future leaders in this rapidly evolving field. This executive program offers an in-depth understanding of blockchain technology, enabling participants to master decentralized systems and gain expertise to contribute to groundbreaking innovations. It prepares professionals to thrive in organizations adopting blockchain solutions for enhanced efficiency, security, and transparency.

Who Can Apply?

Course Eligibility



1+ year of work experience
(or currently employed)



Minimum 60% marks or
6.5 CGPA (or equivalent)



B.Tech / BE / MSc (CS/IT) / MCA
/ ME / M.Tech or equivalent



Working
Professionals

Note:

SC / ST / PwD candidates: Minimum marks relaxed to 55% or equivalent CGPA/CPI

Experience-based relaxation: Marks reduced by 2.5% or 0.5 CGPA/CPI for each additional year of work

Who Is This Program For?

Industry freshers who have been working for a minimum period of two years and mid-level professionals aspiring to learn while earning, upskilling their career, and looking for a career progression in these streams. Professionals working in the following roles can apply for this program:



Junior Blockchain
Developers



Blockchain
Developers



Backend Chain
Developers



Blockchain
Architects



Blockchain System
Administrators



Smart Contract
Developers

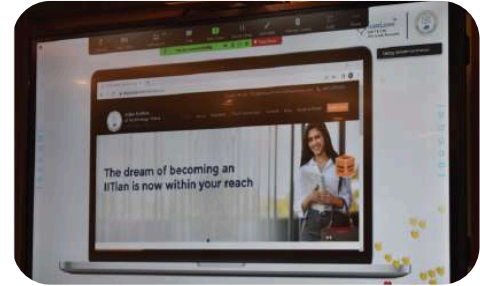


Cryptocurrency
Developers



Blockchain
Security Analysts

Launch Ceremony



The Learning Pathway

Program Duration	2 Years
Immersive sessions at IIT Patna campus	Once a year
Model of delivery	Live sessions and flexible self learning

Hands-On Experience With Tools



Skills Gained Through The Program



Master
Cryptography



Programming
Languages



Data
Structure



Blockchain
Architecture



Smart
Contracts

Program Objectives

Understand

The critical need for blockchain technology, its significance in modern applications, and the challenges associated with implementing secure and scalable blockchain

Develop

The evolution, fundamental types, and diverse applications of blockchain across industries.

Acquire

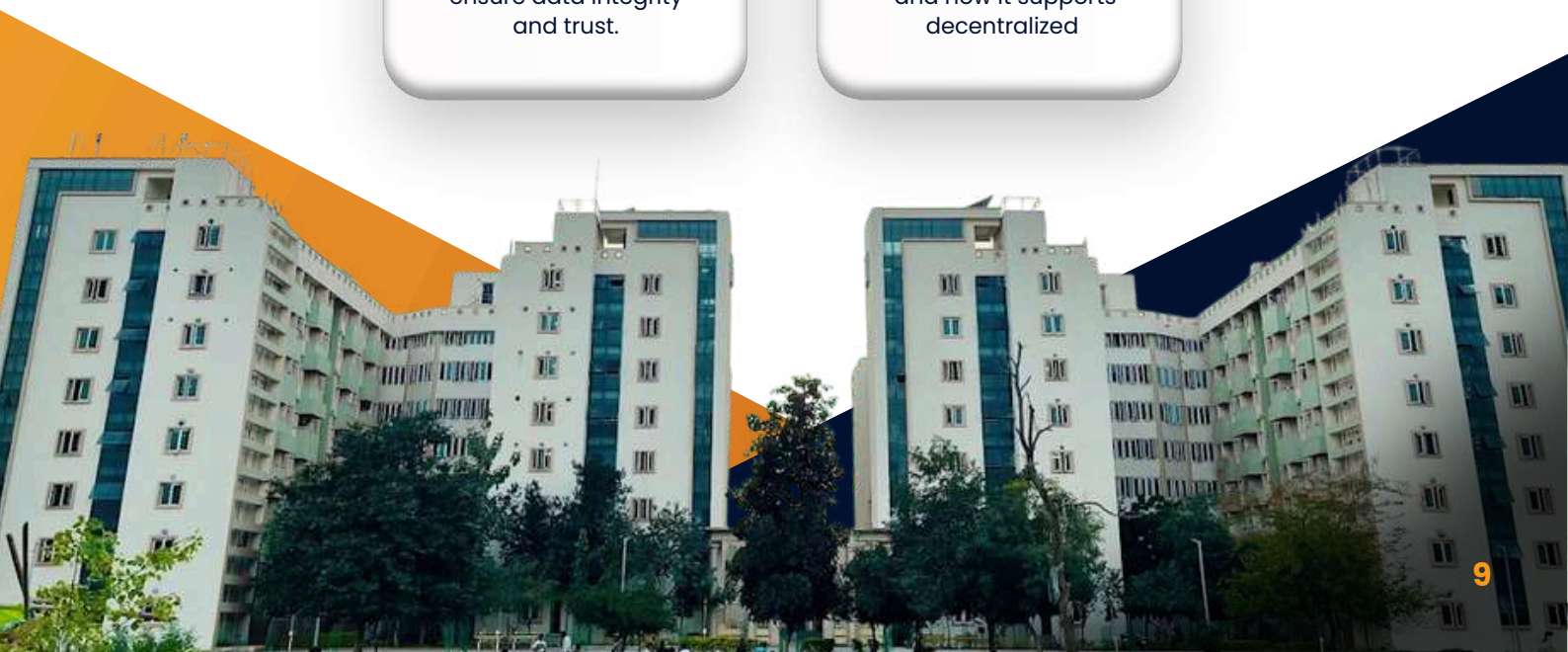
Comprehensive knowledge of cryptographic techniques and consensus algorithms essential for building robust blockchain systems.

