



भारतीय प्रबंध संस्थान कोषिकोड

Indian Institute of Management Kozhikode

*Globalizing Indian Thought*

**Batch 6**



# ADVANCED OPERATIONS MANAGEMENT & ANALYTICS

11 Months, Live Online Sessions  
IIM Kozhikode Executive Alumni Status

# IIM Kozhikode Advantage

From the Director's Desk...

IIM Kozhikode programmes designed by world-class faculty with their cutting-edge thought leadership and industry-leading insights empower participants to manage and lead complex business challenges with confidence and data-driven, informed decision-making ability. Our growing global footprints acknowledged and accredited by leading institutions of the world are a testimony to growth we have achieved in our nearly 27-year journey of academic excellence.

At this juncture, it is also pertinent to share that both future and past are integral to the path taken by an institution on this journey of excellence. Having a wide, far-seeing vision is not an indulgence but an activity that is necessary to give meaning to our present, to give this Institution a sense of purpose, direction and imagination. That is why we have chosen to think in terms of what IIM Kozhikode will be able to contribute to India and the world some three decades from now with 'Vision 2047: Globalizing Indian Thought'. The Institute has set for itself a pre-eminent role with the above motto. The sheer scale, scope and potential impact that India will have on 21st century business makes us believe that this is a legitimate aspiration.

For candidates, it is pertinent to understand that operations management includes recognising and optimising the processes included in the production of services or goods, which can help cut costs. Thus, operations management facilitates selling more products/services and reducing costs, which means increased revenues and enhanced growth of an organisation. Managing each and every aspect of operations of an organisation efficiently is a crucial role of operations management. Operations management requires broad business knowledge, strong communication skills, and long-term thinking. The AOMA programme has thus been designed keeping the above objectives in mind.

Wishing you all a very happy learning experience at IIM Kozhikode!



**Prof. Debashis Chatterjee,**  
Director IIM Kozhikode



# Overview

Digital disruptions led by emerging technologies, automation and data analytics have transformed the business-as-usual ways of managing manufacturing and service operations. Globally, businesses are realising the need to continuously adapt, evolve and transform their operations towards digitisation, not only as an innovative option but as an operational necessity. With the 'Make in India' initiative aiming to create 100 million jobs in the manufacturing sector by 2022 (IBEF, 2020), there is a high demand for skilled professionals in operations management and analytics with strategic business acumen.

The **Advanced Operations Management & Analytics** programme from the Indian Institute of Management Kozhikode (IIM Kozhikode) provides a nuanced understanding of advanced concepts and practices in this domain. Joining this comprehensive programme will enable you to explore how effective operations management driven by analytics can lead to improved efficiencies, significant cost savings, higher customer satisfaction, and organisational excellence.

## Starts On

September 30, 2023

## Duration

11 Months

## Format

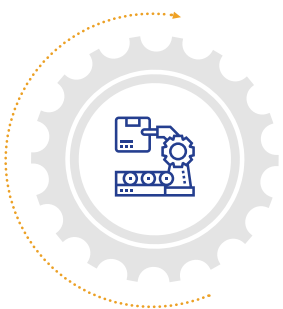
Live Online Sessions

## Programme Fee

INR 1,85,000 + GST

*\*Begins with an introduction to the platform*

## Why upskill in Operations Management and Analytics?



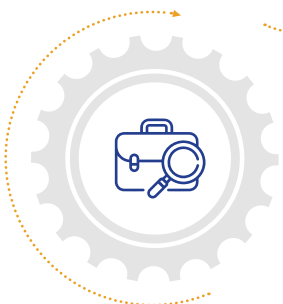
India's logistics market is expected to expand at an annual compounded growth rate of 8% reaching USD 330 billion by 2025.

*Source: Stockarea.io, 2022*



BVG India, a Pune-based integrated facilities management company, plans an initial public offering (IPO) to raise Rs 1,200-1,300 crore to expand into new facilities management areas.

