Data Science and Artificial Intelligence

MARCH 28, 2024 | 8 MONTHS
ONLINE VIA PRE RECORDED LECTURES

AI

Now integrated with

Generative AI

Programme Summary

Professional Certificate Programme in Data Science and Artifical Intelligence

Institute Name
IIM Kozhikode

Programme Duration
8 MONTHS

Cost
INR 1,50,000 + GST

Learning Mode
Online - Pre-recorded videos, 1 weekly doubt-clearing session with programme leader

Weekly effort
7-9 hours per week

Faculty
IIM Kozhikode

Payment Options
Basic Instalment Plans

Special Pricing
Special pricing up to 10% discount is available for corporate plans

Guest Faculty/ Industry Experts
Mid-Senior Industry Practitioners

Programme/ Course Leaders
Subject Matter Experts/ Mid-Senior Industry Practitioners

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

Certificate
Upon successful completion of the programme, participants will be awarded a verified digital certificate from IIM Kozhikode

Learning Experience

- **Pre-recorded videos - Flexibilty -** Learn at your own pace, around your busy schedule

- **High quality Videos -** Great learning experience, even while on-the-move

- **On Demand learning -** Re-watch any lesson/ concept for deeper understanding

- **World-class faculty -** Learn from the Best faculty and industry practioners

- **Cohort-based learning -** Networking & Community Interaction by using discussion boards

Frequently Asked Questions

Are there any LIVE sessions with the institute faculty in this course?
This course is designed to give flexible learning, given time constraints of working professionals and contains high-quality pre-recorded videos with the globally renowned faculty from IIMK. No LIVE sessions will be taken by IIMK faculty.

What is the role of the Programme Leader? Are they institute faculty?
Programme leaders are Industry Practitioners/ Subject Matter Experts who help with doubt clearing, cover specific topics deeper and share real-world examples wherever needed. They are not faculty of the institute

Who grades/ gives inputs on the assignments and projects?
The assignment grading frameworks are created in collaboration with the institute faculty and Emeritus grading team.

Is there a qualifying mark/ grade to get the final certification in this course?
Yes, the qualifying mark is 70%.

What if I miss the assignments for a particular week? Can I attempt them later?
It is upon the faculty's discretion if any re-attempt would be allowed of the quiz or assignment and the evaluation methodology.

Who is the faculty for the LIVE Masterclass/ Online sessions/ Doubt Clearing sessions?
Doubt-clearing sessions are carried out by the Programme Leaders, as they monitor individual student progress.

Are Tools covered in this course taught by institute faculty? Are licenses for these tools included in the course fee
We cover the concepts of the tools using pre-recorded demos and Industry expert sessions. These tools are not taught by faculty and are optional to learn in the course. Participants are expected to have their own licenses to these tools for practice, and are not offered with the course.

Will Emeritus/ Institute help with placement services?
This course is designed with some of the best faculty and to cover relevant topics in a manner that creates positive career outcomes. Over 87% Emeritus learners have witnessed career growth post completing their course. As an additional service, we provide job placement assistance, resume writing guidance, navigating job search and interview prep along with this course. All this guidance is provided over recorded videos, this is not live.

What if I don't find the course appropriate for me after starting the sessions? Can I seek a refund?
We encourage our learners to complete the programme to fully understand the concepts and derive valuable learning outcomes. Should you still feel the need to stop your learning journey, a refund request can be initiated before the programme commencement. However, after the programme commences, fee becomes non refundable.

What type of certificate will I receive?
Upon successful completion of the programme, you will receive a smart digital certificate. The smart digital certificate can be shared with friends, family, schools, or potential employers. You can use it on your cover letter, resume, and/or display it on your LinkedIn profile. The digital certificate will be sent approximately two weeks after the programme, once grading is complete.

How long will I have access to the learning materials?
You will have access to the online learning platform and all the videos and programme materials for 12 months following the programme end date. Access to the learning platform is restricted to registered participants per the terms of agreement.

Note: This Course Summary is provided only for your convenience. You are advised to refer to the Course Brochure for more information.