Identify

Potential network vulnerabilities in blockchain frameworks and apply advanced security mechanisms to ensure data integrity and trust.

Analyse

The underlying principles and technical components of blockchain technology, focusing on its infrastructure, architecture, and how it supports decentralized



Course Structure

Semester 1

Course Name	L-T-P-C
Design and Analysis of Algorithms	3-0-2-4
Foundations of Computer Systems	3-0-2-4
Probability and Statistics	3-0-2-4
Technical Writing and Soft Skills	1-2-2-4
DE-1 (Elective 1)	3-0-0-3

Semester 2

Course Name	L-T-P-C
Artificial Intelligence	3-0-2-4
Numerical Linear Algebra and Optimization Techniques	3-0-2-4
DE-2 (Elective 2)	3-0-0-3
DE-3 (Elective 3)	3-0-0-3
IKS	2-0-0-2

Semester 3

Course Name	L-T-P-C
DE-4 (Elective 4)	3-0-0-3
DE-5 (Elective 5)	3-0-0-3
Project I	0-0-34-17

Semester 4

Course Name	L-T-P-C
DE-6 (Elective 6)	3-0-0-3
DE-7 (Elective 7)	3-0-0-3
Project II	0-0-40-20

Note: The list mentioned above is indicative and is subject to change at the discretion of IIT Patna. 75% attendance mandatory for both LIVE Sessions and Recorded sessions

Core courses	24 credits
Electives	21 credits
Thesis/Capstone Projects	39 credits
Total	84 credits



ELECTIVE 1 (SEMESTER 1)

Course Name	Credits
Blockchain Fundamentals	3-0-0-3
Big Data Fundamentals and Ecosystem	
Cryptoeconomics	
Web Development for Blockchain Applications	
Blockchain Components and Architecture	
Data Engineering	

ELECTIVE 2 (SEMESTER 2)

Course Name	Credits
Distributed Ledger Technologies	3-0-0-3
Advanced Cryptography	
Big Data Storage and NoSQL Databases	
Database system and Design	
Deep Learning	

ELECTIVE 3 (SEMESTER 2)

Course Name	Credits
Blockchain Scalability Challenges	3-0-0-3
Smart Contracts and DApps Development	
Big Data Processing Frameworks	
Data Virtualization and Dashboards	
Predictive Analytics	

ELECTIVE 4 (SEMESTER 3)

Course Name	Credits
Data Analytics for Blockchain	3-0-0-3
Tokenomics and NFT Design	
Big Data Analytics and Visualization	
Cryptocurrency and Cyber Security	
Big-Data Framework	

ELECTIVE 5 (SEMESTER 3)

Course Name	Credits
Blockchain Governance	3-0-0-3
Models Machine Learning for Big Data	
Advanced Smart Contracts Techniques	
Modern Cryptography	
Blockchain Technologies: Platforms and Applications	

ELECTIVE 6 (SEMESTER 4)

Course Name	Credits
Quantum-Resistant Cryptography for Blockchain	3-0-0-3
Cross-Chain Technologies	
Big Data in Cloud Computing	
Smart contracts and solidity programming	
Blockchain policy – Legal, social and economic impact	

ELECTIVE 7 (SEMESTER 4)

Course Name	Credits
Blockchain Regulatory and Legal Issues	3-0-0-3
Blockchain for Digital Identity	
Big Data Project Development and Deployment	
Security and privacy for big data	
Data Mining and Knowledge Discovery	

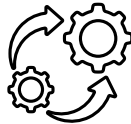


Launchpad Course



Targeted Learning Modules

The course offers focused learning modules that enhance students' understanding.



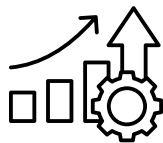
Transformative Experience

The Launchpad Course for IIT Patna has greatly impacted students by bridging the gap between prior education and IIT's academic demands.



