



भारतीय प्रबंध संस्थान कोषिकोड  
Indian Institute of Management Kozhikode  
*Globalizing Indian Thought*

**TALENTE**EDGE

# Professional Certificate Program In **BUSINESS ANALYTICS**

FROM IIM KOZHIKODE | BATCH 6



# PROGRAM OVERVIEW

Thomas Devonport in his book titled, “Competing on analytics: The new science of winning”, claims that a significant proportion of high-performance companies have high analytical skills among their personnel. The rise of business analytics has resulted in a great demand for trained business analysts and the trend will only continue to rise. According to Wall Street Journal, “Companies, barraged with data from the web and other sources, want employees who can both sift through the information and help solve business problems. As the use of analytics grows quickly, companies will need employees who understand the data”. Businesses increasingly need to know how to leverage analytics to gain managerial and strategic insights to improve their competitive position.

Business Analytics is a set of techniques and processes that can be used to analyze large and noisy data to improve business performance through fact-based decision-making. It nurtures the amalgamation of data warehousing, data mining, statistics, and machine learning; applies in various functional areas of business and management to find patterns in the relationships; creates capabilities for companies to compete in the market effectively. It has been proven to be highly useful in industries such as banking, insurance, telecom, retail, travel, healthcare, etc., and has shown very positive impact on business decision-making.

The program is designed to provide in-depth knowledge of data-based decision-making using real case studies. The module-based program would impart participants a sequential learning with a strong foundation of data analytic techniques followed by real applications across various domains.

## This program will

- Help participants understand the critical concepts of business analytics and research, including research design, data processing, and data analysis
- Clarify the scientific understanding of complex methods which are required in business decision making
- Help participants, effectively apply analytical concepts in real life scenario

## PROGRAM BENEFITS



Certificate of Completion from IIM Kozhikode



Provide conceptual understanding of analytical techniques



Case/exercise-based approach for managerial applications



Hands-on experience of data processing



Sophisticated statistical analysis of data using R/SPSS software package and interpretation of output for decision-making



2 day In-Campus immersion module providing participants the opportunity to experience the typical high-intensity classroom and to soak-in the unique campus environment of one of the most iconic and sustainable management campuses in India, set in the midst of lush green hills and surroundings



Gain exposure through Project Work

Opportunity to work on a Project that requires assimilation and application of learnings through the course of the program

## ELIGIBILITY

- For Indian Participants - Graduates (10+2+3) or Diploma Holders (only 10+2+3) from a recognized university (UGC/AICTE/DEC/AIU/State Government) in any discipline
- For International Participants - Graduation or equivalent degree from any recognized University or Institution in their respective countries
- Work Experience – Minimum 3 years of work experience

## PROGRAM PREREQUISITES

- Familiarity with analytics, and statistical software will be useful, but not mandatory for the program. Applicants with no prior exposure to statistics should review the fundamental concepts of statistics prior to beginning the programme.
- Pre-readings will be circulated and an introductory run on elementary concepts will be introduced in the initial sessions of this program. Participants are expected to go through the pre-reads and come prepared for the classes as instructed. The programme will assume that the participants have a basic understanding of and comfort with numbers and statistical techniques.

## WHO SHOULD ATTEND

- Middle-level managers who wish to switch to a career in analytics
- Business analysts who want to sharpen their knowledge in analytics
- Domain specialists and anyone within a wide range of professional backgrounds planning to undertake business analytics projects with the help of analytic tools and techniques
- Early managers and working executives who are new to the analytics domain
- Academicians from business schools

## CERTIFICATE

On satisfying the requisite attendance criteria and successfully clearing the evaluation, participants will be awarded a Certificate of Completion.

Participants who fail to clear the assessment process but fulfil the attendance criteria will be awarded a Certificate of Participation.



## PEDAGOGY

The primary method of instruction will be through LIVE lectures that will be beamed online via Internet to student desktops/laptops or classrooms. The program will be delivered through a combination of methods as listed below

- Live classroom session, which is a forum for discussion. "Discovery through discussion" is a very effective method that gives participants an opportunity to exchange and explore ideas, debate them, and jointly arrive upon solutions to problems.
- Lectures, designed to clarify the readings, and to amplify them with illustrations and related concepts drawn from other sources.
- Cases/Exercises that are important in helping participants to assimilate principles. In the case analyses and other assignments participants discover concepts and apply what has been learnt. Further, participants will be making decisions similar to the way it is done in a managerial situation.
- Data Analysis, in order to process and bring order, structure, and meaning to the mass of primary and secondary data.

All enrolled students will also be provided access to our SLIQ Cloud Campus through which students may access other learning aids, reference materials, assessments, case studies, projects, and assignments as appropriate. Throughout the duration of the course, students will have the flexibility to reach out to the professors, real-time during the class or offline via our SLIQ Cloud Campus to raise questions and clear doubts.

## **SYLLABUS**

### **Module 1: Business Analytics Foundation**

Module 1 comprises the foundation of business and analytics along with familiarity with data analytic tools like R and SPSS. The participants will learn the fundamentals of basic Statistical Methods. While the program is designed for middle-level managers, this module will go a long way in brushing-up the fundamentals of analytical techniques in the context of your business. Moreover, the module will include data preprocessing, data visualizations, and writing algorithms in the context of business.

- Introduction to business analytics and data analytic tools
- Exploratory data analysis
- Statistical inference
- Marketing Management and CRM

### **Module 2 : Business Analytics Techniques**

Module 2 comprises the nervous system of the course which includes predictive analytics and advanced analytics. Predictive analytics will cover both statistical and machine learning techniques, while advanced analytics will comprise unsupervised data analytic techniques. These techniques are very useful to middle-level managers to find patterns in the data and use them in managerial decision-making.

