Indian Institute of Technology, Patna

EXECUTIVE DEGREE PROGRAM

M.TECH
IN CLOUD COMPUTING

The sky's the limit with cloud computing

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 9

For placement records

Ranked 10

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.
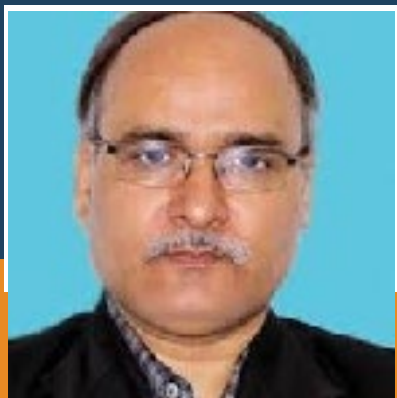
Through our online programs, you will gain access to cutting-edge knowledge, industry-relevant insights, and the support of a distinguished faculty—all designed to help you thrive in your career while giving you the tools to potentially start your own ventures. Whether your goal is to lead within your 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.
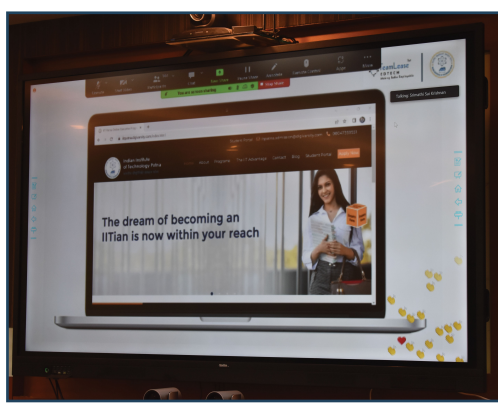
DR. N. K. TOMAR

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).

BATCH LAUNCH CEREMONY

PROGRAM OVERVIEW

Cloud Computing has come of age after corporations like Amazon introduced the first of its kind of cloud services in 2006. There are signs that subscription to cloud services by the local companies will soon skyrocket. The M.Tech in Cloud Computing is a two-year postgraduate program which deals with services like servers, storage, networking, software and more. The M.Tech Cloud Computing curriculum is divided into four semesters of six months each. The basic course structure of M.Tech Cloud Computing includes Cloud Security, Web Application Developments, Data Centre Networking, Cloud Architectures, etc.

WHO CAN APPLY? - COURSE ELIGIBILITY

- The candidates should have a minimum one year of working experience or should be currently employed.
- An aspiring student should have a B.Tech/BE/MSc (Com Sc/IT or in related areas)/MCA/ ME/M.Tech or any equivalent degree.
- At least a 60% scored in the final marks of the eligible degree program or a minimum CGPA or CPI of 6.5 on the scale of 0-10 with corresponding proportional requirements when the scales are other than 0-10 (for example, 5.2 on a scale of 0-8).

- **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:

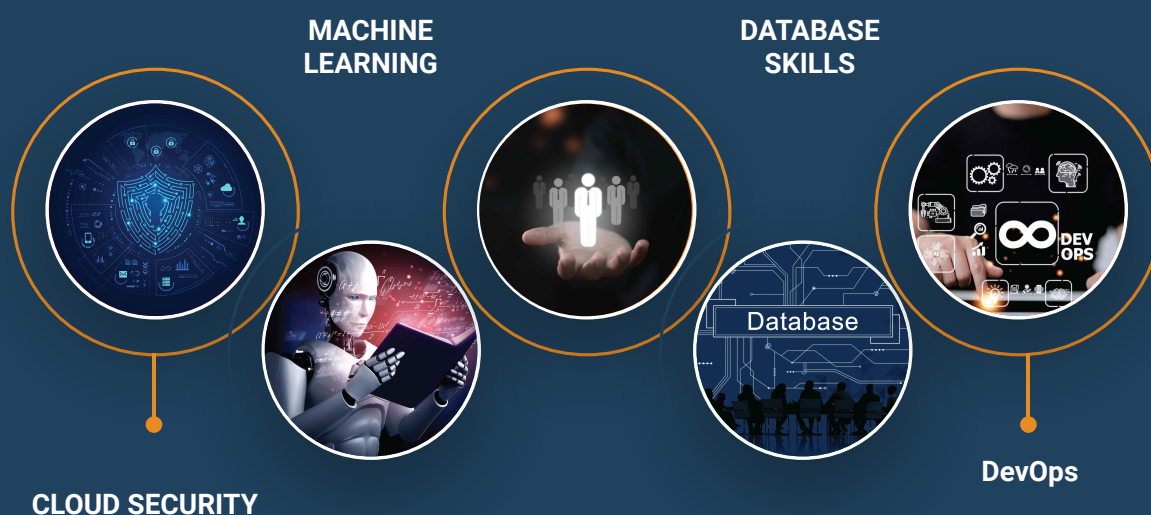|	
Cloud Administrators	Cloud Security Analysts
Cloud Software Engineers	Cloud Engineers
Cloud Network Engineers	Cloud Architects
Cloud Automation Engineers	Cloud Consultants