IIM Kozhikode Advantage

Businesses today have seen a complete transition than they used to run a decade ago. Recent industry reports suggest that close to 68% of business leaders in India have reported that having high agility reduced their costs by 25%. It is thus imperative for business leaders of today and the future to expand their knowledge across domains and proactively make decisions to be effective leaders. 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 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.

IIM Kozhikode's Data Science and Artificial Intelligence(DSAI) Programme offers learning through recorded online sessions taught by renowned faculty available in the comfort of your home. This programme is designed to help tech professionals, business heads, consultants, and entrepreneurs looking to lead end-to-end DS and AI projects and solve complex business problems. The meticulously curated industry-leading modules will enable participants to advance their knowledge to make better strategic business decisions.

Invest in your potential and start your journey of future-proofing your data science career by enrolling in the IIM Kozhikode's DSAI Programme.

Wishing you all the very best!

Prof. Debashis Chatterjee,
Director IIM Kozhikode

Programme Overview

Data Science, Machine Learning and Artificial Intelligence hold tremendous analytical power to glean insights, extract patterns, and make predictions. As one of the world's fastest growing economies, India has a considerable stake in the data science and emerging technology revolution. Unsurprisingly, these reigning, all-pervasive technologies have conquered every industry.

The Data Science and Artificial Intelligence Programme offered by the Indian Institute of Management Kozhikode (IIM Kozhikode) is a comprehensive and cutting-edge program designed to equip professionals and aspiring data scientists with the skills and knowledge required to excel in the rapidly evolving fields of data science and artificial intelligence (AI).

The program is tailored to meet the growing demand for data-driven decision-making in various industries and organisations.

The global AI market in 2021 was nearly US$ 59.67 billion and it is projected to grow at a CAGR of 39.4% to reach US$ 422.37 billion by 2028.

Source: https://www.ibef.org/research/case-study/future-of-data-science-and-ai-in-india

Grasp the role of DS, ML & AI in creating business excellence

Understand how to analyse ubiquitous data for making data-driven business decisions in real-time

Delve into Generative AI and its applications across industries to be future ready

Programme Highlights

350+ Pre-Recorded Videos
60+ Assignments
50+ Quizzes

Hands On Experience with **8+** Industry Tools

25+ Hours of Generative AI content and Doubt Clearing Sessions

2 Industry backed Capstone Projects

Note: This is a self-paced online programme. Thus, faculty will not be a part of weekly live sessions or any other live interaction in this programme. We have a curated panel of eminent industry practitioners who will be conducting the weekly live doubt-clearing sessions.

Who is this Programme for?

▶▶ Early to Mid Level managers with 5-15 years of work experience looking to effectively lead end-to-end DS, ML & AI projects and solve complex business problems

▶▶ Consultants who are looking to build their expertise in DS, ML & AI for better client management

Lead your organisation into the future of Data Science and Artificial Intelligence.

The market for AI is expected to reach US$ 7.8 billion by 2025 in India. According to the State of the Education report (SOER) 2022, AI will grow at a rate of 20.2% compound annual growth rate (CAGR).

Experts have predicted that, by 2030, there will be a 31.4% increase in jobs related to data science and mathematical science, mostly AI-based.

Based on the analysis, it has been estimated that there is a 51% gap between the demand and supply of AI/ML BDA tech talent in India, taking into account the current talent base of approximately 420,000 professionals.

Source:
https://indiaai.gov.in/research-reports/state-of-data-science-ai-skills-in-india/
https://www.ibef.org/research/case-study/future-of-data-science-and-ai-in-india

Programme Modules

1. Data Analytic Thinking

2. Data mining and Data preparation

3. Types of Data Analytics

4. Data-Driven Modelling

5. Classifiers for Predictive Modelling

6. Advanced Clustering Techniques

7. Data Clustering: Introduction

8. Association & Co-occurrences: Introduction

9. Association and Co-occurrences: Items that Go Together

10. Machine Learning Concepts

11. Supervised Learning Techniques

Note:
- *Modules/ topics are indicative only, and the suggested time and sequence may be dropped/ modified/ adapted to fit the total programme hours.*
- *Recordings from live sessions will be available to the participants till two weeks after the live session is conducted, based on the discretion of the Programme Directors/Faculty.*