*(Mordor Intelligence, 2022)*



The annual average operations manager salary for freshers is ₹ 3.2 LPA and may go up to ₹ 18.3 Lacs.

*Source: Ambition Box, 2022*

# Programme Highlights

This cutting-edge programme will equip you with multi-faceted operations management strategies and analytical tools to improve operational efficiencies, forecasting, and risk management, and seeks to help you position yourself as an industry-ready professional in process optimisation.



Receive a Certificate of Completion from one of India's leading B-Schools (NIRF, 2023)

Learn from distinguished IIM Kozhikode faculty & reputed industry experts



Gain practical insights and experience high-impact learning with real world case analysis, excel modeling and simulations

Be eligible for the lifelong Executive Alumni Status and expand your professional network



Explore best practices and advanced perspectives in effective operations management & analytics

Experiential learning through capstone project work, hands-on assignments, class exercises such as monte-carlo simulations and modeling, and tools such as MS Project, and Excel Solver.



## Note:

-The primary mode of learning for this programme is via live online sessions with faculty members. Post session video recordings will be made available, at the discretion of faculty member.

-The programme highlights presented above are approximate, and subject to change depending on the availability and expertise of the teaching faculty, as well as the program's desired outcomes.

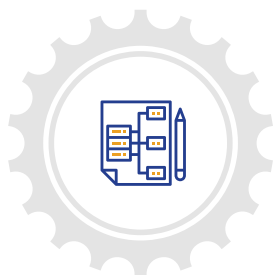
# Who is this programme for?

Whether you are an experienced professional in any major manufacturing or service-providing organisation, or a small business owner, understanding the integration of operations management with data analytics is critical to success. Gain expertise in lean operations management and analytics to improve project planning, manage the production scheduling process, and apply forecasting to meet demand-related challenges.

This programme is best suited for:

- Mid-stage Operations Professionals looking to acquire a strategic mindset and learn advanced concepts in operations management and analytics to transition into senior management roles
- Early and mid-stage professionals aspiring to build and advance their careers in operations management by learning to leverage effective operations strategies and analytics in improving operational efficiencies and achieving business outcomes

## This programme is perfectly suited for people who are...



Organised



Detail-oriented



Efficient



Diligent



Team-player



# Programme Director



## Prof. Ram Kumar P. N.

*Professor,  
Quantitative Methods and Operations Management*

Professor Ram Kumar has an M.E. in Industrial Engineering from PSG Tech Coimbatore and a PhD from IIT Madras. His research areas include transportation network optimisation, military logistics, and operations research in healthcare. He is currently working on a project that tries to understand the suitability of ant colony algorithms for convoy movement problems. He is also the chairperson of QMOM Area at IIM Kozhikode.

### Recent Publications:

- Jie Li, Kunpeng Li, Qiannan Tian & P N Ram Kumar (2022) "An Improved Column Generation Algorithm for the Disrupted Flight Recovery Problem with Discrete Flight Duration Control and Aircraft Assignment Constraints", **Computers and Industrial Engineering**, Vol.174
- Kunpeng Li, Peiyang He & P N Ram Kumar (2022) "A column generation based approach for an integrated production and transportation scheduling problem with dual delivery modes", Accepted for publication in the **International Journal of Production Research**, DOI.
- Prashant Premkumar and P N Ram Kumar (2022) "Locomotive Assignment Problem - Integrating the Strategic, Tactical and Operational Level Aspects", **Annals of Operations Research**, Vol. 315, pp. 867 - 898.
- Alan J. Maniamkot, P N Ram Kumar, Mohan Krishnamoorthy, Hamid Mokhtar and Sridharan Rajagopalan (2022) "Hybridised ant colony optimization for convoy movement problem", **Annals of Operations Research**, Vol. 315, pp. 847 - 866.