THE LEARNING PATHWAY

Program Duration	2 Years
Live online sessions	3 Days a week
Session frequency	6 Hours on Sat/Sun and 2-3 Hours on Fri
Immersive sessions at IIT Patna campus	Once a year
Model of delivery	Live sessions and flexible self learning

HANDS-ON EXPERIENCE WITH TOOLS*

Note:

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

2) Cloud lab access is for scheduled 9-12 hour learning sessions with auto-termination to ensure equitable and cost-effective use. Save your work externally.

SKILLS GAINED THROUGH THE PROGRAM

MACHINE LEARNING

DATABASE SKILLS

CLOUD SECURITY

DevOps

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 OBJECTIVES

UNDERSTAND	LEARN	ACQUIRE	IDENTIFY	ANALYSE
The need for cloud, virtualization, and security issues in cloud computing	The principles of data warehousing and data mining	Knowledge about the need and importance of machine learning	Complex routed and switched networks	Various advanced data structures and algorithms to solve real life problems

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 Skill • 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 + IKS	23 credits
Projects	37 credits
Total	84 credits

ELECTIVE I

COURSE NAME	CREDITS
Application development framework	3-0-0-3
Python for cloud computing	3-0-0-3
Advanced Cloud Computing	3-0-0-3

ELECTIVE II & III

COURSE NAME	CREDITS
Cloud computing Architecture	3-0-0-3
Cloud Security	3-0-0-3
Advanced Edge Computing	3-0-0-3
Parallel Algorithms	3-0-0-3
Data Virtualization & Dashboards	3-0-0-3

ELECTIVES IV & V

COURSE NAME	CREDITS
Cloud strategy planning and Management	3-0-0-3
Cloud Based DevOps	3-0-0-3
Distributed Systems	3-0-0-3
Machine learning for cloud computing	3-0-0-3

ELECTIVES VI & VII

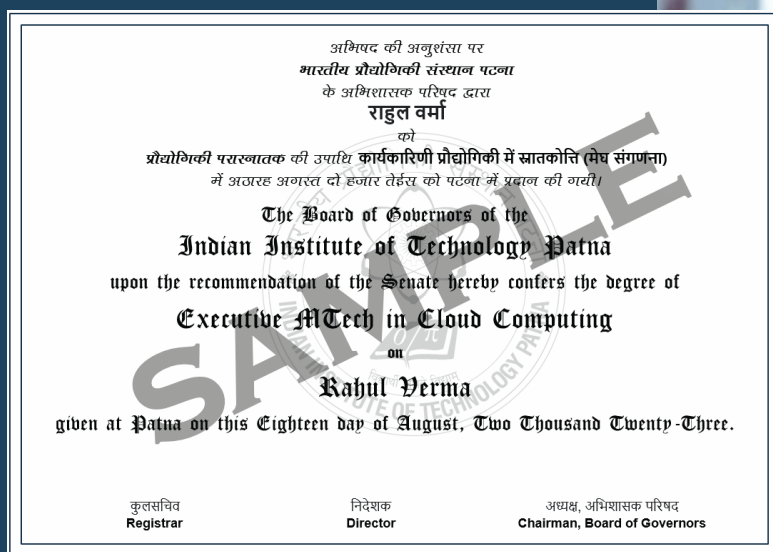| COURSE NAME	CREDITS
Meta Learning	3-0-0-3
Service-oriented Architecture and Web security	3-0-0-3
Reinforcement Learning	3-0-0-3
Data Warehousing	3-0-0-3

CORE PROGRAM OUTCOMES

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

- **Evaluate** the strategic value of Cloud Computing using IT Governance and Compliance.
- **Design** and program efficient algorithms related to Machine Learning, train models, conduct experiments, and deliver ML-based applications.
- **Analyze** critical case studies to derive the best practice model to apply when developing and deploying cloud based applications.
- **Examine** the components of cloud computing showing how business agility in an organization can be created.

