CERTIFICATE
IN TECHNOLOGY
AND MANAGEMENT

PROGRAMME OBJECTIVE ▶

For successfully leading tomorrow's organisations an in-depth understanding of technology and management theories are critical. The Certificate Programme in Technology and Management (CTM) was designed with the express purpose of meeting this need. A joint effort by two of India's leading educational institutions, CTM aims to equip students with a deep understanding of recent developments in technology and modern theories of management.
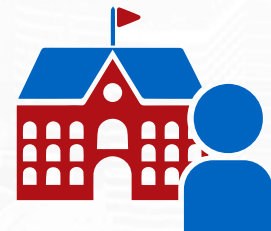
PROGRAMME DIRECTORS ▶

Andrew Thangaraj, Professor IIT Madras
P D Jose, Professor IIM Bangalore

10 Months Programme

Case Discussions and Projects

Online Learning with Campus Connect Sessions

PROGRAMME DESIGN ▶

Module 01

- Accounting and Finance
- Marketing Management
- Programming, Data Structures and Algorithms using Python
- Probability and Statistics for Data Sciences
- Data Visualization

Module 02

- Managerial Economics
- Operations Management
- Cloud computing
- Parameter Estimation and Linear regression

Module 03

- Organizational Design
- Strategic Management
- Applied Machine Learning using Python
- Introduction to Machine Learning

CERTIFICATE
IN **TECHNOLOGY** AND **MANAGEMENT**

This is to certify that _____ has successfully completed the programme.

SIGNATURE   SIGNATURE

The programme consists of 3 modules comprising combinations of technical and management courses. Each module spans a period of three months with webinars and campus connect sessions in between. Exams will be conducted at the end of each module. On successful completion of exams, learners will be awarded the "Certificate in Technology and Management".

IIMBx

COURSE CURRICULUM ▶

The programme comprises MOOCs from Technology and Management disciplines.

THE TECHNOLOGY DOMAIN ▶

Under this domain the student has the option to choose one of the following two specialization streams:

COMPUTER SCIENCE ENGINEERING

Programming, Data Structures and Algorithms using Python

Introduction to programming, data structures and algorithms using the programming language Python.

Instructor: Madhavan Mukund, Professor, Chennai Mathematical Institute.

Duration: 8 weeks

Cloud Computing

Fundamentals of cloud computing paradigm, its applicability in various fields; Cloud service and deployment models, virtualization techniques, service management, resource management and security issues related to cloud computing; Case studies and example scenarios on popular public and private cloud platforms.

Instructor: Soumya Kanti Ghosh, Professor, IIT Kharagpur

Duration: 8 weeks

Applied Machine Learning using Python

Concept of machine learning and data fitting in practice; Machine learning algorithms through Python implementations; Hands-on simple analytics problem solving with programming and practice projects.

Instructor: Partha Prathim Das, Professor, IIT Kharagpur

Duration: 8 weeks

DATA SCIENCES

Instructors– Nandan Sudarsanam, Arun Tangirala, Ravindran Balaraman, Professors, IIT Madras.
Mr.Kathirmani Sukumar, Data Scientist, Gramener and Co-founder, Quelit

Probability and Statistics for Data Sciences

Basics of probability theory, descriptive statistics, hypothesis testing and confidence intervals

Duration: 6 weeks

Data Visualization

Data visualization of different data types and derived metrics across various visualization tools

Duration: 6 weeks

In each course, the student will complete a project with mentoring support from IIT Madras faculty.

Parameter Estimation and Linear Regression

Elements of estimation theory, parameter estimation and distribution fits; Linear Regression with OLS and inferential statistics; Regularization in regression.

Duration: 6 weeks

Introduction to Machine Learning

Concepts and methods pertaining to supervised learning and unsupervised learning

Duration: 6 weeks

THE BUSINESS AND MANAGEMENT DOMAIN ▶

Under this domain, the student has the option to choose four courses from the following list of core management subjects:

Accounting and Finance

Financial statement analysis; Preparing cost sheets, budget and making cost-based decisions
Instructor: MS Narasimhan, Professor, IIM Bangalore
Duration: 6 weeks

Marketing Management

Apply marketing management theories and practices: Segmentation, targeting, differentiation and positioning; Marketing strategy; 4Ps of marketing: product, price, place and promotion