# Programme Faculty



## Prof. Anand G.

*Professor,  
Quantitative Methods and  
Operations Management*



## Prof. Rupesh Kumar Pati

*Professor,  
Quantitative Methods and  
Operations Management*



## Prof. Soumya Roy

*Associate Professor,  
Quantitative Methods and  
Operations Management*



## Prof. Arqum Mateen

*Associate Professor,  
Quantitative Methods and  
Operations Management*



## Prof. Ramesh Krishnan

*Assistant Professor  
Quantitative Methods and  
Operations Management Area*



## Prof. Sapparaya Suresh

*Assistant Professor  
Quantitative Methods and  
Operations Management Area*

# Industry Expert



## Andrea Stone

*Founder & Leadership Coach,  
Stone Leadership*

Ms Andrea Stone has over 25 years of experience in coaching leaders in diverse technology-based organisation, marketing and product roles in global technology industries and in leadership development. She has led teams across Asia and Europe and collaborated with teams in emerging and developed markets globally to develop, manage and market data network services and mobile applications. She now works to support leaders to effect positive change and create personal and business success. Her main focus is on developing effective leadership behaviors and skills, including personal leadership, vision and values, influence, and team building.

## Programme Modules

### MODULE 1: FUNDAMENTALS OF OPERATIONS MANAGEMENT

- Fundamentals of operations in manufacturing and services
- Process and systems view of the organisation
- Product process matrix, process analysis
- Macroeconomics and supply chain
- Industry 4.0 and its implications for manufacturing/services
- Digital transformation: Opportunities and Challenges

### MODULE 2: ANALYTICS IN OPERATIONS

- Statistics for managers
- Descriptive, predictive and prescriptive
- Data visualisation and interpretation
- Decision Trees
- Simulations
- Multi-Criteria Decision Making (MCDM)
- Simple statistical analysis using R

### MODULE 3: PROJECT PLANNING AND MANAGEMENT

- Project lifecycle management
- CPM and PERT
- Project scheduling using MS Project
- Critical chain project management

## MODULE 4: INVENTORY MANAGEMENT

- Economic order quantity
- Inventory classifications

## MODULE 5: SUPPLY CHAIN DESIGN AND MANAGEMENT

- Supply chain planning, concepts, processes and bottlenecks
- Supply chain structure and design
- Network strategy
- Strategic sourcing and procurement
- Sustainability
- Forecasting and Supply chain analytics

## MODULE 6: QUALITY MANAGEMENT

- Quality management principles and TQM
- Quality dimensions and measures
- Quality tools and methodologies
- Implementing quality planning and assurance
- Quality analytics

## MODULE 7: SIX SIGMA & LEAN OPERATIONS MANAGEMENT

- Six Sigma and Lean management concepts
- Theory of constraints

## MODULE 8: ADVANCED CONCEPTS

- Linking operations to overall organisational strategy
- Linking operations to financial goals
- Risk management and innovation
- Operational leadership and change management

*Note:*

*-Modules/ topics are indicative only, and the suggested time and sequence may be dropped/ modified/ adapted to fit the total programme hours.*

*-The primary mode of learning for this programme is via live online sessions with faculty members. The recording of the live sessions will be made available to the participants until the duration of the programme.*



# Capstone Project

The hands-on group project with four to five members is an integral part of the programme completion and will enable you to apply your learnings in a real-world business scenario. You and your team members can work on any domain for the project, preferably your working domain. Guided by IIM Kozhikode faculty and industry experts, explore how sound operations management and analytics can enhance your ability to optimise in-house processes and systems to minimise costs and maximise business profit.