Personalized Mentorship

Students receive personalized guidance to boost their confidence and learning.



Improved Academic Performance

The course prepares students for IIT challenges, leading to better academic results.



Smoother Transition

Students experience an easier transition into the IIT curriculum and positively express feedback on the course.



Hands-on Projects

Practical projects are included to strengthen foundational knowledge



CORE PROGRAM OUTCOMES

By the end of the program
students will be able to:



Implement secure and scalable blockchain data storage solutions tailored to meet specific business needs.



Apply and evaluate blockchain algorithms to optimize the performance of decentralized applications.



Leverage optimization techniques to enhance the efficiency and performance of blockchain networks.



Utilize blockchain frameworks to analyze and implement various tools with real-world data sets.



Create and deploy blockchain applications using Truffle and other industry-leading tools.



Adopt cryptographic methods and consensus algorithms to ensure secure and reliable blockchain operations.

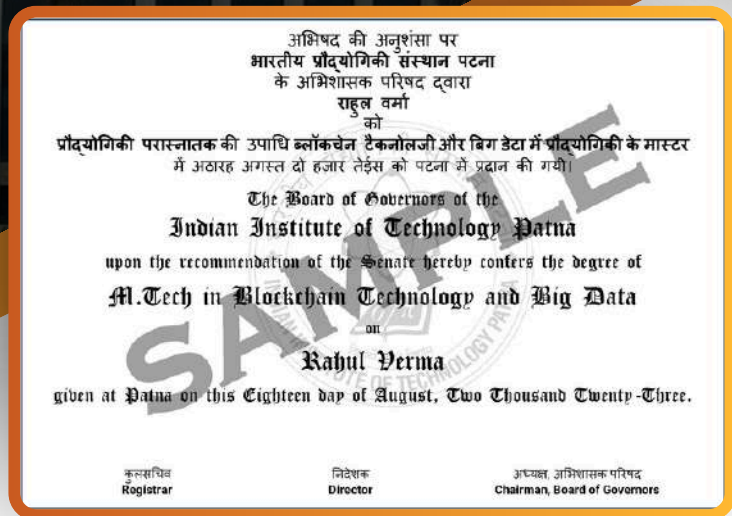


Employ statistical methods to analyze and improve blockchain network performance and security.



Degree Program

Sample Certificate



Become an IIT Patna Alumni

A Gateway Of Opportunities

Identity

Have a lifelong IIT Patna email address

Access

The e-library of the university

The on-campus sports and gym facilities

The IIT Patna guest house and concession on accommodation charges

Opportunity

To network with global alumni community

To attend alumni events

Campus Immersion

The Campus Immersion Program is designed to offer students a rich, immersive educational experience that not only enhances their academic knowledge but also fosters collaboration and personal growth. The executive program encourages peer-to-peer engagement, allowing students to build meaningful connections and develop valuable skills through interactive and collaborative activities.

Frequency: Held annually for each batch, this immersion program spans 5 days

Minimum Enrolment: Immersion requires a minimum of 10 students per course to proceed.

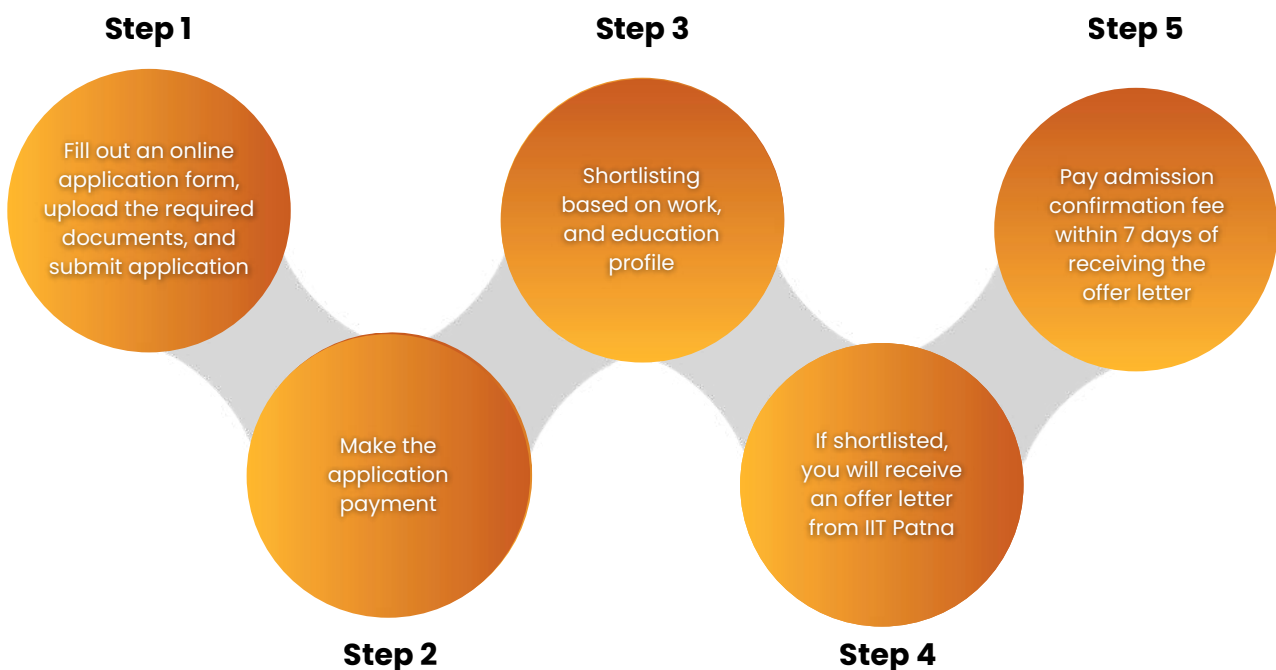
Immersion Fees: \$200, payable between 45 and 30 days before the scheduled date to IIT Patna.

