

MIT MANAGEMENT
EXECUTIVE EDUCATION

MASTERING DESIGN THINKING

OVERVIEW

Design thinking is a powerful approach to new product development that begins with understanding unmet customer needs. It's a human-centered design process that approaches problem-solving with understanding the user needs. Design thinking encompasses concept development, applied creativity, prototyping, and experimentation. When design thinking approaches are applied to business, the success rate for innovation has been seen to improve substantially.

Design-driven companies such as Apple, Coca-Cola, IBM, Nike, Procter & Gamble, and Whirlpool have outperformed the S&P 500 over the past 10 years by an accumulated 211% in what's called the Design Value Index—a portfolio of 16 publicly traded companies that integrate design thinking into corporate strategy. According to a 2016 report from the Design Management Institute, this marks the third consecutive year the index has shown an excess of 200% over the S&P 500.

The *Mastering Design Thinking* program will lead participants through a step by step, design thinking process. To be considered successful, innovations have to solve the three key dimensions of Desirability, Feasibility, and Viability.

Desirability: *Is this product or service addressing a real customer need?*

Feasibility: *Can we develop a solution that is technically feasible and better than competitors?*

Viability: *Is there a viable business model around this product or service?*

START DATE

June 8, 2023

PRICE

\$3,300*

DURATION

3 months, online
6-8 hours per week

*Program fee is exclusive of GST applicable to Singapore residents.



IMPACT

Upon completion of this program, you will be able to:

- Understand the design thinking process
- Identify and assess opportunities through customer needs analysis
- Create clear product specifications based on customer needs that are desirable, feasible, and viable
- Generate and evaluate new product and service concepts through applied creativity
- Implement a proven 4-step method for planning and executing a prototype
- Design services for enriched customer experiences
- Create and establish a robust product architecture
- Evaluate the economics of product development
- Design products and services with sustainability in mind
- Plan and manage innovation projects effectively

WHO SHOULD ATTEND

This program is for teams and individuals who want to learn a proven, systematic approach to new product development. Anyone responsible for driving innovation, growth, and the customer experience should attend, including functional and cross-functional teams.

Roles of past participants include those from creative, design, customer experience, engineering, innovation, product, R&D, strategy, and UX, such as:

- Product Manager, Marketing Manager, Growth Manager, R&D Manager, and Product Head
- Senior Designer, UX Designer, Design Engineer, Creative Manager, UX Design Consultant, Art Director
- C-Suite executives including CEO, COO, Managing Director, Founder, President, Chief Strategy Officer
- Innovation and Growth Consultants

A GLOBALLY CONNECTED CLASSROOM

At MIT Sloan, peer learning and real-world application are integral to a participant's learning experience. This approach has been replicated in our online "Globally Connected Classroom". While the course frameworks are delivered via video lectures, two-thirds of the learning time is devoted to application of these concepts through working in collaborative teams (which we call "Learning Circles").