*Note:*

*- Modules/ topics are indicative only, and the suggested time and sequence may be dropped/ modified/ adapted to fit the participant profile & programme hours.*

*-The recording of the live sessions will be made available to the participants until the duration of the programme.*

*-The programme curriculum includes individual assignments, simulations, group projects & presentations to apply and demonstrate classroom learnings.*

## Real-world Case Studies

Enhance your conceptual understanding from the programme modules with real-world business use cases in operations management and analytics. Develop your strategic thinking skills, learn best practices and actionable insights to effectively drive operational efficiencies. These use cases will include:

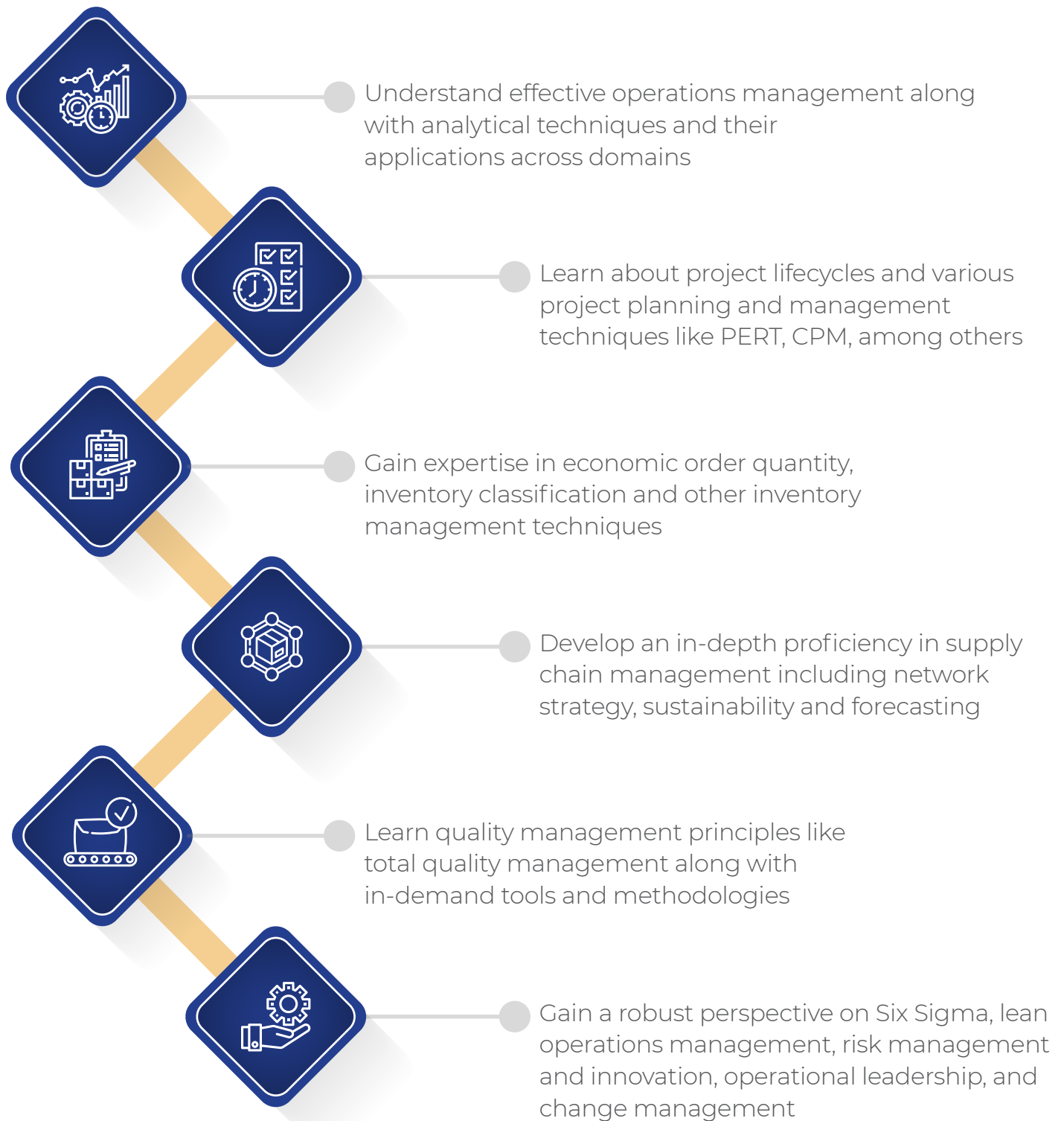
- Merck and Company - Evaluating a drug licensing opportunity  
**Learning Objective:** Decision Trees
- ABC Paper Manufacturing Case  
**Learning Objective:** Linear Programming
- AIC Netbooks  
**Learning Objective:** Assembly Line Balancing
- Three Jays Corporation  
**Learning Objective:** Inventory Management
- Process Analysis  
**Learning Objectives:** Capacity Analysis

