

# Blended Professional Certificate in **Chief Technology Officer**



## About the Program

Modern technologies and technological change are changing the rules of everything: business models, processes, people management, products, and services. It is therefore critical to stay ahead of technological trends and be able to anticipate disruptions. Which explains the growing importance of the figure of the Chief Technology Officer across all industries; The person responsible to keep the company ahead of the technology curve, anticipate technological trends and and turn them into a competitive advantage. This program is designed to prepare senior managers that want to move into the position of Chief Technology Officer.

**The Chief Technology Officer Program from MIT provides you with the knowledge, skills, professional direction, and access you need to become a CTO.**

### **Masterclasses and sessions led by MIT**

A Faculty 2-week experience on the MIT campus

### **Live online synchronous sessions with experts**

A total of 4 interactive sessions

### **Live online synchronous sessions with MIT Faculty**

2 sessions per course. A total of 10 sessions

### **Live online synchronous sessions with learning facilitators**

Weekly sessions with a total of approximately 40 sessions

## Why this Program:

- 01** • Immersive 12-month learning that will enable senior executives to become successful Chief Technology Officers.
- 02** • Comprehensive learning journey where you will acquire the technical knowledge and develop the right mindset and leadership skills to lead transformation and growth based on technology, data, and innovation.
- 03** • Live online sessions with MIT Faculty, subject matter experts and guest speakers leading digital transformation initiatives.
- 04** • Experiential in-person at the MIT Campus where you will have direct contact and attend hands-on workshops with MIT faculty members, speakers, and colleagues.
- 05** • Access to the Digital Pathway which includes over 90 webinars in diverse topics and industry themes from experts.
- 06** • Personalized coaching sessions with coaches that will help you define your career goals and set up a plan to progress accordingly.
- 07** • Access to a premium ecosystem and network composed of MIT Faculty, leading executives in digital transformation and senior executives from all around the world.
- 08** • Become part of the MIT community, the leading institution in the World for Innovation and Digital Transformation.

## Key Takeaways

Throughout this professional program, you will:

- 01** Find out how to conduct business in a multicultural environment.
- 02** Quantify technology progress over time using relevant figures of merit.
- 03** Map technologies to a product / service and set realistic figures of merit-based targets.
- 04** Shape the R&D strategy and portfolio of an organization based on a set of technology roadmaps and effective R&D execution.
- 05** Comprehend the system dynamics modeling approach to model technical innovation.
- 06** Anticipate and prepare for technological evolution.
- 07** Understand the globality of data and master the 4 steps for implementing machine learning plans.
- 08** Learn the characteristics of datasets and become familiar with how to use effective statistical tools to identify and clarify data.
- 09** Obtain an overview of the theory and practice of modern technologies that lead to digital transformation.
- 10** Develop a vision about how to apply technologies to organizations and to your professional career.

## Participant Profile

**Leaders of technological departments or projects** who need to understand the impact of modern technologies and be able to turn technological disruptions into competitive advantages for their organization

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**Current and aspiring C-suite executives** from Digital, IT, Marketing and Strategy responsible for setting up the corporate and product strategy

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**Senior consultants and entrepreneurs** that need to understand the role of technology in the company's growth and portfolio

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**Senior executives** responsible for strategic product management and innovation

### **Participants are required to have:**

- A minimum of ten years of experience
- At least 3 years of experience managing projects related to technology, innovation, or business development
- International experience is appreciated

# Learning Journey

## Program Outline

### **Module 1 | Leadership & Innovation**

8 weeks

With this module, participants will learn to lead by coming to know themselves better, harnessing their own creativity, and building teams and organizations through the culture of innovation.

### **Module 3 | Management of Technology: Strategy and Portfolio Analysis**

9 weeks

Expand your knowledge of technology management and learn to elaborate an organizational technology portfolio based on multiple technology roadmaps.

### **Module 5 | Cloud & DevOps: Continuous Transformation**

8 weeks

This online module delves further into the technological transformation currently underway, with a practical approach applicable to different industries and sectors.

### **Module 2 | Management of Technology: Roadmapping and Development**

9 weeks

Walk the path of technology through its history, its different tools and methods, its fundamental limits, and the theory and empirical evidence for technology evolution over time.

### **Module 4 | Machine Learning: From Data to Decisions**

8 weeks

A module that guides professionals through the fundamentals and applications of machine learning, trains them in analyzing and understanding data, and ultimately prepares them to master confident data-driven decision making within their organizations.

## Impact Project

A crucial aspect of the program enables you to apply your learnings to a real-world challenge as you gain insights into the opportunities awaiting a Chief Technology Officer.

### **1 Premium Access / MIT Professional Education ecosystem**

Get exclusive access to networking events, live online sessions with speakers and international MIT Alumni network.

### **2 Professional Development**

In turn, you will have the support of a specialized career development coach who will help you enhance and elevate your professional career.

### **3 Access to the Digital Pathway**

Includes over 90 webinars on diverse topics and industry themes. That is around 5520 minutes of expert knowledge.

## Meet the Faculty

In alphabetical order



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**Dr. David Niño**

Senior Lecturer in the Daniel J. Riccio Graduate Engineering Leadership Program at MIT



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**Dr. Abel Sanchez**

Executive Director of the MIT Geospatial Data Center



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**Prof. Devavrat Shah**

Professor in the Department of Electrical Engineering and Computer Science at MIT



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**Prof. Olivier de Weck**

Professor of Aeronautics, Astronautics and Engineering Systems, MIT



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**Prof. John R. Williams**

Director of the MIT Geospatial Data Center

## MIT Professional Education Alumni



At MIT Professional Education, we offer several benefits for participants who successfully complete the Blended Professional Certificate: Chief Technology Officer

- 01** • Professional Certificate and CEUs
- 02** • Access to our exclusive Virtual Campus Network and directory for online alumni
- 03** • Exclusive announcements of new courses, programs, and events
- 04** • Access to our exclusive MIT Professional Education LinkedIn group
- 05** • International Networking opportunities with other MIT Professional Education alumni
- 06** • 15% discount for online programs and short duration, in-person programs offered by MIT Professional Education
- 07** • A one-year subscription to MIT Technology Review

## About MIT Professional Education

MIT Professional Education provides continuing education courses and lifelong learning opportunities for science, engineering, and technology professionals at all levels, from around the world. Worthy of note is that MIT professors and lecturers lead and teach all MIT Professional Education offerings.

