PRODUCT MANAGEMENT OVERVIEW

Product Management has become one of the most important components of corporate strategy in the modern world due to the rise of the start-up culture and the quickening shift to become more user friendly and centric. Product managers have done the same. Product management is a multifaceted role that involves strategic thinking, market analysis, cross-functional collaboration, and a strong focus on customer satisfaction. It is instrumental in bringing successful products to market and ensuring their continued relevance and success throughout their lifecycle.

The intersection of technology, business, and user experience is product management.

WHY AI AND WHY NOW?

Deploying the right AI technologies in your organization can help you automate routine tasks, gain insights through data analytics, and engage better with customers. Given the broad spectrum of AI's applications in organizations, it's no surprise that AI Specialist is the top rated job on the LinkedIn Emerging Jobs Report in 2020. With an annual growth rate of 74% for this position, every industry is clamoring for AI talent to first devise a strategic plan for AI applications, and then help manage and optimize themin practice.

$15.7 Trillion Potential contribution to the global economy by 2030 from AI **SOURCE: PWC**

$93.5 Billion Value of the global AI market in 2021, projected to grow at a CAGR of 38.1% through 2030 **SOURCE: GRAND VIEW RESEARCH**

PROGRAM HIGHLIGHTS

Earn prestigious Certificate from E&ICT IIT G

Insights and examples from renowned IIT Faculty and Industry experts

Market-ready skills for evaluating the opportunity for AI solutions and making the case for it

Develop an AI project proposal to present to internal stakeholders or investors

Advance your knowledge through crowd sourcing, demos, and design-support activities

Earn Executive alumni status from E&ICT IIT- G on successful completion of the program and become a part of the rich alumni network

Individualized career support to suit your specific career progression aspirations

WHO IS THIS PROGRAMME FOR?

This 11-month course is ideal for you if you are a technical product leader, technology professional, technology consultant, or entrepreneur who wants to enhance your understanding of AI technology fundamentals and tools, and explore various design processes involved in AI-based products. Knowledge of calculus, linear algebra, statistics, and probabilities is beneficial, along with basic Python experience. The program is ideal for:

- ☑ Students and professionals with (0-2 years) Work Experience who wants advance their careers in AI development.

- ☑ Technical Product Managers in charge of machine learning and AI-based products in their organizations who are looking to add value to their organization by leveraging the latest in AI technologies.

- ☑ Technology Professionals who design and develop technology solutions aligned to organizations' needs and are looking to broaden their understanding of developing AI-based solutions using machine learning algorithms.

- ☑ Technology Consultants who focus on the analysis, design, and development of technology solutions for clients.

- ☑ Founders of AI Startups that build AI-driven applications and want to learn a proven framework for developing viable AI products and network with other technologists.

- ☑ UI/UX Designers responsible for managing user experience of AI-based applications.

According to the **Product School Future of Product Management report,** 43% of companies are hiring more PMs and 26% of PMs are planning to leave their jobs within the next 12 months.
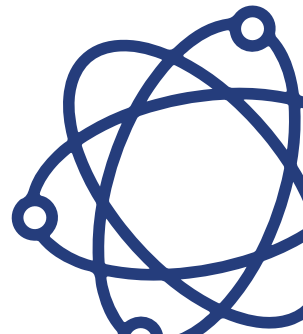
REASONS TO CHOOSE A CAREER IN PRODUCT MANAGEMENT

A rewarding career in product management gives you the chance to drive innovation, influence the future, and have a real impact on goods and services. It provides flexible opportunities for the development of strategic thinking, teamwork, leadership, and problem solving skills

With **20,000+ jobs** on Linkedin in mid-2022, the product management domain is in high demand in India. According to Jobted, the average salary for a product manager is around **246%** higher than the national average salary in India.

