Indian Institute
of Technology Patna
भारतीय प्रौद्योगिकी संस्थान पटना

Indian Institute of Technology, Patna

Executive M.Tech

IN BLOCKCHAIN TECHNOLOGY AND BIG DATA

Elevate your career graph in the most emerging tech space

24 Months I Online I Immersive Sessions I Graduate from an IIT

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

Ranked 9th

For placement records

Ranked 10th

Best Government Engineering College in the performance category overall

2500+ Alumni

Serving national and international institutions at leadership positions

100+

M.Tech Students

10+

Operating Departments

100+

Faculty Members

MESSAGE FROM THE DIRECTOR

DR. T. N. SINGH,

DIRECTOR, IIT PATNA

Dear Students,

Welcome to IIT Patna's Online Executive Programs, where we are dedicated to empowering professionals like you with the skills and expertise required to excel in today's fast-evolving, digital-first world. As part of this transformative online learning experience, you are joining a community of forward-thinking leaders who are shaping not just their careers, but the future of industries and the economy.

In this era of rapid technological advancement, the need for continuous learning is more critical than ever. At IIT Patna, we are committed to providing an education that goes beyond just enhancing your skills—it is about nurturing innovators, job creators, and entrepreneurs. By choosing to upskill with us, you are taking a vital step toward not only elevating your professional journey but also contributing to the creation of a more skilled, entrepreneurial, and future-ready India.

Through our online programs, you will gain access to cutting-edge knowledge, industry-relevant insights, and the support of a distinguished faculty—all designed to help you thrive in your career while giving you the tools to potentially start your own ventures. Whether your goal is to lead within your organization or become a job creator in your field, we are here to help you realize that vision. Your growth and success are integral to our collective mission of fostering innovation and business excellence. Together, we can unlock new opportunities, solve complex challenges, and build a brighter future for both the individual and society at large.

We are proud to have you as part of this vibrant learning ecosystem and look forward to seeing the impact you will make as future leaders and entrepreneurs.

With best wishes for your success.

KEY PERSONNEL

PROF. A. K. THAKUR

DEAN - ACADEMICS & ADMINISTRATION

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: a) renewable clean and green energy, b) solid-state ionic devices, c) storage cells, d) solar photovoltaics, e) dielectrics and ferroelectrics, f) processing and fabrication of nanomaterials, g) E.M.I. shielding, h) Battery Management System (BMS) design and fabrication for operational safety of battery packs for EV applications, and i) product design simulation and development for commercialization.

DR. N. K. TOMAR

ASSOCIATE DEAN RESOURCE

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, **Executive M.Tech in Blockchain Technology and Big Data** is designed to shape future leaders in this rapidly evolving field.

This 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

- Applicants must hold a B.Tech/BE/MSc (Computer Science/IT or related areas)/MCA/ME/M.Tech, or an equivalent degree.
- A minimum of 60% marks or a CGPA of 6.5 (on a 10-point scale) is required in the qualifying degree. Equivalent proportional scores are acceptable for other grading systems (e.g., 5.2 on a scale of 0-8).
- Candidates should have at least one year of work experience or be currently employed.
- Industry professionals with at least two years of experience or mid-level professionals seeking career progression and upskilling are encouraged to apply.

- **Relaxation:**

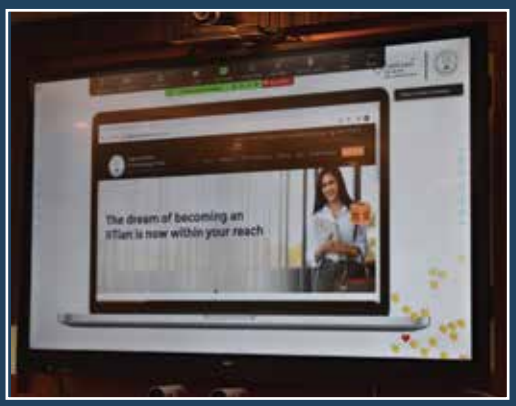
- In case of the candidate belonging to scheduled caste (SC)/ Scheduled Tribe (ST)/ Persons with Disability (PwD) category, this is relaxed to 55% or equivalent CGPA/ CPI.
- Marks will be relaxed by 2.5% or 0.5 CGPA or CPI against each additional year of experience.