Travel and Accommodation: Students are responsible for their own travel

Accommodation Options: Students will be getting hostel to stay, subject to availability

Cancellation Policy: Under any circumstances, TeamLease EdTech and IIT Patna reserve the right to cancel the event.

Program Admission Journey



Note: The application fee once paid is not refundable. IIT Patna reserves the right to conduct the admission process. By submitting the application, the students agree that any decision regarding Admissions from IIT Patna will be final and binding.

Fees And Installment Schedule

Fee Details	Payment Timeline	Amount
Application Fee	To be paid with application submission	\$ 200
Semester 1	To be paid within 15 days from the Admission Fee payment date	\$ 1950 Mandatory Course Fee + \$80 Exam Fee
Semester 2	To be paid 30 days before starting of the 2nd semester	\$ 1950 Mandatory Course Fee + \$80 Exam Fee
		\$200 (Optional Campus Immersion Fee)
Semester 3	To be paid 30 days before starting of the 3rd semester	\$ 1950 Mandatory Course Fee + \$80 Exam Fee
Semester 4	To be paid 30 days before starting of the 4th semester	\$ 1950 Mandatory Course Fee + \$ 80 Exam Fee
		\$ 200 (Optional Campus Immersion Fee)
		\$ 200 Institute Alumni Fee



Payment Details For Students

- All students are requested to strictly adhere to the payment schedule deadlines mentioned in the above table.
- The alumni fee is INR 6,000. This is an optional fee. Students desirous of registering as alumni may pay this fee to IIT Patna directly upon graduating from the program.
- Some sessions with faculty and/or industry experts could be rescheduled at a different time, in case of exceptional circumstances.
- IIT Patna does not charge any processing fee or service charge from the students for online payment. However, online payment gateway charges, over and above programme fees, need to be borne by the students, as applicable.

Code of Conduct for Online sessions

- Be punctual for the live session on time and stay for the entire duration if possible.
- Treat all participants respectfully and courteously.
- Avoid any form of harassment, discrimination, or offensive language.
- Be mindful of the confidentiality of the content shared during the session.
- Ensure that you have good internet connectivity.
- Cameras should be kept on during the sessions, and your microphone should be muted when not speaking to avoid background noise.
- Refrain from engaging in side conversations during the session.
- Adhere to all timelines shared in the Academic Calendar, with regard to assessments and sessions, and Exams.
- Data Privacy: Students will be allowed to only view only the content that is uploaded for all online sessions.
- No student should engage in any activity that could negatively impact the image of the institute. All students should refrain from publishing any social media posts that could harm the Institute's reputation. If found guilty of such actions, the Institute reserves the right to take appropriate action.