AVG CTC	Role	YOE
AVG CTC 5-7 LPA	Assistant Product Manager	YOE 0-2 YEARS
AVG CTC 10-27 LPA	Product Manager	YOE 2-5 YEARS
AVG CTC 27-40 LPA	Senior Product Manager	YOE 4-6 YEARS
AVG CTC 40-77 LPA	Director Product Manager	YOE 7+ YEARS
AVG CTC 77-100 LPA	VP Product Manager	YOE 10+ YEARS
AVG CTC 100-150 LPA	Chief Product Officer	YOE 15+ YEARS

WHY CHOOSE PRODUCT MANAGEMENT PROFESSIONAL CERTIFICATE PROGRAMME?

The Professional Certificate Programme in Product Management offered by CollegeDekho in association with **E&ICT IIT Guwahati** is an excellent opportunity for professionals looking to develop their skills and expertise in product management. This program provides a well-rounded education in product-related strategies, market dynamics, and leadership, helping participants advance their careers in this competitive field.

Hands-On Learning

Real-World Expertise

Internship BYOP

Networking Opportunities

Career Advancement

Joint Certification by CollegeDekho and E&ICT Academy IIT Guwahati

FACULTY/INDUSTRY EXPERTS

Dr. Gaurav Trivedi

Associate Professor, EEE Department and Principal Investigator, E&ICT Academy, IIT Guwahati.

Key Research Area

Circuit Simulation (Analog and Digital) and VLSI CAD High Performance computing Computational, Biology and Solar Photovoltaics.

Awards

Eramus+ Fellowship to visit University of Pardubice for Joint Research and Development from May 2019-July 2019

Third best student paper award in MAREW 2019 by IEEE Czechoslovakia section at MAREW 2019 for the original and technical contribution made in the area of cryptography (pseudo random number generation), April 2019

Recognized for my contribution to VLSI Education in North-East by Mentor Graphics - a Siemens Business in U2U conference in Bangalore, February, 2019

Best student paper award in Radioelektronika 2016 by IEEE Czechoslovakia section for the original and technical contribution made in the area of optimization, April 2016

Honorable Mention Award under the category of Best Paper Award in VLSI Design 2016 at Kolkata, January, 2016

Best student paper award in MAREW 2015 by IEEE Czechoslovakia section for the original and technical contribution made in the area of analog circuit design optimization, April 2015
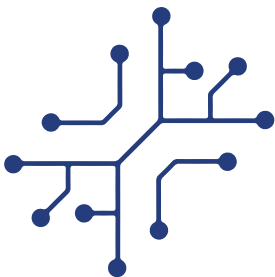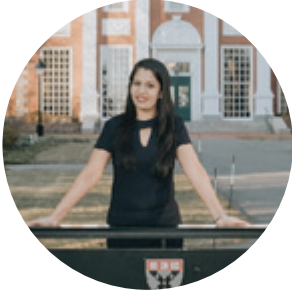
Ms. Anvita Dekhane

HBS MBA, IIT B BTech.

Pricipal Product Manager at UiPath, leading Automation Cloud Robots. Harvard Business School - Class of 2022. Ex-VC Fellow at Assymetric Capital Partners, Pear VC & Lerer Hippeau. Ex-operator at BabyChakra, India's largest platform for young Indian families. Ex-investor at Sequoia Capital, doing consumer and healthcare investing. Ex-consultant at Boston Consulting Group.

Mr. Jatin Solanki

**Co-Founder of Expertrons, TEDX speaker,
Alumnus of IIT-B 2012,**

Founder of application Eduisfun, Creator of stepAPP, India's largest educational application backed by investor Mr. Amitabh Bachhan

Jatin is a multifaceted entrepreneur with a passion for innovation and education. With a foundation in public relations, communication, and creativity, he has successfully founded and led ventures in e-commerce and education.

Currently, at Expertrons (world's first AI videobot platform for career hacks) they have mentors from IITs / NITs / IIMs who have cracked interviews with top firms like BCG, Google, One Plus, JP Morgan, Citibank & many more. They are the largest library of video interview experiences globally.

Jatin and his team (of 150+ employees) have developed educational games to make learning fun, easy and accessible to everyone. 60,000+ students across 53 countries the globe are benefiting from these edugames.