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 System Administrators**
Blockchain Developers	**Smart Contract Developers**
Backend Chain Developers	**Cryptocurrency Developers**
Blockchain Architects	**Blockchain Security Analysts**

BATCH LAUNCH CEREMONY

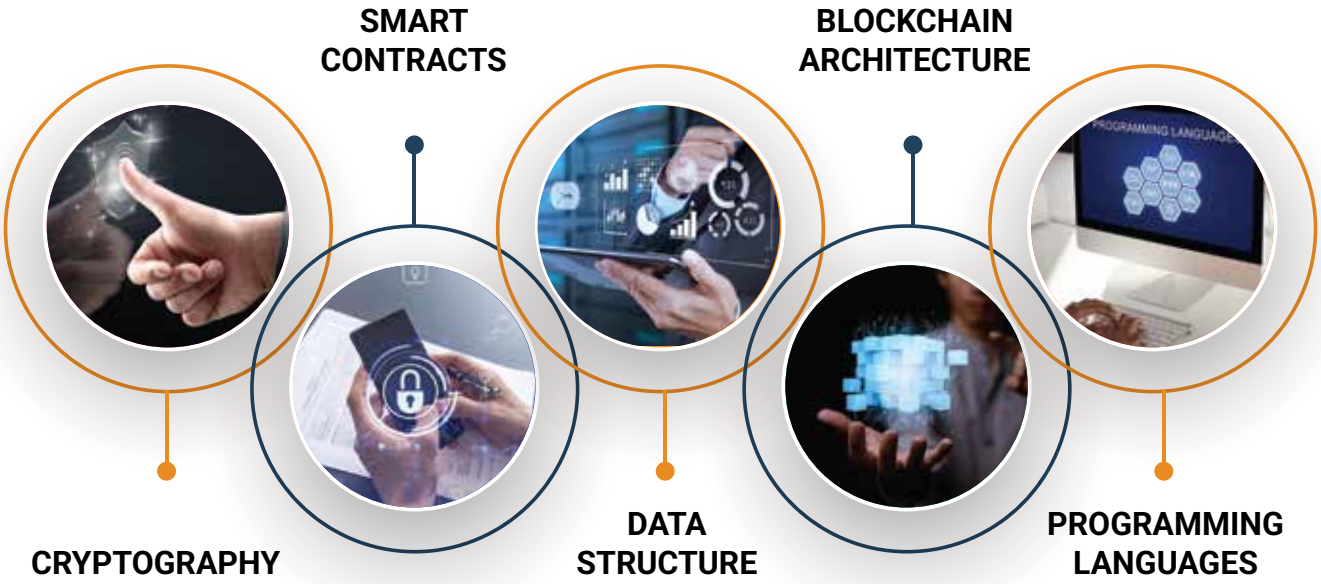


THE LEARNING PATHWAY

Program Duration	2 Years
Live online sessions	3 Days a week
Immersive sessions at IIT Patna campus	Once a year
Model of delivery	Live sessions and flexible self learning

Note: The list mentioned above is an indicative list of tools and is subject to change at the discretion of IIT Patna.

SKILLS GAINED THROUGH THE PROGRAM



PROGRAM OBJECTIVES

UNDERSTAND	LEARN	ACQUIRE	IDENTIFY	ANALYSE
The critical need for blockchain technology, its significance in modern applications, and the challenges associated with implementing secure and scalable blockchain architectures.	The evolution, fundamental types, and diverse applications of blockchain across industries.	Comprehensive knowledge of cryptographic techniques and consensus algorithms essential for building robust blockchain systems.	Potential network vulnerabilities in blockchain frameworks and apply advanced security mechanisms to ensure data integrity and trust.	The underlying principles and technical components of blockchain technology, focusing on its infrastructure, architecture, and how it supports decentralized systems.

COURSE STRUCTURE

SEMESTER	COURSE NAME	L-T-P-C
SEMESTER 1	• Design and Analysis of Algorithms • Foundations of Computer Systems • Probability and Statistics • Technical Writing and Soft Skills • DE-1 (Elective 1)	3-0-2-4 3-0-2-4 3-0-2-4 1-2-2-4 3-0-0-3
SEMESTER 2	• Artificial Intelligence • Numerical Linear Algebra and Optimization Techniques • DE-2 (Elective 2) • DE-3 (Elective 3) • IKS	3-0-2-4 3-0-2-4 3-0-0-3 3-0-0-3 2-0-0-2

SEMESTER 3	• DE-4 (Elective 4) • DE-5 (Elective 5) • Project I	3-0-0-3 3-0-0-3 0-0-34-17
SEMESTER 4	• DE-6 (Elective 6) • DE-7 (Elective 7) • Project II	3-0-0-3 3-0-0-3 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 I (SEMESTER 1)