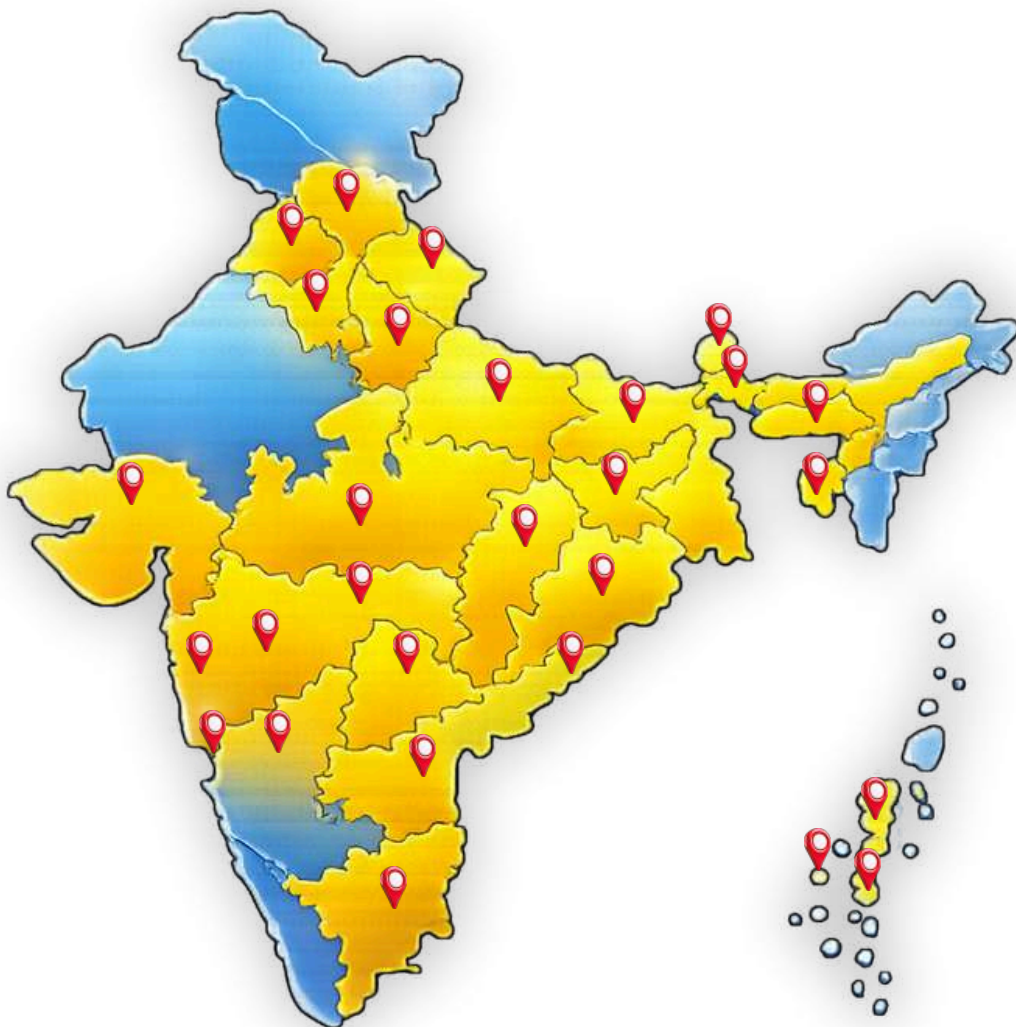


A Glimpse Into Our Past **8 Batches**

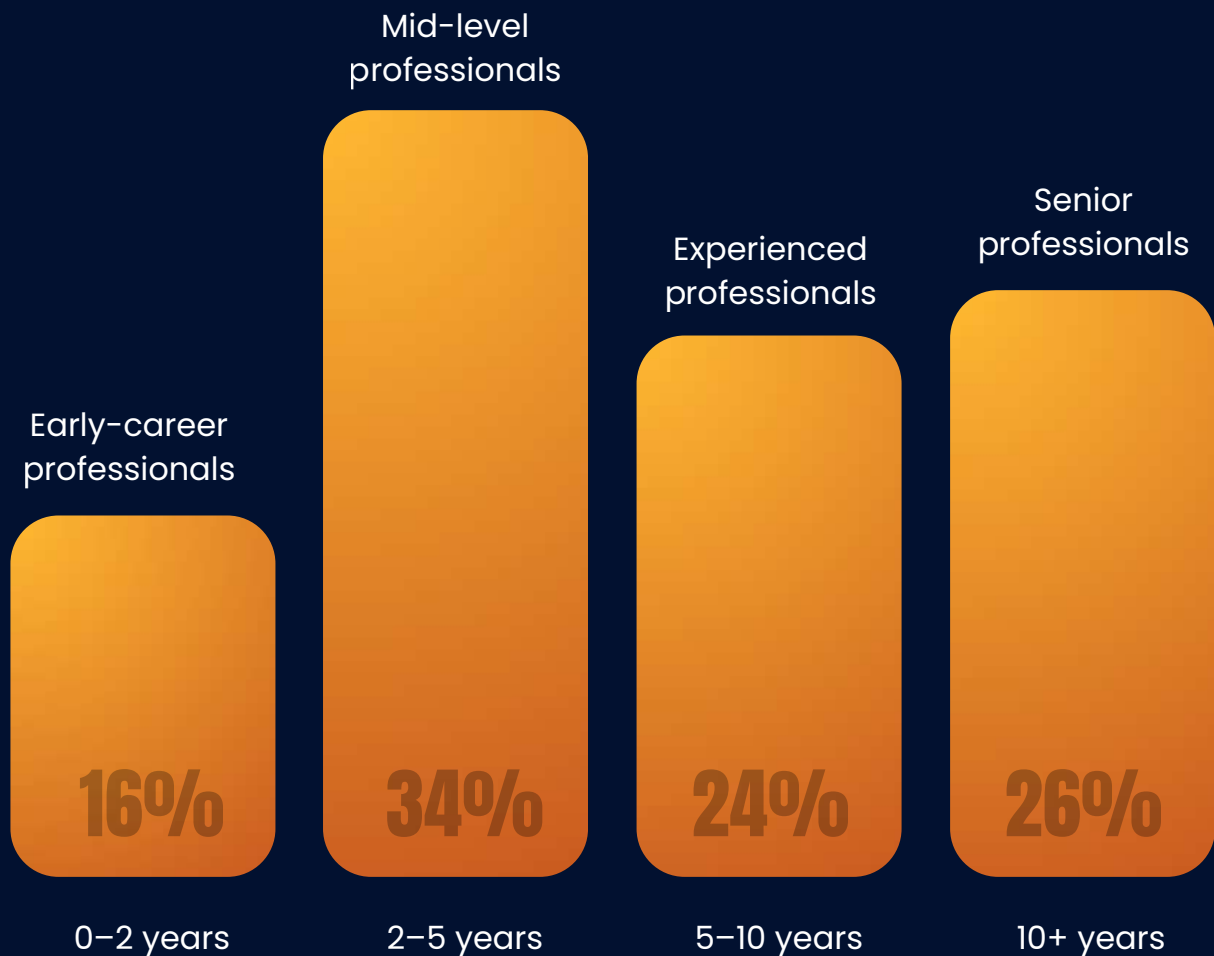
Over 8 completed batches, the M.Tech in Blockchain Technology & Big Data has attracted technology professionals keen on mastering next-generation digital systems. The cohorts reflect a strong mix of engineers, analysts, and technology leaders from across India.