Byte-Sized Learning



Games and Role Plays



Real-World Application



Peer-to-Peer Learning and Feedback



Mobile App Learning



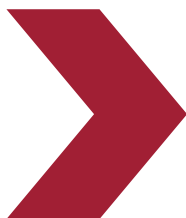
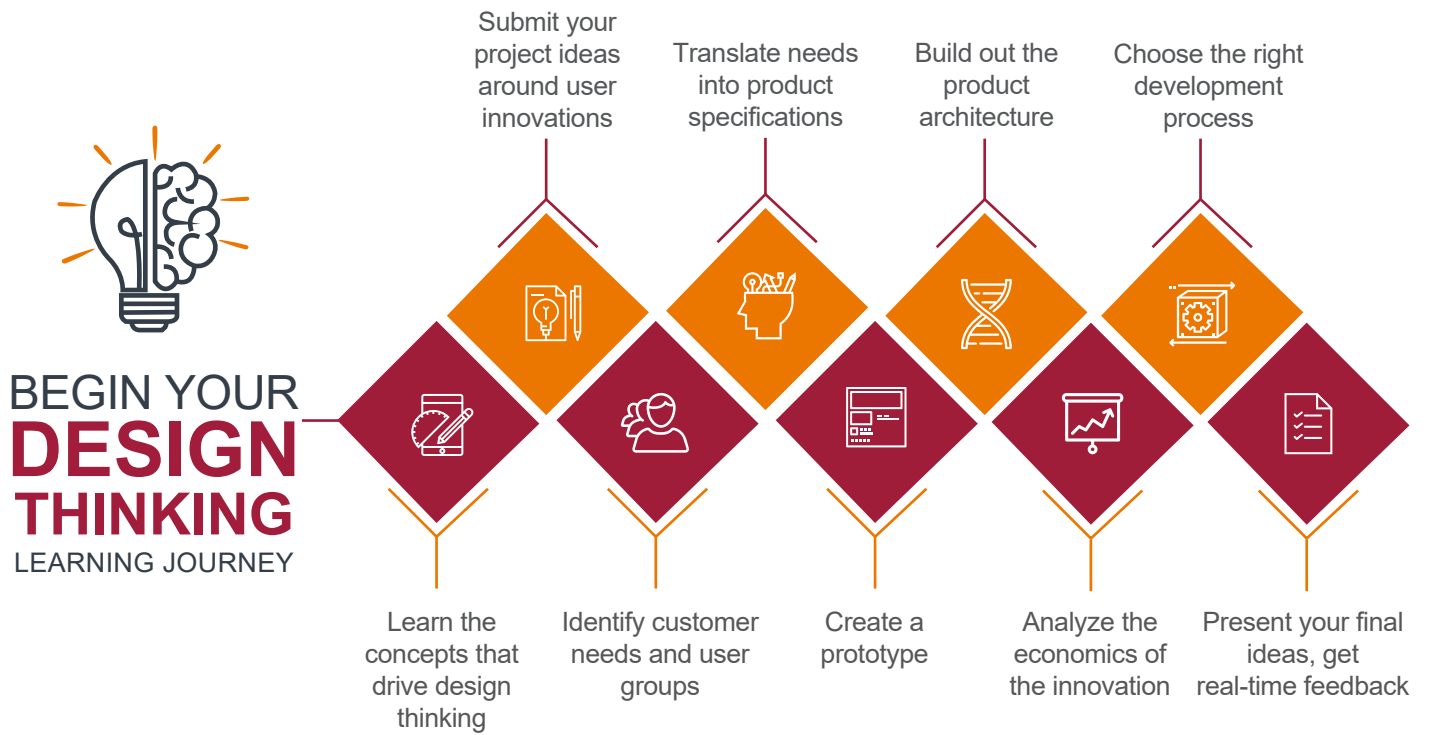
Cohort-Based



Evaluation

PROGRAM HIGHLIGHTS

Mastering Design Thinking is for teams and individuals who want to learn a proven, systematic approach to new product development. The process puts unmet customer needs at the center of the problem, and every step brings you closer to solving the problem.



 **128**

VIDEO LECTURES

 **3**

LIVE TEACHING SESSIONS

 **3**

GROUP PROJECTS

 **10**

ASSIGNMENTS

 **1**

CAPSTONE PROJECT

 **7**

REAL WORLD APPLICATIONS

PROGRAM MODULES

This executive program integrates rich, interactive media such as videos, infographics, and e-learning activities as well as traditional components such as live faculty lectures, group projects, and individual assignments. The program design facilitates collaborative learning through discussion forums and a team-based capstone project. This results in an enhanced peer network that delivers value long after the course ends.

ORIENTATION MODULE

Welcome to Your Online Campus

MODULE 1

Design Thinking Skills

- Skills expected of design thinking practitioners
- Innovation challenges, Real-Win-Worth framework
- Altitude case study – innovation processes, leadership, and overall culture

MODULE 2

Identifying Customer Needs

- Product development process and concept development phase in design planning and analysis
- Customer needs and markets
- Types of product users
- Customer needs analysis

MODULE 3

Product Specifications

- Translating customer needs into measurable specifications
- Benchmarking needs vs. specifications
- Dynamics of product specifications
- Quality function deployment (house of quality)