Programme Modules

12 Regression

13 Advanced Classification Techniques

14 Ensemble Methods for Classification

15 Advanced Regression Methods

16 Unsupervised Learning: Clustering

17 Fundamentals of Artificial Intelligence

18 Deep Learning-Concept & Application

19 Reinforcement Learning

20 Natural Language Processing

21 Text Analytics & Conversational AI

22 Recommender Systems

Note:
- *Modules/ topics are indicative only, and the suggested time and sequence may be dropped/ modified/ adapted to fit the total programme hours.*
- *Recordings from live sessions will be available to the participants till two weeks after the live session is conducted, based on the discretion of the Programme Directors/Faculty.*

Programme Modules

23 Introduction to Generative AI
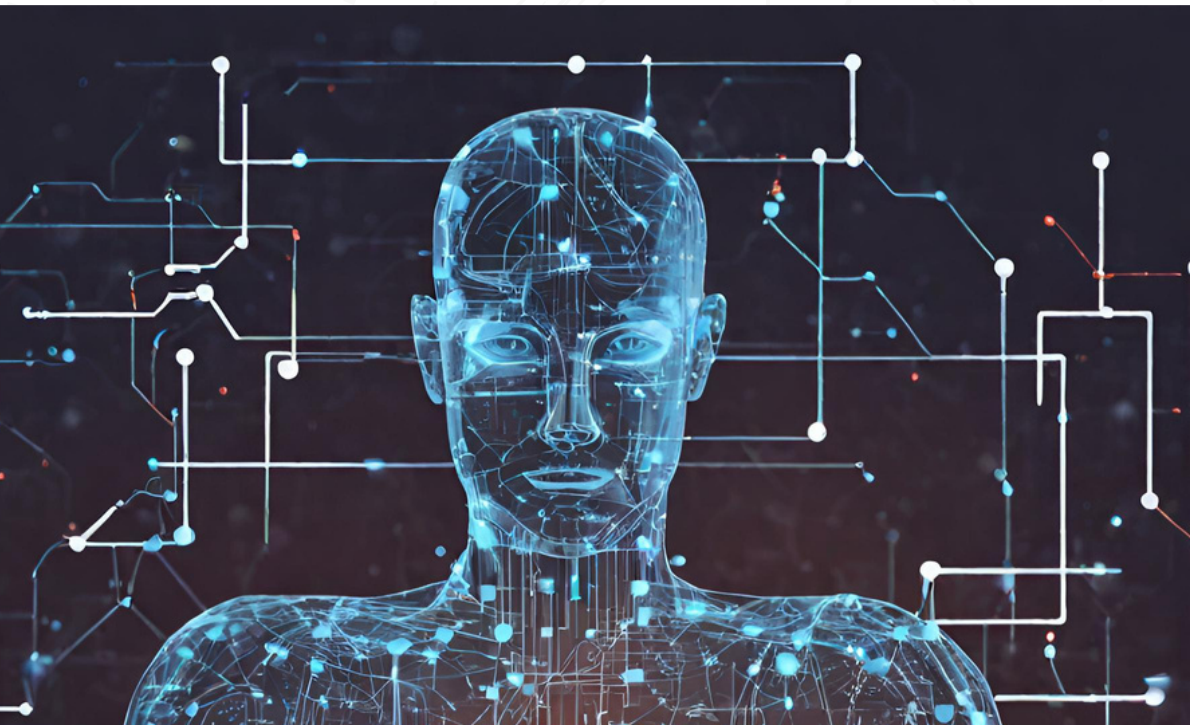
24 Generative AI Models

25 Prompting and Creativity through GenAI

26 Applications of Generative AI on Finance and Digital Marketing

27 Applications of Generative AI on Coding and Product Management

Note:
- *Modules/ topics are indicative only, and the suggested time and sequence may be dropped/ modified/ adapted to fit the total programme hours.*
- *Recordings from live sessions will be available to the participants till two weeks after the live session is conducted, based on the discretion of the Programme Directors/Faculty.*