Instructor: Ashis Mishra, Associate Professor, IIM Bangalore
Duration: 8 weeks

Managerial Economics

Introduction to Microeconomics, its impact on managerial decision making in today's business world; Elasticity of supply and demand, taxes and subsidies; Pricing and selling decisions with different types of competitive pressures
Instructor: Subhashish Gupta, Associate Professor, IIM Bangalore
Duration: 6 weeks

Strategic Management

Industry and competitive analysis; Resource and competency analysis; Analysing strategy across corporate and business levels
Instructors: Rejie George Pallathita, P D Jose,
Sai Yayavaram, Professors IIM Bangalore
Duration: 6 weeks

Operations Management

Estimate, compute, analyze and configure key elements of operations management.; Compute cycle times for operations and estimate capacity of the system; Monitor a process using control charts
Instructor: B. Mahadevan, Professor, IIM Bangalore
Duration: 6 weeks

Organizational Design

Design control systems; Achieve competitive advantage through different designs; Manage structural change
Instructor: Sourav Mukherji, Professor, IIM Bangalore
Duration: 7 weeks

PEDAGOGY ▶

The programme is delivered online through a combination of multimedia elements and interactive discussion forum.

A unique learning element of this programme is the opportunity to interact with the course instructors in person at IITM and IIMB campuses at least once during the run of each module.

Interviews with several industry professionals will provide you the necessary perspective to apply theoretical knowledge.

In addition, in each course, a Teaching Assistant (a subject matter expert) will guide you through the online learning journey through email and online discussion forums.

CAMPUS CONNECT ▶

In each module, the learner will have the opportunity to feel the IIT Madras and IIM Bangalore classroom experience through campus connect sessions. During these day-long sessions, students will interact with faculty for case study and project discussions.

This programme is for you if you wish to:

- Gain mastery over both technology and management domains
- Enhance your skills to keep pace with current industry trends

Eligibility Criteria:

- An undergraduate degree (or higher) in any stream
- 2+ years of industry experience

A background in technical education is preferred but not mandatory. Admission will be based on perfomance in interview. Selected candidates will be invited to join the programme.

Candidates may be waitlisted depending on the eligibility criteria and the number of seats available.
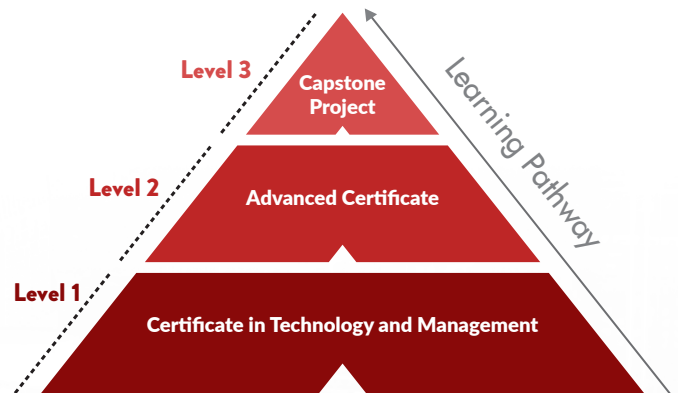
Programme Fee:

Indian Participants- Rs. 4,00,000 (Exclusive of taxes)
International Participants- 9000 USD

Limited financial assistance will be provided to deserving candidates.

STACKABLE CREDENTIALS ▶

On successful completion of the programme, students earn a Certificate in Technology and Management as the first step in this stackable credential system.

Those who would like to explore more of this combination can opt for a 3-tier stackable credential system designed to give you a strong foundation, advanced knowledge and real-world experience.

Level 3 — Capstone Project
Level 2 — Advanced Certificate
Level 1 — Certificate in Technology and Management
Learning Pathway

ABOUT IITM CCE ▶

The Centre for Continuing Education (CCE) at IITM coordinates the continuing education programmes of the Institute. The Education Technology Cell, (established by MHRD for creating educational videos) and other software of broadcast quality in Science and Technology using the expertise of the faculty and the facilities at IIT, is associated with this Centre.

ABOUT IIMBx ▶

IIMBx is founded on the philosophy that management education has strong potential to transform our educational systems and that high-quality education must be available to all unconstrained by limitations imposed by location, finances or prior educational background. Led by the faculty at IIM Bangalore, IIMBx offers online courses and programmes covering core and advanced business and management subjects.

Important Dates:

Registration starts on : 15 January 2018
Last date for registration : 25 February 2018
Course Commences on : 5 April 2018