*Note: Listed above are a few indicative case studies and the programme will include additional case studies specially curated by the faculty.*

# Learning Outcomes

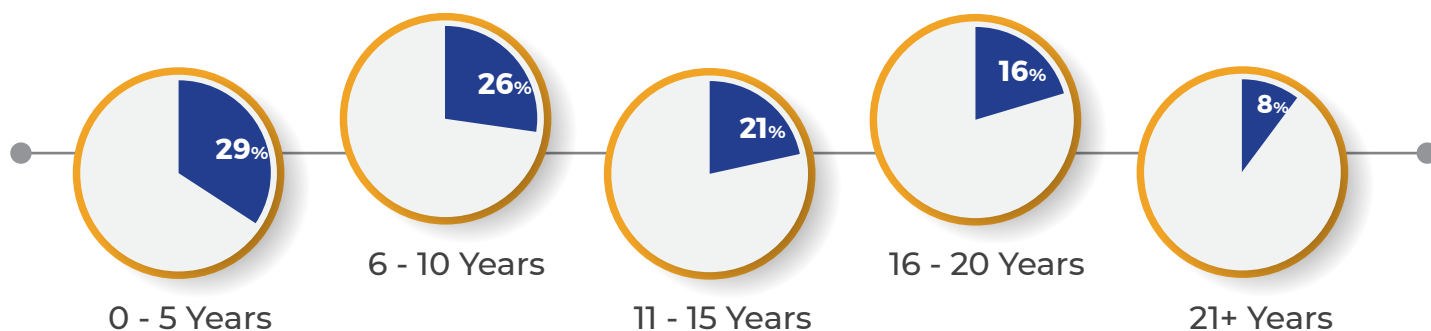
Build in-demand skills in optimising the operations value chain with advanced strategies and analytics to achieve competitive advantage and operational excellence for your business.

Joining this programme will enable you to:

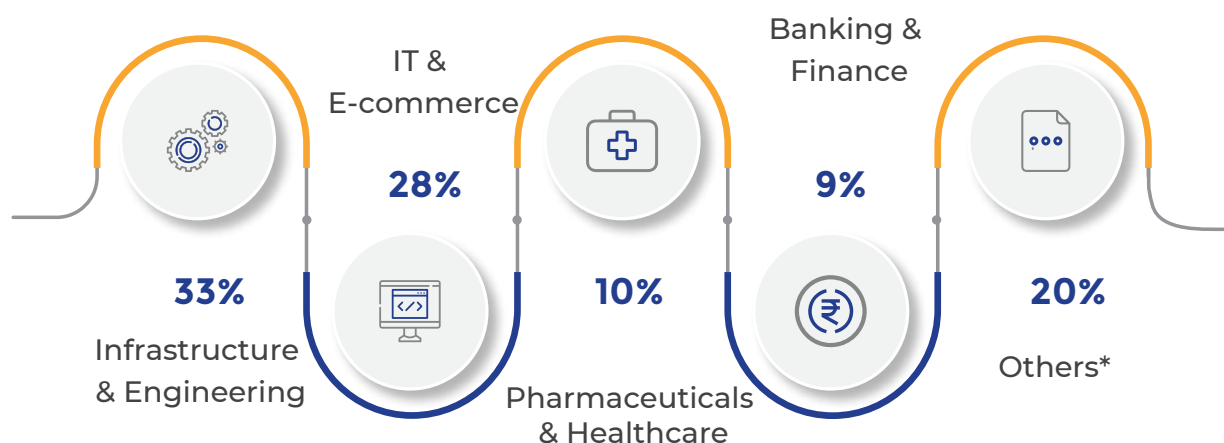


# Past Participant Profile

## Work Experience

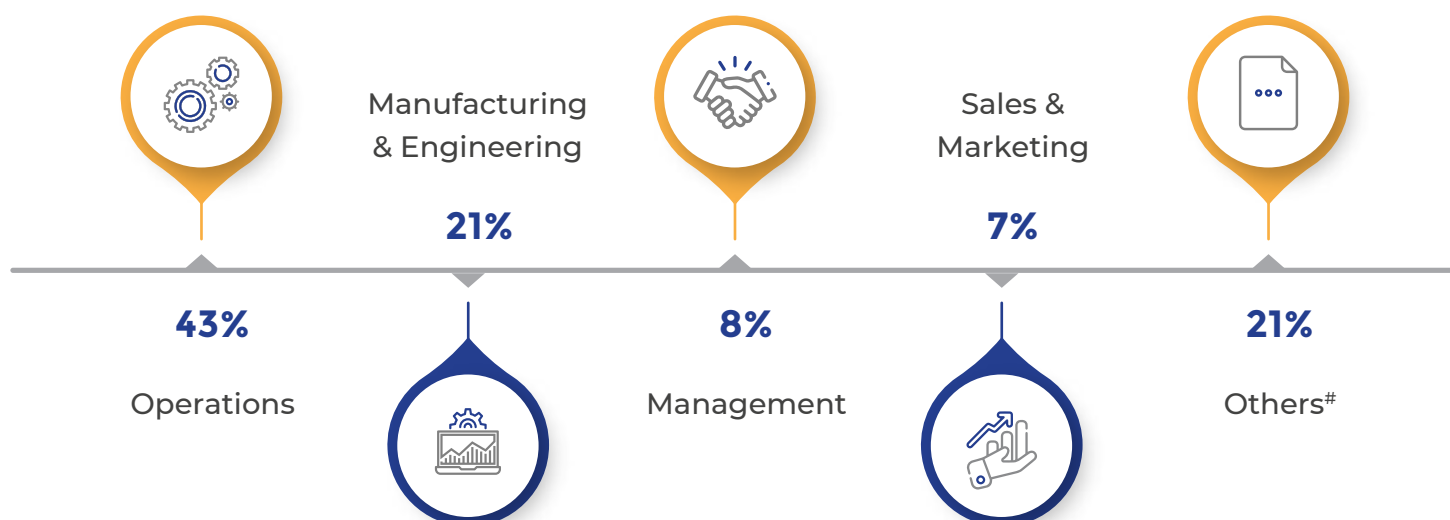


## Industries



\*Others include Agriculture, FMCG, Media, Retail etc.

## Participant Job Functions



#Others include Finance, R&D, IT, Consulting etc.

# Certificate

Participants will be awarded a completion certificate from IIM Kozhikode on successfully completing all evaluation components and maintaining a minimum attendance of 75%. Participants who are unable to clear all evaluation components, but have a minimum attendance of 75% shall be awarded a participation certificate.

We encourage you to attend all the live sessions and make the best out of these interactive learning experiences. Post session video recordings will be made available, as per discretion of respective faculty members.



Note:

The certificate shown above is for illustrative purposes only and may not be an exact prototype of the actual certificate. IIM Kozhikode reserves the right to change the certificate and specifications without notice.

## Eligibility

- Graduates (10+2+3) or Diploma Holders (only 10+2+3) from a recognized university (UGC/AICTE/DEC/AIU/State Government/recognised international universities) in any discipline
- Candidate should have a minimum of 1 year of work experience (after graduation) by the Programme Start date i.e., September 30, 2023

## Evaluation

- There will be periodic evaluations built-in throughout the programme at regular intervals. These may be in the form of quizzes, case study analysis, capstone project presentation, performance in the simulation or other objective/ subjective assessments. A minimum of 75% attendance is a prerequisite for the successful completion of this programme. The participants will have to secure the minimum pass marks considering all evaluation components.