Jatin has been invited as panel & guest speaker at multiple B-school events besides being a Tedx speaker.
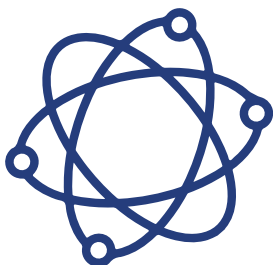
ROLE OF INDUSTRY EXPERTS

Career Guidance and Support:
The industry mentor will provide insights into various career paths within the field of artificial intelligence and related industries. They will assist you in identifying your strengths, interests, and career objectives, offering guidance on potential career trajectories and opportunities for growth.

Mock Interviews and Skill Development:
To help you prepare for future career opportunities, the industry mentor will conduct mock interviews and provide constructive feedback on your performance. These simulated interviews are designed to enhance your communication skills, confidence, and ability to articulate your knowledge and expertise effectively.

Networking and Professional Connections:
Leveraging their extensive network of industry contacts, the mentor will facilitate introductions to professionals and organizations relevant to your field of interest. These connections can open doors to internships, job opportunities, and collaborative projects, enriching your learning experience and expanding your professional network.

Industry Insights and Trends:
Stay abreast of the latest developments and trends in the industry through regular interactions with your mentor. They will share their insights and expertise, providing valuable perspectives on emerging technologies, market dynamics, and industry best practices.

Personal and Professional Development:
Beyond technical skills, the industry mentor will also focus on your personal and professional development, nurturing essential attributes such as leadership, teamwork, and adaptability. Through mentorship sessions and one-on-one discussions, they will empower you to realize your full potential and excel in your chosen career path.

PROGRAMME MODULES

Module 1 — Introduction to Product Management and Generative AI

Sessions 01-02	Overview of Product Management; Evolution and Future.
Sessions 03-04	Introduction to Artificial Intelligence in Products.
Sessions 05-06	Fundamentals of Generative AI; Key Concepts and Applications.
Sessions 07-08	Integrating AI in Product Strategy: Case Studies and Tools Overview.

Module 2 — Product Strategy and Market Analysis

Sessions 09-10	Crafting Product Strategy; Role of AI.
Sessions 11-12	Market Need Analysis using AI; Techniques and Tools.
Sessions 13-14	Competitor Analysis with AI; Building Competitive Advantage.
Sessions 15-16	Customer Segmentation and Targeting using Generative AI.

Module 3 — Design Thinking and User Experience

Sessions 17-18	Principles of Design Thinking; AI's Role.
Sessions 19-20	User Research and Personas; AI-enhanced Methods.
Sessions 21-22	Designing for User Experience; AI Tools and Prototypes.
Sessions 23-24	Usability Testing with AI; Iterations and Improvements.

Module 4	Data Science for Product Managers
Sessions 25-28	Basics of Data Science; Importance for PMs.
Sessions 29-32	Python for Data Analysis; Introduction and Practical Exercises.
Sessions 33-36	Utilizing Pandas and Numpy for Product Data.
Sessions 37-40	Predictive Analytics and Machine Learning Basics.
Sessions 41-44	Applying Machine Learning in Product Decisions.
Sessions 45-48	Data Visualization and Interpretation with AI Tools.
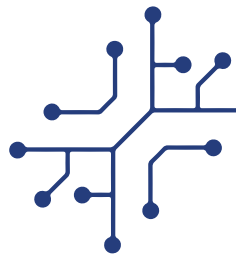
Module 5	Agile Product Engineering and Management
Sessions 49-50	Agile and Scrum Fundamentals; AI Integration.
Sessions 51-52	Agile Project Management Tools Powered by AI.
Sessions 53-54	Sprint Planning and Reviews with AI Analytics.
Sessions 55-56	Case Studies: Agile Projects Enhanced by AI.

Module 6	Product Launch and Marketing
Sessions 57-58	Planning and Executing a Product Launch.
Sessions 59-60	AI-driven Market Strategies and A/B Testing.
Sessions 61-62	Digital Marketing in the AI Era; Tools and Techniques.
Sessions 63-64	Measuring Success; AI in Analytics and Consumer Insights.