Projects and Assignments

Data Science

- Data categorising types and Data cleaning
- Predictive Analysis and Predictive Modelling
- Decision Tree
- Calculating Support, Confidence and Lift to Derive Rules
- Control the complexity of an association rule
- Deriving 3- and 4-Itemset

Machine Learning

- Supervised and unsupervised learning approaches
- Covariance and Correlation Building
- Training and Evaluating a Classifier Model
- Building and Evaluating KNN and Perceptron Models
- Building and Evaluating Random Forest
- XGBoost Classifier Models
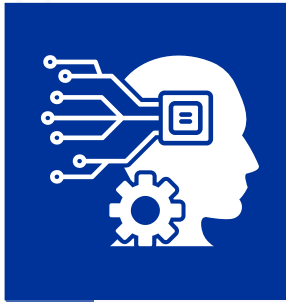
30+ Hands- On Projects

Artificial Intelligence

- Text Processing
- Sentiment Analysis
- Image Recognition
- Recommendation systems Video Analysis
- Deep Learning Model
- Building an AI Classifier Applying Ant Colony Optimisation (ACO) and Particle Swarm Optimisation (PSO) for Feature Selection in Classification

Capstone Project

Industry backed projects on
- Credit Risk Analytics in Banking and Financial Services
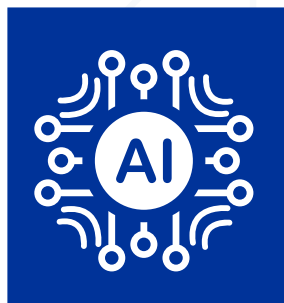- Data Collection and Analysis

Masterclasses

On latest ML trends like Large language Models, Multi-modal ML and Transformers

On Python and its applications in ML, introduction to low-code and no-code solutions
(Including Hands-On Workshop on Python)

On Generative AI and its applications, doubt clearing sessions on GenAI

Tools

python

pandas

SciPy

seaborn

NumPy

plotly

matplotlib

+ableau

scikit learn

PyTorch

Generative AI Tools

Modules on Generative AI

Generative AI Tools

Masterclass

The programme includes industry backed hands-on learning on the Generative AI tools.

Google Bard

ChatGPT

midjourney

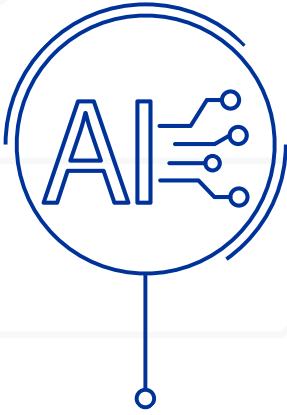FinChat.io
ChatGPT for Investors

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.
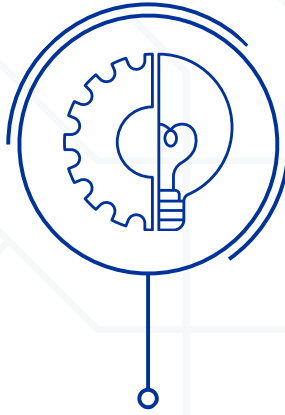*-The tools showcased in this material will be taught through pre-recorded demo videos.*
-Please note that the fee does not cover any payments required for certifications offered by the tools or tool subscriptions.
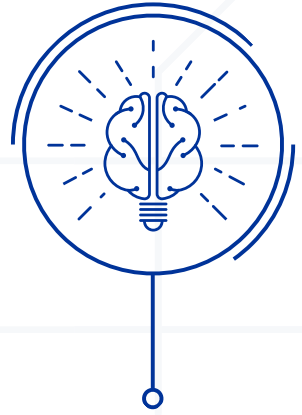*-These sessions are optional and will not be factored into your final evaluation.*