# IIM Kozhikode Executive Alumni Status

On successful completion of the programme, participants will be eligible for the prestigious IIM Kozhikode Executive Alumni Status. These participants will subsequently receive the alumni registration details from IIM Kozhikode.

# Emeritus Career Services



## 15 Recorded sessions and resources in the following categories:

*(Please note: These sessions are not live):*

- Resume and Cover Letter
- Navigating Job Search
- Interview Preparation
- LinkedIn Profile Optimisation

*Note:*

- This service is available only for Indian residents enrolled into select Emeritus programmes.

- IIM Kozhikode or Emeritus do NOT promise or guarantee a job or progression in your current job. Career Services is only offered as a service that empowers you to manage your career proactively. The Career Services mentioned here are offered by Emeritus. IIM Kozhikode is NOT involved in any way and makes no commitments regarding the Career Services mentioned here.

# Programme Details

**Programme Fee** INR 1,85,000 + GST

**Academic Orientation** October 21, 2023

## Instalment Schedule

Particulars	Remarks	Amount
Booking Amount	Within 7 days post selection	INR 18,500 + GST
Instalment I	Oct 2, 2023	INR 46,250 + GST
Instalment II	Nov 22, 2023	INR 64,750 + GST
Instalment III	Jan 10, 2024	INR 55,500 + GST

Note:

- The actual programme schedule will be announced closer to the programme start
- In case a programme session corresponds with a public holiday, the session would be held on the following weekend
- GST (currently @ 18%) will be charged extra on these components
- Postage charges for books and study materials sent to locations outside of India will be paid for by the student.

## Round-wise Application Dates

Particulars	Application Fee	Dates
Round 1	INR 1,500 + GST	Jul 31, 2023
Round 2	INR 2,000 + GST	Aug 28, 2023

# Programme Schedule

### Live Online Sessions

3 Hours/ week  
Saturday, 12:15 PM to 3:15 PM

### Attendance

Minimum 75%

### Note

Admissions are on a first-come, first-serve basis. There might not be subsequent rounds if seats are filled in the initial rounds.



- **Programme Application Link**

- [Click here](#) to apply to the programme.
- Finance options available. [Click here](#) to learn more.
- For more information, please email at [iimk.execed@emeritus.org](mailto:iimk.execed@emeritus.org)

Note: -

- The schedule will be 3 hours/week and will be confirmed closer to the programme start date.
- If a programme session corresponds with a public holiday, the session would be held on the following weekend.
- The primary mode of learning for this programme is via live online sessions with faculty members. Post session video will be available at faculty's discretion.
- GST (currently @ 18%) will be charged extra on these components.
- The school will be providing study materials in an electronic format. In case if participants needs a physical copy, they will have to bear the international courier charges.

## Application Requirements

Applying to the programme? We suggest you keep the following 3 documents ready.

### 1. Your Photo ID Proof:

You can submit a scanned copy of ANY ONE of PAN Card or the first two pages of your Passport.

### 2. Your Graduation/Degree:

You can submit a scanned copy of ANY ONE of: Degree certificate, provisional Degree certificate, marks transcript or score transcript.

### 3. Your Work Experience Certificate:

- You can submit scanned copy(ies) of document(s) which demonstrate that you have the minimum work experience required by the programme.
- You can confirm the minimum work experience requirement of a programme under the heading '**Eligibility**' in the brochure or the programme website.
- Examples of documents you can submit are joining letter, relieving letter, Bonafide work experience letter from your HR, salary slips etc.
  - These documents must be issued by your company.
  - Please ensure that the document(s) you submit contain a **date of joining** and a **date of leaving** or a **statement** about the **number of years** you have worked at the company.