Module 7	Advanced Generative AI Applications in Product Management
Sessions 65-66	Deep Learning and Advanced AI Models for PM.
Sessions 67-68	Natural Language Processing for Customer Insights.
Sessions 69-70	Image and Video Generation for Product Concepts.
Sessions 71-72	Ethical Considerations and Future Trends in AI for PM.

Module 8	Research internship on Applications of Gen AI at IIT G (On campus or online)

Module 9	Capstone Project
Sessions 73-76	Project Introduction; Teams, Topics, and Objectives.
Sessions 77-80	Project Work; Milestone Reviews and Feedback.
Sessions 81-82	Final Presentations; Peer and Instructor Evaluation.
Sessions 83-84	Reflections; Integrating Learnings and Next Steps

Throughout the course, each session will incorporate interactive discussions, practical exercises with relevant tools, and regular feedback sessions to ensure a deep understanding of both product management fundamentals and the innovative applications of generative AI within this field

TOOLS COVERED IN THE PROGRAMME

pandas

NumPy

TensorFlow

GPT-3

Google Analytics

asana

balsamiq®

mixpanel

SQL

Retool

Figma

Other Essential Tools

Excel

Jira

tableau

Note:

- All product and company names mentioned in this material are trademarks or registered trademarks of their respective holders. Their use does not imply any affiliation with or endorsement by them.
- The tools showcased in this material will be taught through pre-recorded demo videos. Please note that the fee does not cover any payments required for certifications offered by the tools or tool subscriptions.
- These sessions are optional and will not be factored into your final evaluation.

LEARNING OUTCOMES

1

Build a foundation Learn the four stages of AI product design Identify applicable AI technologies to improve organizational processes

2

Analyze technical and operational requirements to build AI models expand your knowledge Differentiate between various machine learning algorithms

3

Design AI products to solve organizational issues earn about challenges you may encounter when designing AI products

4

Apply learnings Learn to apply machine learning methods to practical problems

5 Design intelligent human-machine interfaces Assess AI opportunities in various fields such as healthcare and education Identify an operational challenge and propose a technical solution for it

6 Implement the Lawler Model for defining an AI problem and identify key steps to build an organization case Design and construct an executive summary of an AI product or process using the AI design process model

LEARNING JOURNEY

Orientation Week

The first week is orientation week. During this week you will be introduced to the other participants taking part in the programme. You will learn how to use the learning management system and other learning tools provided.

Weekly Goals

On other weeks, you have learning goals set for the week. The goals would include completing the assignments, which have weekly deadlines.

Flexible & Convenient Online Learning

Learn online via live and interactive classes from the industry experts and special sessions by IIT Faculty

Build Your Own Product Weeks

Learn to build a product using AI under the guidance of IIT Guwahati Faculty. The Internship will be in Hydrid mode, in case of offline, accommodation can be provided at IIT Guwahati based on availability of hostel (On self payment basis)

2 Days On Campus Immerison

Get to meet your faculty and mentors during the immersion process and get awared with an Advanced Certification In Product Management With Gen AI
(On successful completion of Program)
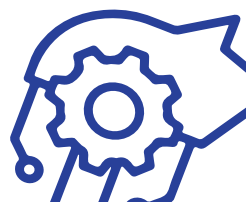
3 MONTHS OF EXCLUSIVE WORKSHOP & RESEARCH MENTOR BY E&ICT ACADEMY IIT- GUWAHATI CAMPUS

Dr. Gaurav Trivedi

Associate Professor, EEE Department and Principal Investigator, E&ICT Academy, IIT Guwahati.

This program offers a unique chance to delve into cutting-edge research and hands-on experience under the guidance of Dr. Gaurav Trivedi, Associate Professor in the EEE Department and Principal Investigator at the E&ICT Academy, IIT Guwahati.

Throughout the program, you will have the opportunity to explore the latest advancements in artificial intelligence and its applications, specifically focusing on Gen AI. Dr. Gaurav Trivedi's expertise and mentorship will provide invaluable guidance as you engage in research activities and workshops designed to enhance your understanding and skills in this field.