COURSE NAME	CREDITS
Blockchain Fundamentals Big Data Fundamentals and Ecosystem Cryptoeconomics Web Development for Blockchain Applications Blockchain Components and Architecture Data Engineering	3-0-0-3

ELECTIVE 2 (SEMESTER 2)

COURSE NAME	CREDITS
Distributed Ledger Technologies Advanced Cryptography Big Data Storage and NoSQL Databases Database system and Design Deep Learning	3-0-0-3

ELECTIVE 3 (SEMESTER 2)

COURSE NAME	CREDITS
Blockchain Scalability Challenges Smart Contracts and DApps Development Big Data Processing Frameworks Data Virtualization and Dashboards Predictive Analytics	3-0-0-3

ELECTIVE 4 (SEMESTER 3)

COURSE NAME	CREDITS
Data Analytics for Blockchain Tokenomics and NFT Design Big Data Analytics and Visualization Cryptocurrency and Cyber Security Big-Data Framework	3-0-0-3

ELECTIVE 5 (SEMESTER 3)

COURSE NAME	CREDITS
Blockchain Governance Models Machine Learning for Big Data Advanced Smart Contracts Techniques Modern Cryptography Blockchain Technologies: Platforms and Applications	3-0-0-3

ELECTIVE 6 (SEMESTER 4)

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

ELECTIVE 7 (SEMESTER 4)

COURSE NAME	CREDITS
Blockchain Regulatory and Legal Issues Blockchain for Digital Identity Big Data Project Development and Deployment Security and privacy for big data Data Mining and Knowledge Discovery	3-0-0-3

LAUNCHPAD COURSE

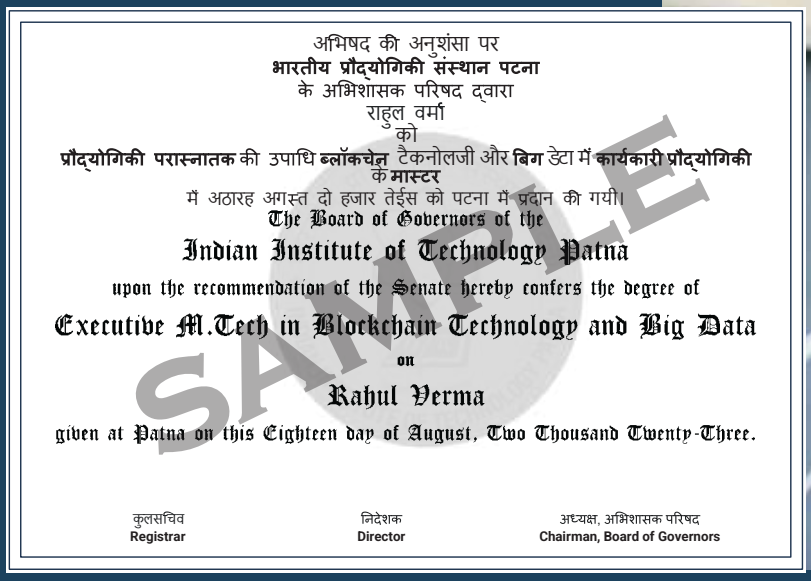
- **Transformative Experience:** The Launchpad Course for IIT Patna has greatly impacted students by bridging the gap between prior education and IIT's academic demands.
- **Targeted Learning Modules:** The course offers focused learning modules that enhance students' understanding.
- **Personalized Mentorship:** Students receive personalized guidance to boost their confidence and learning.
- **Hands-on Projects:** Practical projects are included to strengthen foundational knowledge
- **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.

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.

EXECUTIVE DEGREE PROGRAM
SAMPLE CERTIFICATE



अभिषद की अनुशंसा पर
भारतीय प्रौद्योगिकी संस्थान पटना
के अभिशासक परिषद द्वारा
राहुल वर्मा
को
प्रौद्योगिकी परास्नातक की उपाधि **ब्लॉकचेन** टेकनोलजी और **बिग** डेटा में **कार्यकारी प्रौद्योगिकी के मास्टर**
में अठारह अगस्त दो हजार तेईस को पटना में प्रदान की गयी।

The Board of Governors of the
Indian Institute of Technology Patna
upon the recommendation of the Senate hereby confers the degree of
Executive M.Tech in Blockchain Technology and Big Data
on
Rahul Verma
given at Patna on this Eighteen day of August, Two Thousand Twenty-Three.