Trusted By Professionals Across India

Learners joined from 20+ states and 40+ districts, showcasing the programme's relevance across India's evolving tech ecosystem.

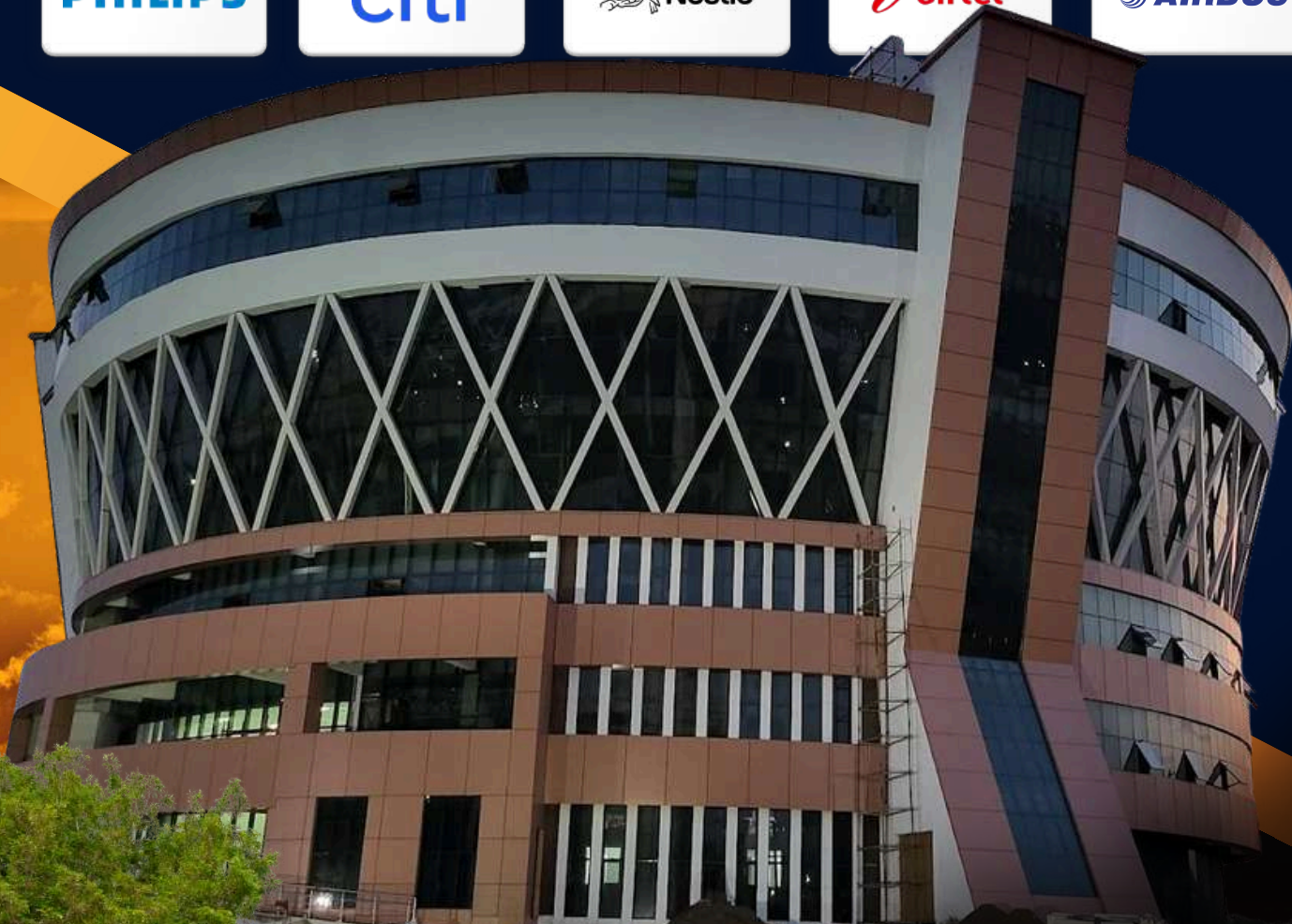


EXPERIENCE THAT SPANS CAREER STAGES



Our Students Are From Leading Organisations

Professionals enrolled in the programme were working with leading organizations across BFSI, technology, manufacturing, consulting, and infrastructure sectors.



Convocation Highlights



CAMPUS IMMERSION HIGHLIGHTS



Step Into High-Impact Roles **in 2026**

Potential **Job Roles**

Blockchain, Web3, and Big Data are transforming the digital landscape across BFSI, cybersecurity, logistics, and enterprise IT. This program prepares you for advanced engineering, architecture, and data-centric roles that offer excellent growth prospects and premium earning potential.

Average Salary

\$100K - \$180K+

**Blockchain
Developer**

\$140K - \$250K+

**Blockchain
Architect**

\$120K - \$200K+

**Data Scientist
(Big Data)**

\$110K - \$170K+

**Big Data
Engineer**

\$120K - \$200K+

**Cryptography
Engineer**

\$120K - \$190K+

**Blockchain
Consultant**

\$130K - \$220K+

**Smart Contract
Auditor**

\$120K - \$180K+

**Distributed
Systems Engineer**

\$130K - \$220K+

**ML Engineer
(Big Data Focus)**

\$110K - \$180K+

**DApp
Developer**

Salary Source: Market projections from AmbitionBox, LinkedIn Insights, and top hiring platforms

IIT Patna does not offer any employment.

Esteemed Faculty Panel



Rishav Singh
IIT Patna



Dr. Chandranath Ada
IIT Patna



Abhinoy Singh
IIT Patna



Dr. Mayank Agarwal
IIT Patna



**Dr. Amarendra
Yadav**
IIITM Gwalior



Dr. Padmalochan Bera
IIT Bhubaneswar



Dr. Siba Narayan Swain
IIT Dharwad

IIT Patna Awards & Recognition



Lifetime Achievement Award (2020)

Prof. Trilok Nath Singh received the Lifetime Achievement Award (2020) by IASRM (ISRMTT), New Delhi. He also received the Best Paper Award at INDOROCK-2019 (ISRMTT) and the Shiv Prasad Gupta Samman (2021).



Top 2% Scientist Recognition

Dr. Siripantha Saha is listed among the world's top 2% scientists, with a global rank of 4023 out of 215114, according to the Stanford University global database



Patent Grant Achievement

A patent is granted to Dr. Karoli Patra and his team for the invention titled "Biaxial Planar Tensile Testing Device."



Prime Minister's Research Fellowship

Kshitij Mishra, PhD scholar in the Department of CSE, has been awarded the Prime Minister's Research Fellowship (PMRF) for his research work related to Artificial Intelligence and Image Processing.



Best PhD Thesis Award

Mr. Praveen Kumar, under the supervision of Dr. Navin K. Nishchal, received the Best PhD Thesis Award for his thesis titled "Investigations on Structured Light to Probe Optical Singularity and Its Use in Image Encryption", awarded by the Optical Society of India during the 44th Annual Symposium of Optics and Photonics (FOP21).



INSA Medal for Young Scientists (2019)