This program is tailored for individuals who are passionate about AI and eager to contribute to groundbreaking research in the field. Participants will have access to state-of-the-art facilities and resources at one of India's premier institutions, fostering an environment conducive to innovation and learning.

TOPICS FOR RESEARCH

1. Revamping a Travel Booking Platform

Case Study: Booking.com

Project Description: Analyze the existing features of Booking.com and identify areas for improvement, such as user experience, personalization, and customer support.

Use of Generative AI:

- **Personalized Itinerary Generator:** Use generative AI to create personalized travel itineraries based on user preferences and past behavior.
- **Customer Support Chatbot:** Implement a generative AI chatbot to handle customer inquiries and provide instant support.
- **Content Generation:** Generate engaging travel guides and destination descriptions to enhance the platform's content.

2. Enhancing an E-Commerce Platform

Case Study: Amazon

Project Description: Focus on improving the recommendation system, customer reviews, and search functionality of Amazon.

Use of Generative AI:

- **Advanced Recommendation Engine:** Utilize generative AI to develop a more sophisticated recommendation engine that suggests products based on complex user behavior patterns.
- **Review Summarization:** Implement AI to summarize customer reviews, making it easier for users to get a quick overview of product feedback.
- **AI-Driven Search Optimization:** Enhance the search functionality by using AI to understand user intent and provide more accurate search results.

3. Optimizing a Food Delivery Service

Case Study: DoorDash

Project Description: Improve the logistics, customer experience, and restaurant partner management of DoorDash.

Use of Generative AI:

- **Dynamic Routing and Delivery Optimization:** Use AI to optimize delivery routes in real-time, reducing delivery times and costs.

- **Personalized Meal Suggestions:** Implement AI to provide personalized meal recommendations based on user preferences and past orders.

- **Content Generation for Menus:** Generate appealing and consistent menu descriptions for restaurant partners to enhance user engagement.

4. Transforming a Streaming Service

Case Study: Netflix

Project Description: Enhance user engagement and content discovery on Netflix by leveraging AI.

Use of Generative AI:

- **Content Recommendation System:** Use generative AI to build a more personalized recommendation system that suggests movies and shows based on viewing history and preferences.

- **Automated Trailer Creation:** Implement AI to generate personalized trailers for users, highlighting content they are likely to enjoy.

- **Dynamic Thumbnails:** Use AI to create dynamic thumbnails that adapt to user preferences, increasing click-through rates.

5. Improving a Social Media Platform

Case Study: Instagram

Project Description: Focus on enhancing user engagement, content discovery, and advertising effectiveness on Instagram.

Use of Generative AI:

- **Content Creation Assistance:** Provide users with AI-powered tools to create engaging posts and stories, suggesting hashtags, captions, and editing styles.

- **Ad Targeting Optimization:** Use AI to improve ad targeting by analyzing user behavior and preferences to deliver more relevant ads.

- **Content Moderation:** Implement AI to detect and remove inappropriate content, ensuring a safer and more enjoyable user experience.

6. Upgrading a Fitness App

Case Study: MyFitnessPal

Project Description: Enhance the user experience, personalization, and data insights of MyFitnessPal.

Use of Generative AI:

- **Personalized Workout Plans:** Use AI to generate customized workout plans based on user goals, fitness levels, and preferences.

- **Nutrition Insights:** Implement AI to provide personalized nutrition advice and meal plans, adapting to user dietary needs and preferences.

