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CERTIFICATE IN TECHNOLOGY AND MANAGEMENT

Excelling at both technical and management domains is no longer an option, but a necessity.

OBJECTIVES ►

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.

DIRECTORS SPEAK ►



"A multi-disciplinary education that combines the best of technology and management disciplines can empower young leaders of tomorrow. The Certificate Programme in Technology and Management is a great way for young working professionals to acquire domain and business understanding while working, using specially crafted MOOCs. IIM Bangalore is proud to launch this programme in partnership with IIT Madras."

- *G Raghuram, Director, IIM Bangalore*



"The Certificate Programme in Technology and Management from IIT Madras and IIM Bangalore is a breakthrough for professionals who aim to excel in the fields of technology and management. This fusion will turn an ordinary learner into a dynamic intellectual."

- *Bhaskar Ramamurthi, Director, IIT Madras*

PROGRAMME PEDAGOGY ▶



Case Discussions and Projects

A successful education model cannot be complete without peer learning. Online learning provides such an experience at a global level. Through discussion forums, participants can interact with their peers regarding course difficulties, projects and share solutions to various discussion questions.



10 Months Programme

Most part of the content delivery will be online through video lectures, text and podcasts. Faculty from IIM Bangalore, IIT Madras and other IITs, several industry professionals will share their insights through these multimedia elements.



Online Learning with Campus Connect Sessions

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 first run of each course. These sessions will provide the synergy that online courses otherwise cannot offer.

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".

PROGRAMME 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

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

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

DATA SCIENCES

Parameter Estimation and Linear Regression

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

Instructor:
Arun Tangirala,
Professor, IIT Madras

Duration : 6 weeks

Data Visualization

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

Instructor:
Kathirmani Sukumar,
Data Scientist,
Gramener and
Co-founder, Quelit

Duration : 6 weeks

Probability and Statistics for Data Sciences

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

Instructor:
Nandan Sudarsanam,
Professor, IIT Madras

Duration : 6 weeks

Introduction to Machine Learning

Concepts and methods pertaining to supervised learning and unsupervised learning

Instructor:
Ravindran Balaraman,
Professor, IIT Madras

Duration : 6 weeks

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

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:

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,
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,
Professor, IIM Bangalore

Duration : 8 weeks

Accounting and Finance

Financial statement analysis; Preparing cost sheets, budget and making cost-based decisions

Instructor :
MS Narasimhan, Professor,
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

Strategic Management

Industry and competitive analysis; Resource and competency analysis; Analysing strategy across corporate and business levels

Instructor :
Rejie George Pallathita,
P D Jose, Sai Yayavaram,
Professors, IIM Bangalore

Duration : 5 weeks

Organization Management

Design control systems; Achieve competitive advantage through different designs; Manage structural change

Instructor : Sourav Mukherji,
Professor, IIM Bangalore

Duration : 7 weeks



PROGRAMME INSTRUCTORS



Arun Tangirala
Professor, IIT Madras



Ashis Mishra
Professor,
IIM Bangalore



Kathirmani Sukumar
Data Scientist, Gramener
and Co-founder, Quelit



B. Mahadevan
Professor, IIM Bangalore



Subhashish Gupta
Professor, IIM Bangalore



MS Narasimhan
Professor, IIM Bangalore



Nandan Sudarsanam
Professor, IIT Madras



Partha Prathim Das
Professor, IIT Kharagpur



P D Jose
Professor, IIM Bangalore



Sai Yayavaram
Professor, IIM Bangalore



Soumya Kanti Ghosh
Professor, IIT Kharagpur



Sourav Mukherji
Professor, IIM Bangalore



Madhavan Mukund
Professor,
Chennai Mathematical
Institute



Ravindran Balaraman
Professor, IIT Madras



Rejie George Pallathita
Professor, IIM Bangalore

PARTICIPANT PROFILE ▶



- 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 performance in interview. Selected candidates will be invited to join the programme

PROGRAMME FEE ▶



Indian Participants -

Rs. 4,00,000
(Exclusive of taxes)

International Participants -

9000 USD

Limited financial assistance will be provided to deserving candidates

AWARD OF CERTIFICATE ▶



A "Certificate in Technology and Management" will be issued to the participants on successful completion of the programme

PROGRAMME DIRECTORS ▶



Andrew Thangaraj has been with the Department of Electrical Engineering, IIT Madras since 2004 and is currently a professor there. He received his B.Tech in Electrical Engineering from the IIT Madras, and a PhD in Electrical Engineering from the Georgia Institute of Technology, Atlanta, USA.

Andrew Thangaraj, Professor, IIT Madras



P D Jose is a Professor in the Strategy Area. Prior to joining IIMB, he was a member of the faculty at the Administrative Staff College of India, Hyderabad. He was a Fulbright Fellow at the Massachusetts Institute of Technology, Boston, and Kenan-Flagler Business School, North Carolina.

P D Jose, Professor, IIM Bangalore



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 the purpose of 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. Further, the Centre facilitates continuing education modules for industry and IIT Madras series in Science and Engineering.



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. The vision of the IIMBx programme is to use digital learning to enable widespread access to management education. Led by the faculty at IIM Bangalore, IIMBx offers online courses and programmes covering core and advanced business and management subjects.



IMPORTANT DATES:

Course Commences on : 15 June 2018

Registration:

Website: <http://ctm-iitm.iimbx.edu.in>
Phone: 080- 26993479

Contact Details:

Email: ctm-admissions@iimbx.edu.in
Email: ctm-support@iimbx.edu.in

Address:

Indian Institute of Management Bangalore
Bannerghatta Road, Bengaluru, India
Pin Code: 560 076

Indian Institute of Technology Madras
Sardar Patel Road,
Adyar, Chennai, India
Pin Code: 600036