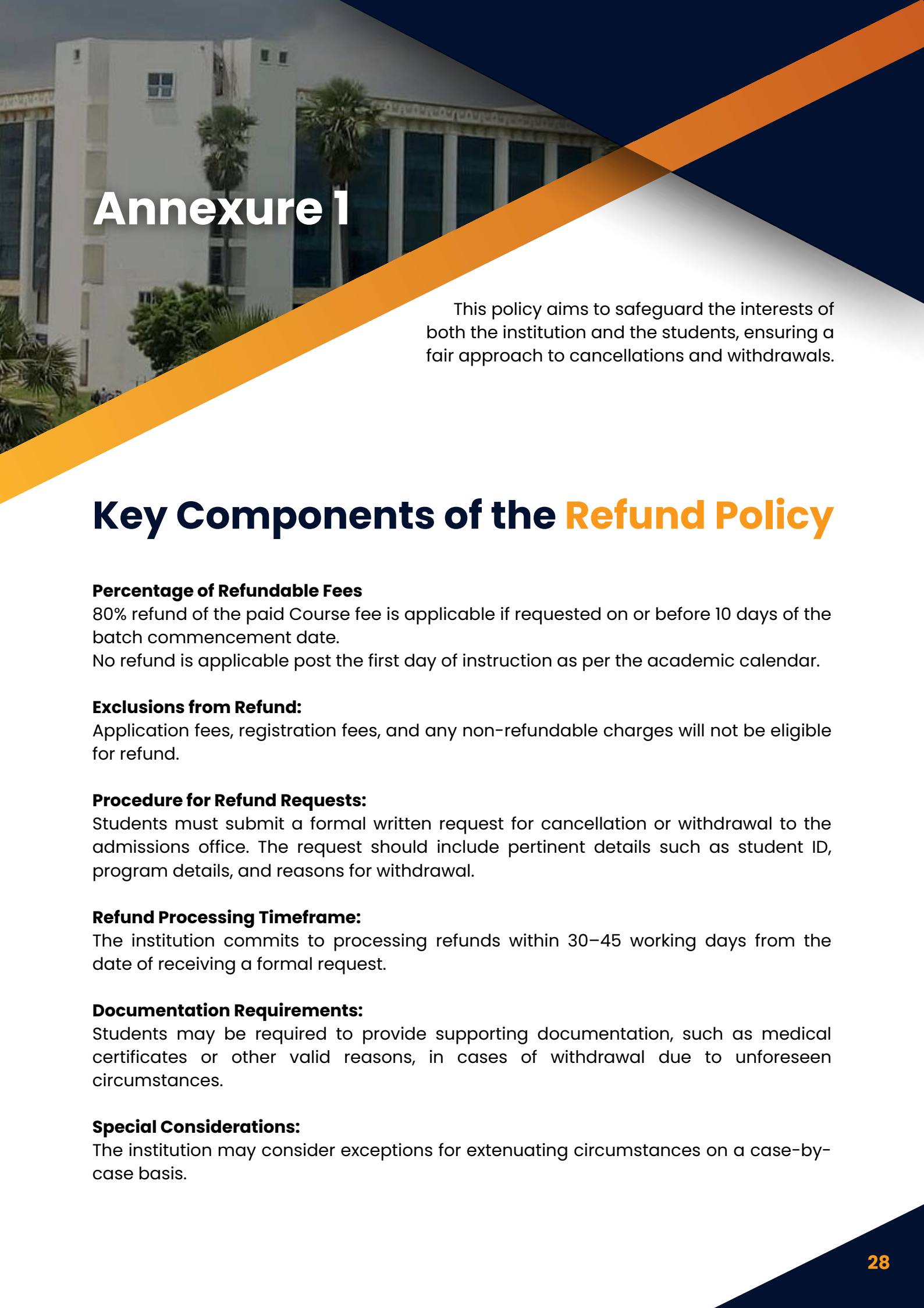
Dr. Rishi Raj has been awarded the INSA Medal for Young Scientists (2019) for his innovative contributions in phase-change heat transfer in zero-gravity environments.



Best Poster Presentation Prize

Ms. Archita Mati (PhD – Chemistry) received the Best Poster Presentation Prize at the Theoretical Chemistry Symposium (TCS 2021) under the supervision of Dr. Snehashis Chakraborty.





Annexure 1

This policy aims to safeguard the interests of both the institution and the students, ensuring a fair approach to cancellations and withdrawals.

Key Components of the Refund Policy

Percentage of Refundable Fees

80% refund of the paid Course fee is applicable if requested on or before 10 days of the batch commencement date.

No refund is applicable post the first day of instruction as per the academic calendar.

Exclusions from Refund:

Application fees, registration fees, and any non-refundable charges will not be eligible for refund.

Procedure for Refund Requests:

Students must submit a formal written request for cancellation or withdrawal to the admissions office. The request should include pertinent details such as student ID, program details, and reasons for withdrawal.

Refund Processing Timeframe:

The institution commits to processing refunds within 30–45 working days from the date of receiving a formal request.

Documentation Requirements:

Students may be required to provide supporting documentation, such as medical certificates or other valid reasons, in cases of withdrawal due to unforeseen circumstances.

Special Considerations:

The institution may consider exceptions for extenuating circumstances on a case-by-case basis.



**Indian Institute
of Technology Patna**
भारतीय प्रौद्योगिकी संस्थान पटना

APPLY NOW

Contact us for the application
and any other information



admission@iitp-tle.com



08047359551

Note: All brochure details are subject to change at the Institute's discretion. We recommend referring to the most recent version of the brochure on the website & course page before submitting your application to ensure you have the latest information.