MODULE 4

Applied Creativity

- Problem decomposition techniques and solution concepts
- Brainstorming principles and their efficacy in creative thinking
- System exploration and concept / down-selection

MODULE 5

Prototyping

- Prototyping and its relevance in the concept development phase
- Types of prototyping
- Prototyping strategy
- Rapid prototyping and virtual prototyping
- Prototyping examples

MODULE 7

Product Architecture

- Types of product architecture: integral and modular
- Examples of integral and modular architectures
- Implications of product architecture on the design process selection

MODULE 9

Design for Environment

- DFE principles and decision making
- How DFE integrates with the product development process
- Product life cycle and environmental impacts
- Herman Miller story

MODULE 6

Design for Services

- Service development process
- Service cycle experience map
- Product vs. service systems
- Service innovation examples

MODULE 8

Financial Analysis

- Product development economics
- Project financial modeling
- Calculating Net Present Value (NPV) and its influence over product decision making
- Cash flow analysis

MODULE 10

Product Development Processes

- Systematic innovation process: Altitude case study
- Types of development processes – staged, spiral, and agile methodologies

PROGRAM FACULTY

Steven Eppinger



**General Motors Leaders for Global Operations Professor of Management
Professor of Management Science and Engineering Systems
Co-Director, System Design and Management Program**

Steven D. Eppinger is the General Motors Leaders for Global Operations Professor, a Professor of Management Science and Engineering Systems, and the Co-Director of the System Design and Management Program at the MIT Sloan School of Management. Steven served as deputy dean of MIT Sloan from 2004 to 2009; as faculty co-director of the Leaders for Global Operations (formerly MIT Leaders for Manufacturing) and the System Design and Management programs from 2001 to 2003; and as co-director of the Center for Innovation in Product Development from 1999 to 2001. His research efforts are applied to improving product design and development practices. Conducted within MIT's Center for Innovation in Product Development, his work focuses on organizing complex design processes in order to accelerate industrial practices, and has been applied primarily in the automotive, electronics, aerospace, and equipment industries. At MIT Sloan, Steven has created an interdisciplinary product development course in which graduate students from engineering, management, and industrial design programs collaborate to develop new products. He also teaches MIT's executive programs in the area of product development.

Matthew Kressy



**Director and Founder, MIT Integrated Design & Management (IDM)
Senior Lecturer at MIT
Principal, Designturn Inc.**

Matthew S. Kressy, director and founder of the MIT Integrated Design & Management (IDM) master's degree track, is an expert in product design and development. As an entrepreneur and founder of Designturn, he has designed, invented, engineered, and manufactured products for startups, Fortune 500 companies, and everything in between.

Matt believes in interdisciplinary, design-driven product development derived from deep user research, creative concept generation, and rapid prototype iteration. He is passionate about teaching this approach to the design process.

David Robertson



Senior Lecturer at MIT

David Robertson is a Senior Lecturer at the MIT Sloan School of Management where he teaches Product Development and Digital Product Management. Prior to MIT, David was a Professor of Practice at the Wharton School at the University of Pennsylvania and from 2002 through 2010 was the LEGO Professor of Innovation and Technology Management at IMD in Lausanne, Switzerland.

David is the author of the award-winning book about LEGO's near-bankruptcy and spectacular recovery: *Brick by Brick: How LEGO Rewrote the Rules of Innovation and Conquered the Global Toy Industry* (Crown, 2013). David has also held several executive management positions in enterprise software companies, and spent five years at McKinsey & Company in the U.S. and Sweden.

Renee Richardson Gosline



Senior Lecturer and Research Scientist, MIT Sloan School of Management

Renée Richardson Gosline is a Senior Lecturer and Research Scientist at the MIT Sloan School of Management. She has been named one of the World's Top 40 Professors under 40 by Poets and Quants, an MIT "Iron Professor," and a scholar at the MIT Center for Digital Business.

Her main interest is in how status-based bias and technology affect self-perceptions and behavior. Her research projects include: the positive impact of imitation on brand strength, the effect of social media storytelling on persuasion, the role of status dynamics in health and performance, and the use of wearable technology to aid willpower. In order to address these issues rigorously, she employs experimental methodology, both in the field and laboratory.