Bonus Content

PYTHON PRIMER

Module 1: Python for Data analysis, Demo on Python fundamentals, Python libraries, Python Dataframes

Module 2: Python for Machine learning, Python IDEs, Python Libraries, Data Structures, Tuple and Data Set structures, nested dictionaries, classes and objects, error and exception handling

Module 3: NumPy, SciPy, Pandas library, Data exploration using Pandas, Reading and loading datasets, Web scraping, Matplotlib, Seaborn, Plotly

EXCEL STATISTICS

Module 1: Excel for data analysis, decision making, demos on What-if analysis, goal-seek analysis, sensitivity analysis,

Module 2: Probability and statistics, problem classification, randomness, Statistics, probability, normal/gaussian distribution, Continuos distribution, Sampling and replacement, correlation, Anscombe's quartet

Note:
Bonus content is added as an additional content aiding the non-technical learner with the holistic programme benefit. The content is accessible to all the learner.

Programme Director

Professor Sebastian received both his masters degree and PhD from the Indian Institute of Science, Bangalore. His research interests include artificial intelligence, machine learning, cybersecurity, healthcare ICT etc. He has guided many PhD candidates and has published research papers in journals such as Information System Frontiers, Information and Computer Security, Health Policy and Technology, Computers and Electrical Engineering, Knowledge and Information Systems, among others.

M.P. Sebastian, PhD

Professor,
Information Systems, IIMK

Programme Certificate

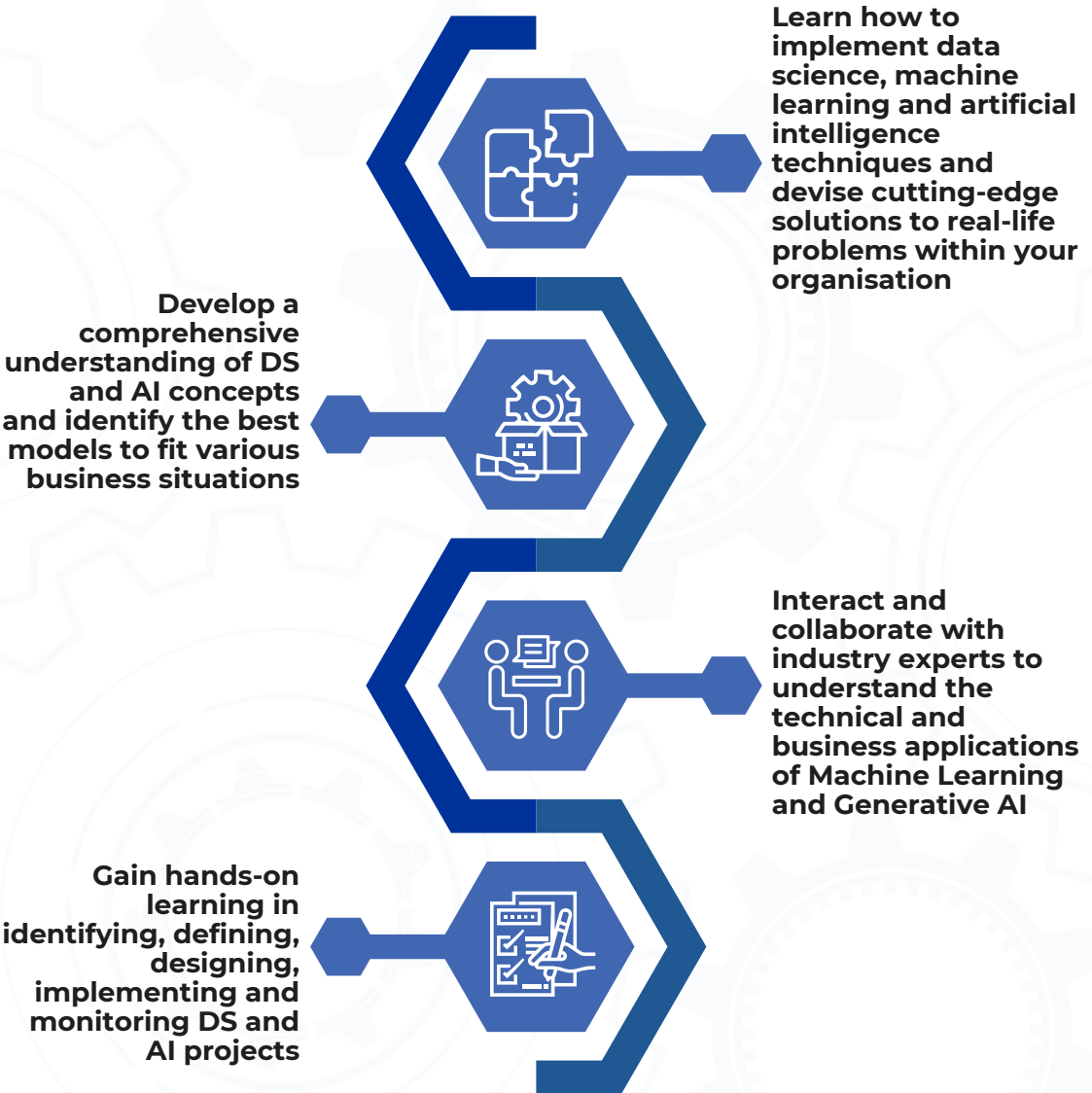IIM Kozhikode will award a certificate of successful completion to participants who complete the programme successfully with 70% of the score in the evaluation. A participant with less than 70% of the score in the overall evaluation will not be awarded any certificate.