- Predictive Analytics (Regression techniques, Logistic regression, Tree-based methods, Ensemble Models, Time series analysis)
- Advanced analytics (Dimension reduction technique, Clustering technique, Conjoint analysis, social media analytics)

### **Module 3 : Business Analytics Applications**

Module 3 focuses on the applications of techniques of analytics in business.

- Customer and Retail analytics
- Financial Analytics
- Supply chain Analytics
- HR Analytics

## **CAPSTONE PROJECT**

The capstone project is an integral part of the successful program completion and will run throughout the program duration. Participants will learn to identify a real-life scenario of an organisation/industry, collect primary/secondary data, and apply concepts discussed in the modules of this program to source a probable solution. This project will enable a deep understanding of the subject matter and foster the practical application of the program learning in real-world business scenarios.

## CAMPUS COMPONENT

This program includes a 2-day in-campus immersion session which is scheduled to be held towards the end of the program at the IIM Kozhikode campus. The dates will be communicated in due course. Attendance to In-Campus sessions is mandatory for all participants of this course. However, the In-Campus modules are subjected to the conditions that prevail at the point in time. These conditions pertain to the pandemic or other unavoidable reasons. In case the current situation maintains the status quo, adequate alternate options with regards to the in-campus modules will be made available via online sessions.

## FACULTY



### **Prof. Shovan Chowdhury**

Ph.D. in Statistics (University of Calcutta), M.Sc. in Statistics (University of Calcutta)

Prof Shovan Chowdhury is a Professor in the area of Quantitative Methods and Operations Management in IIM Kozhikode. He earned Bachelor of Science, Masters of Science, and PhD degrees in Statistics from University of Calcutta. He has published several articles in international peer-reviewed academic journals. He has co-authored books titled “Applied Statistics in Business and Economics”, and “Forecasting and Predictive Analytics” by leading international publishers.



### **Prof. Atanu Adhikari**

Professor of Marketing, IIM Kozhikode

Former Doctoral Fellow Member of Royal Statistical Society, London, Commonwealth Academic Fellow to London Business School, UK, Visiting Researcher to Syracuse University, USA, PhD (ICFAI University with one year visiting program at Syracuse University, USA), MBA (Gold Medalist, IISWBM, University of Calcutta), BE (National Institute of Technology, Durgapur). He has taught as an adjunct faculty in many business schools abroad and in several IIMs in India. He has designed and conducted several executive education and management development programmes for middle and senior management executives working in Fortune 500 companies, large Indian companies, and public sector organisations.

## ASSESSMENT

Evaluation methodology is the discretion of the faculty. The methodology includes online exams/quiz case analysis, class contribution, capstone project and any other component as decided by the faculty. A minimum of 75% attendance in **live lectures** is a prerequisite for the successful completion of this program. The program may require participants to work on individual/group assignments and/or projects. The main objective of such assignments/projects will be to help the participants apply their conceptual learning in the program to actual organizational decision scenarios. The participants will have to secure the minimum pass marks in the respective evaluation components. Participants who successfully complete the same and satisfy the requisite attendance criteria will be awarded a certificate of completion. Participants who are unable to clear the evaluation criteria but have the requisite mandatory attendance will be awarded a Participation certificate. If the required percentage of live lectures are not attended, one will not be eligible for a certificate. If the required percentage of live lectures are not attended, one will not be eligible for a certificate.

Talentedge is an Ed-Tech firm. We are the first to bring 'Live & Interactive' anywhere learning in digital format. Jointly with world's leading institutes and corporates, we offer courses to working professionals, enabling them to plan their future course of action and fast track their careers. We also partner with top Indian & International institutes including IIMs, XLRI, MICA, Jack Welch Management Institute (JWMI), London School of Business & Finance (LSBF) and also with top corporate names like Society of Human Resource Management (SHRM) and others. Our ability to re-create classroom-type interactions in the virtual world has struck a chord with over 4,50,000 individuals and corporate learners. By bringing eminent subject experts into online education, we initiate industry relevant learning. We are also one of the first Ed-Tech organizations to be credited with an ISO 9001:2008 certification.

## ABOUT IIM KOZHIKODE



Started in 1997 with its Postgraduate 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 Doctoral 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 in Women Leadership, 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 4th as per latest NIRF India Rankings 2021: Management. The institute also made its global debut for its flagship MBA (101+ globally, 7+ in Asia) and EMBA programme (101+ globally, 15+ in Asia) in the 2020/21 QS World University Rankings. It is also Ranked No.2 in CFIs (non-Technical) category in the Atal Innovation Rankings (ARIIA 2021) rankings released.

IIM Kozhikode is globally accredited by EQUIS (EFMD) and AMBA (UK).



IIM Kozhikode aims to create a unique and futuristic space of global reckoning so as to nurture the finest management thinkers in the pursuit of developing innovative, socially responsible and environmentally friendly practitioners, leaders and educators. Strategically moving towards a better future, the Institute strives to provide holistic learning, giving equal weightage to academic solidarity and practical application. IIM Kozhikode integrates concepts with applications and values, thus transforming individuals into dependable, capable, caring and fair-minded personalities who will contribute towards the development of communities.

## PROGRAM DETAILS

- Program Commencement: 10 July 2022
- Schedule of Classes: Sunday from 06.00 p.m. to 09.00 p.m. IST (3 hours)
- Duration: 5 months

## PROGRAM FEE

- For Indian Residents: INR 1,15,000 + GST
- For International Residents: USD 2400

## FOR MORE DETAILS

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