EXECUTIVE DEGREE PROGRAM
SAMPLE CERTIFICATE

अभिषद की अनुशंसा पर
भारतीय प्रौद्योगिकी संस्थान पटना
के अभिशासक परिषद द्वारा
राहुल वर्मा
को
प्रौद्योगिकी परास्नातक की उपाधि **कार्यकारिणी प्रौद्योगिकी में स्नातकोत्ति (मेघ संगणना)**
में अठारह अगस्त दो हज़ार 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 MTech in Cloud Computing
on
Rahul Verma
given at Patna on this Eighteen day of August, Two Thousand Twenty-Three.

SAMPLE

कुलसचिव	निदेशक	अध्यक्ष, अभिशासक परिषद
Registrar	**Director**	**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

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 3:
Shortlisting based on work, and education profile

STEP 4:
If shortlisted, you will receive an offer letter from IIT Patna

STEP 5:
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.

INDIAN 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.

OUR EXECUTIVE STUDENTS ARE FROM LEADING ORGANISATIONS

Esteemed Faculty Panel

Dr. Rahul Mishra
IIT Patna

Dr. Arijit Roy
IIT Patna

Dr. Suraj Suman
IIT Patna

Dr. Sriparna Saha
IIT Patna

Dr. Padmalochan Bera
IIT Bhubaneswar

Dr. Avadh Kishor
IIITM Gwalior

Dr. Vishwesh Jatala
IIT Bhilai

Dr. Amrendra Yadav
IIITM Gwalior

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.
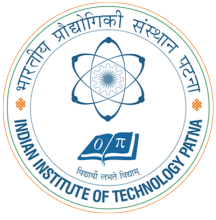
5) **Documentation Requirements:**
   Students may be required to provide supporting documentation, such as medical certificates or other valid reasons, in cases of withdrawal due to unforeseen circumstances.
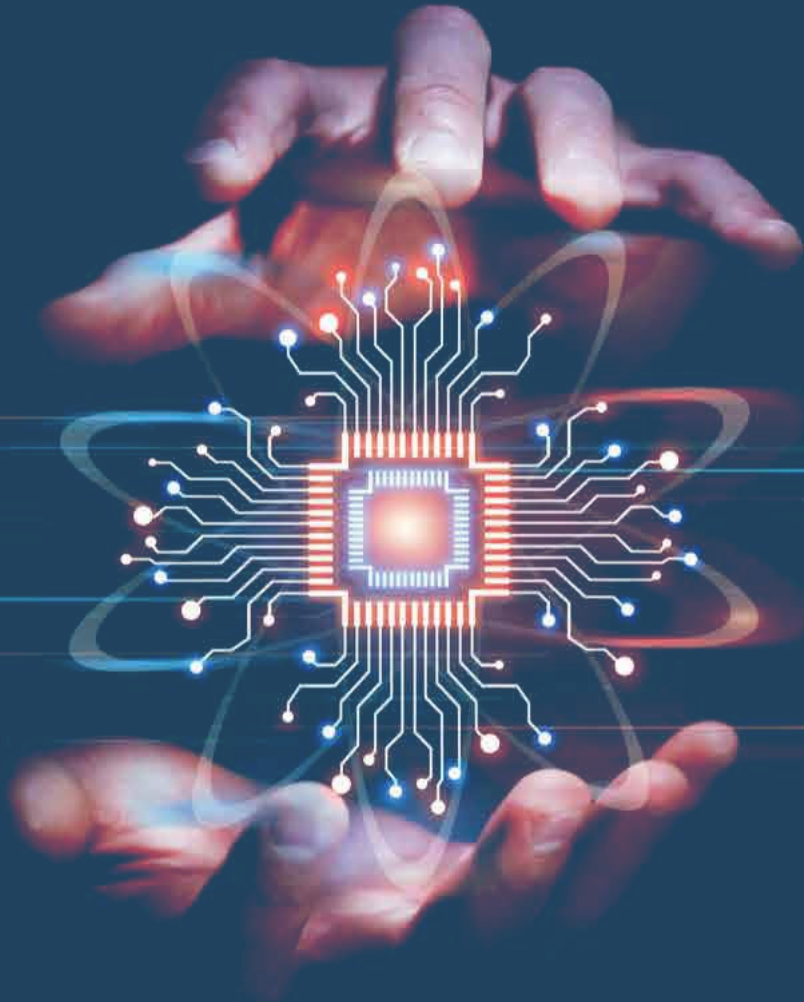
6) **Special Considerations:**
   The institution may consider exceptions for extenuating circumstances on a case-by-case basis.

APPLY NOW

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

admission@iitp-tle.com   08047359551