Note: All certificate images are for illustrative purposes only and may be subject to change at the discretion of IIM Kozhikode.

Learning Outcomes

Learn how to implement data science, machine learning and artificial intelligence techniques and devise cutting-edge solutions to real-life problems within your organisation

Develop a comprehensive understanding of DS and AI concepts and identify the best models to fit various business situations

Interact and collaborate with industry experts to understand the technical and business applications of Machine Learning and Generative AI

Gain hands-on learning in identifying, defining, designing, implementing and monitoring DS and AI projects

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 and Convenient Online Learning

Learn online via recorded videos from top IIM Kozhikode faculty in a high-impact 28-week journey with a learning commitment of 5-6 hours/week. Faculty will not be a part of weekly live sessions or any other live interaction in this programme.

Debrief Sessions

The Emeritus Programme Leaders will be available for live online sessions every week or every alternate week to help you clarify your doubts pertaining to the programme content.

Timely Follow up and Learning Support

The Emeritus Programme Support team will follow up over emails and phone calls with learners who are unable to submit their assignments on time.

Programme Details

Programme Start Date
March 28, 2024

Programme Fee
INR 1, 50,000 + GST

Note:

*GST (currently @ 18%) will be charged extra on these components.

*Instalment payment options available.

*Additional convenience charges will be applicable on instalment payments.

*For detailed information on instalment payments reach out to your programme advisor.

Eligibility

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

Admission Criteria

Open Enrolments

Programme Format

Online via Recorded Video Lectures

Application Requirements

Your Graduation/Degree:

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

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

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

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 and consistently features among the Top 5 B-Schools in the country in various rankings. 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.

#4	#3	#2
72 Globally | Rank #4 in India Financial Times, Open Enrolment Rankings 2023	NIRF India Ranking 2023, Management	Public B-Schools, The Week - Hansa Research Survey 2023

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.
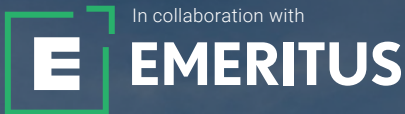
Lead into the future of Data Science & AI

APPLY NOW

For registration and any other information please get in touch with at
iimk.execed@emeritus.org

WhatsApp an advisor on + 918657038243*

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

In collaboration with
E EMERITUS

Erulearning Solutions Private Limited (a company incorporated in India) is a subsidiary of Eruditus Learning Solutions Pte Ltd (a company incorporated in Singapore), and operates under the brand name of 'Eruditus' and 'Emeritus'.