- **Progress Tracking and Motivation:** Use AI to generate motivational content and progress reports, keeping users engaged and motivated.
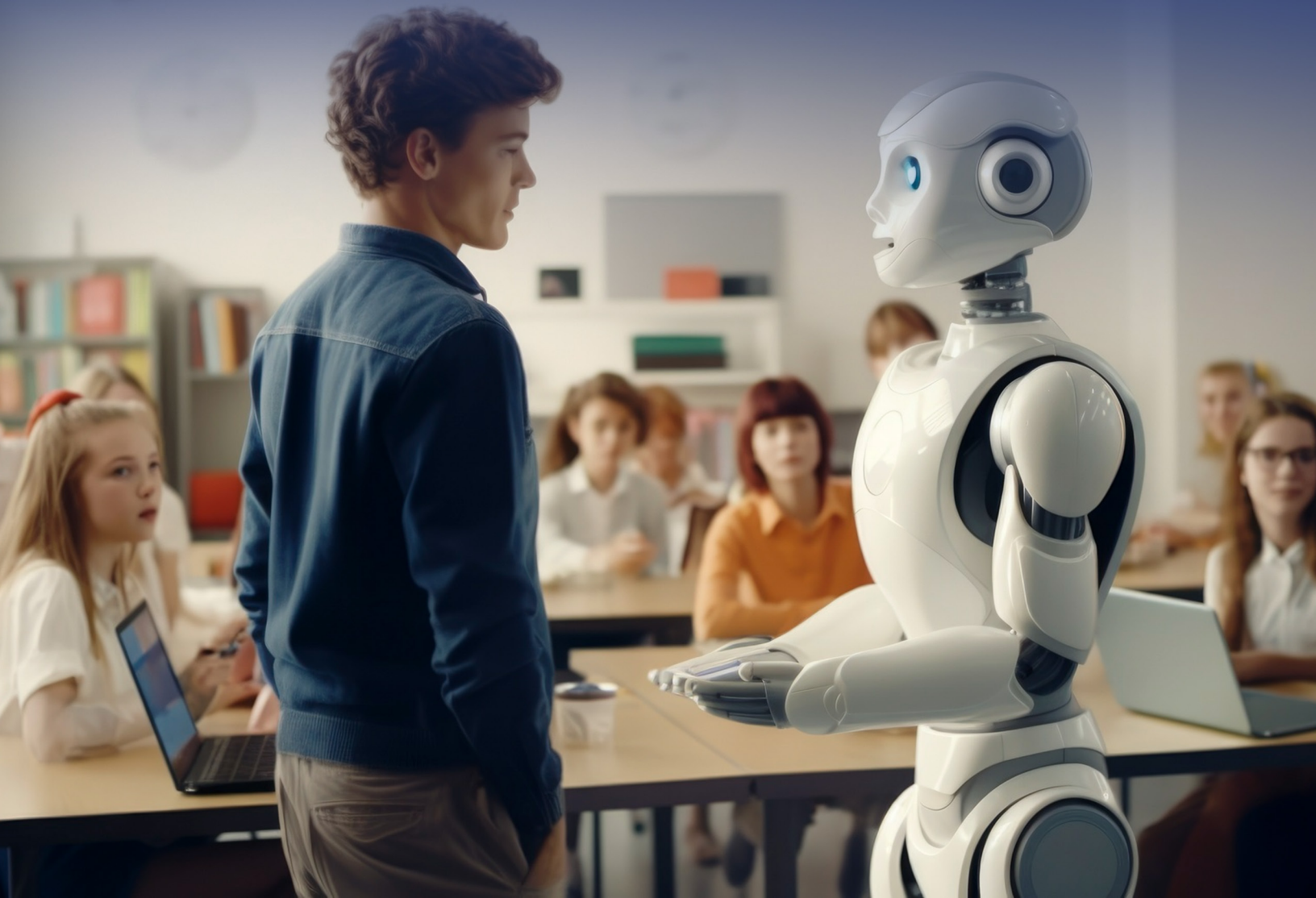
Eligibility

Minimum Graduate or Diploma
Holder (10+2+3)

Admission Criteria

Open Enrolments

PROGRAMME DETAILS

Start date of the program - **June 5, 2024**

PROGRAMME FEE* : INR 1,40,000 + GST

Note:
*GST (currently @ 18%) will be charged extra on these components.
*Instalment payment options available.

Application Requirements

Your Graduation/Degree
You can submit a scanned copy of either pass certificate or final year maksheet or both.

Programme Format

180 Mins live and interactive classes per week.

Note: Admissions are on a first-come, first-serve basis