# System Requirements

This programme includes live online classes. To attend a live online class you will need to have a PC/Laptop/Mac with



**Speakers and microphone:** built-in or a USB plug-in or wireless Bluetooth



**Webcam:** built-in or USB plug-in



**Processor:** with Dual Core 2Ghz or higher (i3/ i5/ i7 or AMD equivalent)



**RAM:** 4 GB or higher



**OS:** Either MacOS 10.7 or higher OR Windows 8 or higher



**An internet connection:** Minimum bandwidth of 3.0 Mbps (up/ down)



**Browser:** IE 11+, Edge 12+, Firefox 27+, Chrome 30+



**Zoom software client installed on your PC/ Laptop/ Mac**

We use the Zoom software application to conduct live online classes. Zoom works on a variety of PCs/ Laptops/ Mac systems and also on phones and tablets.

You can join your live online class from a phone or tablet if it supports the Zoom client.

We recommend that you attend classes from a PCs/ Laptops/ Mac.

# About IIM Kozhikode

Started in 1997 with its Post Graduate Programme (PGP), the Indian Institute of Management Kozhikode (IIMK) is on a high growth trajectory today, offering widest range of academic programs in the field of management education. These include Fellow Programme in Management, Executive PG Programmes, Management Development Programmes and Faculty Development Programs. IIMK set up a Satellite campus at Infopark, Kochi, in 2013 dedicated to Executive Education. IIMK has also the unique distinction of launching a PhD (Practice Track) programme for working professionals besides bringing in new dynamic courses like the one-year Post Graduate programme in Business Leadership (2019) MBA in Finance and MBA in Liberal Studies & Management (2020). The institute is also home to IIMK LIVE a first-of-its-kind startup incubation programme and the Indian Business Museum.

IIMK is ranked 3rd as per NIRF India Rankings 2023: Management. The institute also features regularly among top global institutes for its flagship MBA (PGP) and EMBA programme (EPGP) in QS World University Rankings. The Institute has leapfrogged 100 spots to be placed in the Top 251-300 Institutes in Business & Management Studies globally, as per the QS World University Rankings by Subject 2023. It is also Ranked No.2 in CFIs (non-Technical) category in the Atal Innovation Rankings (ARIIA 2021) rankings released recently by Ministry of Education, Govt. of India, and has the distinction of being the only IIM in the coveted innovation rankings. IIM Kozhikode is globally accredited by EQUIS (EFMD) and AMBA (UK).

IIM Kozhikode also made its debut in the prestigious Financial Times Rankings (FT Rankings 2023) at 72nd position among the top-75 Open-enrolment executive program providers globally, catapulting the 27-years young IIM to an exclusive list of foremost providers of executive education in the world. IIM Kozhikode has successfully delivered close to 1300 MDP programmes for the past two decades, training more than 41000 participants from 150+ organisations - which also includes several Fortune 500 companies - in the process.



**#2**

Atal Innovation  
Rankings (ARIIA) 2021

**#3**

NIRF India Ranking  
2023, Management

**#3**

India's Best B-School The Week  
- Hansa Research Survey 2022

# About Emeritus

IIM Kozhikode is collaborating with online education provider Emeritus to offer a portfolio of high-impact online programmes. Working with Emeritus gives IIM Kozhikode the advantage of broadening its access beyond their on-campus offerings in a collaborative and engaging format that stays true to the quality of IIM Kozhikode. Emeritus' approach to learning is built on a cohort-based design to maximise peer-to-peer sharing and includes video lectures with world-class faculty and hands-on project-based learning. More than 250,000 students from over 160 countries have benefitted professionally from Emeritus' courses.



Apply for the programme here

**APPLY NOW**

For registration and any other information please get in touch with at  
[iimk.execed@emeritus.org](mailto:iimk.execed@emeritus.org)

 **WhatsApp an advisor on +91 74120 81081\***

*\*Note: This number does not accept any calls. Please message your queries.*

In collaboration with



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