SAMPLE

कुलसचिव
Registrar

निदेशक
Director

अध्यक्ष, अभिशासक परिषद
Chairman, Board of Governors

BECOME AN IIT PATNA ALUMNI - A GATEWAY OF OPPORTUNITIES

IDENTITY
- Have a lifelong IIT Patna email address

ACCESS
- To the e-library of the university
- To the on-campus sports and gym facilities
- To 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 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:** ₹7,000, payable between 45 and 30 days before the scheduled date to IIT Patna.
- **Travel and Accommodation:** Students are responsible for their own travel, accommodation arrangements, and food expenses.
- **Accommodation Options:** Students may opt to stay in a guesthouse or hostel, subject to availability, and manage these arrangements independently.
- **Cancellation Policy:** Under any circumstances, TeamLease EdTech and IIT Patna reserve the right to cancel the event. In case of cancellation from TeamLease EdTech and IIT Patna, refunds will be processed within 3-4 weeks upon receipt of the required bank details.

PROGRAM ADMISSION JOURNEY

STEP 1:
Fill up an online application form, upload the required documents and submit application

STEP 2:
Make the application payment

STEP 1:
Shortlisting based on work, and education profile

STEP 1:
If shortlisted, you will receive an offer letter from IIT Patna

STEP 1:
Pay admission confirmation fee within 7 days of receiving the offer letter

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	Date	Amount
Application Fee	To be paid with the application on submission	₹5000/-
Admission Fee	To be completed within 7 days of receiving the offer to join the course	₹40000/-
Semester 1	To be paid within 15 days from the Admission fee payment date	₹35000/- Mandatory Course Fee + ₹5500/- Exam Fee
Semester 2	To be paid 30 days before starting of the 2nd semester	₹75000/- Mandatory Course Fee + ₹5500/- Exam Fee
		₹7000/-(Optional Campus Immersion Fee)
Semester 3	To be paid 30 days before starting of the 3rd semester	₹75000/- Mandatory Course Fee + ₹5500/- Exam Fee
Semester 4	To be paid 30 days before starting of the 4th semester	₹75000/- Mandatory Course Fee + ₹5500/- Exam Fee
		₹7000/-(Optional Campus Immersion Fee)
		₹6000/- Institute Alumni Fee

INTERNATIONAL FEES AND INSTALLMENT SCHEDULE

Fee details	Date	Amount
Application Fee	To be paid with the application on submission	$ 150
Semester 1	To be paid within 15 days from the Admission Fee payment date	$ 1620 Mandatory Course Fee + $ 80 Exam Fee
Semester 2	To be paid 30 days before starting of the 2nd semester	$ 1620 Mandatory Course Fee + $ 80 Exam Fee
		$ 200 (Optional Campus Immersion Fee)
Semester 3	To be paid 30 days before starting of the 3rd semester	$ 1620 Mandatory Course Fee + $ 80 Exam Fee
Semester 4	To be paid 30 days before starting of the 4th semester	$ 1620 Mandatory Course Fee + $ 80 Exam Fee
		$ 200 (Optional Campus Immersion 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 an 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. an alumni may pay this fee to IIT Patna directly upon graduating from the program.

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 mute your microphone 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 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.

OUR EXECUTIVE STUDENTS ARE FROM LEADING ORGANISATIONS

TATA CONSULTANCY SERVICES

BAJAJ FINANCE LIMITED

HDFC BANK
We understand your world

accenture

Infosys

amazon

Deloitte.

cognizant

Capgemini

HCLTech

Esteemed Faculty Panel

Rishav Singh
IIT Patna

Dr. Chandranath Adak
IIT Patna

Abhinoy Singh
IIT Patna

Dr. Mayank Agarwal
IIT Patna

Dr. Amarendra Yadav
IIITM Gwalior

Dr. Subhajit Siddhanta
IIT Bhilai

Dr. Padmalochan Bera
IIT Bhubaneswar

Dr. Siba Narayan Swain
IIT Dharwad

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:

1) **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.

2) **Exclusions from Refund:**
   Application fees, registration fees, and any non-refundable charges will not be eligible for refund.

3) **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.

4) **Refund Processing Timeframe:**
   The institution commits to processing refunds within 30-45 working days from the date of receiving a formal request.

5) **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.

6) **Special Considerations:**
   The institution may consider exceptions for extenuating circumstances on a case-by-case basis.

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APPLY NOW

Contact us
For application and any other information please
get in touch with us

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.