Prior to academia, she was a marketing practitioner at LVMH Moët Hennessy and Leo Burnett.

Gosline received her undergraduate and graduate training at Harvard University, including a Doctorate from the Harvard Business School.

WHAT PARTICIPANTS SAY



“I met and worked with interesting people whom I otherwise would probably have never had the opportunity to interact with. The group project was the highlight of the course in my opinion.”

- **Tom Rudolph, Senior Director at Jenzabar**
USA



“The best parts were the daily lifestyle examples shared in videos, as well as the group project.”

- **Cecile Tardy-Srinivasan, Management Consultant at CapSys Group**
SWITZERLAND



“The customer needs identification, ranking, and then the identification of the real needs. The product architecture and the financial analysis have positively opened my eyes.”

- **Bogdan Andres, Technical Sales at Tenaris**
UAE



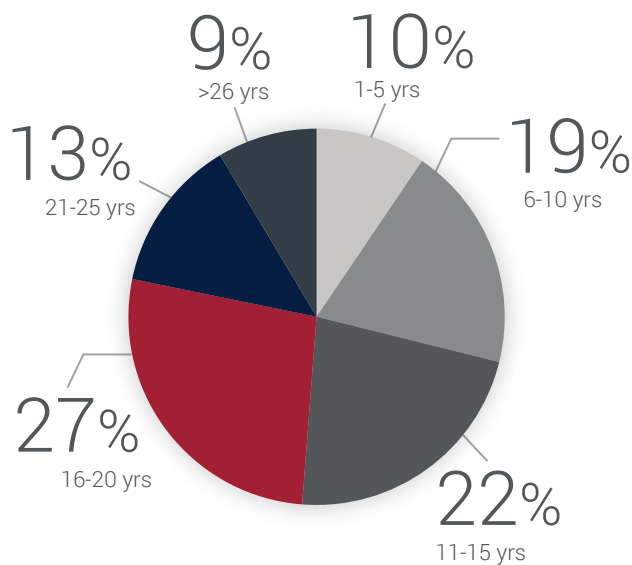
“It helped me synthesize what design thinking was about, but most importantly, I understood the correct sequence and how to sell it within the company so our executives could understand that design thinking is part of innovation.”

- **Ines Masallach, Marketing Director and Co-Founder at Imalinx**
MEXICO

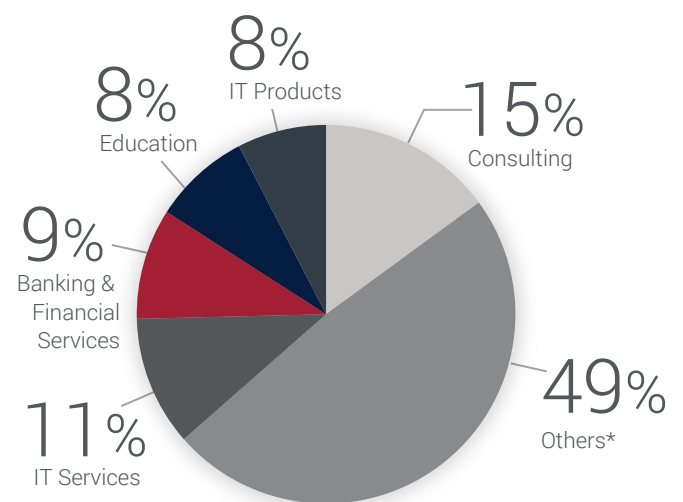
PARTICIPANT PROFILE

On your journey to master design thinking with MIT Sloan, you'll be in good company. Past participants come from a wide range of industries, job functions, and management levels—from more than 33 countries around the world. The benefits of adopting a design thinking approach are far-reaching. It all starts with finding unmet customer needs and taking a human-centered approach to solving those needs.

Participants by Years of Experience



Participants by Industry



Others - includes E-commerce, Electronics / Hardware, Fast Moving Consumer Goods, Healthcare, Industrial Goods, Media, Real Estate, Retail, Telecommunications and more.*

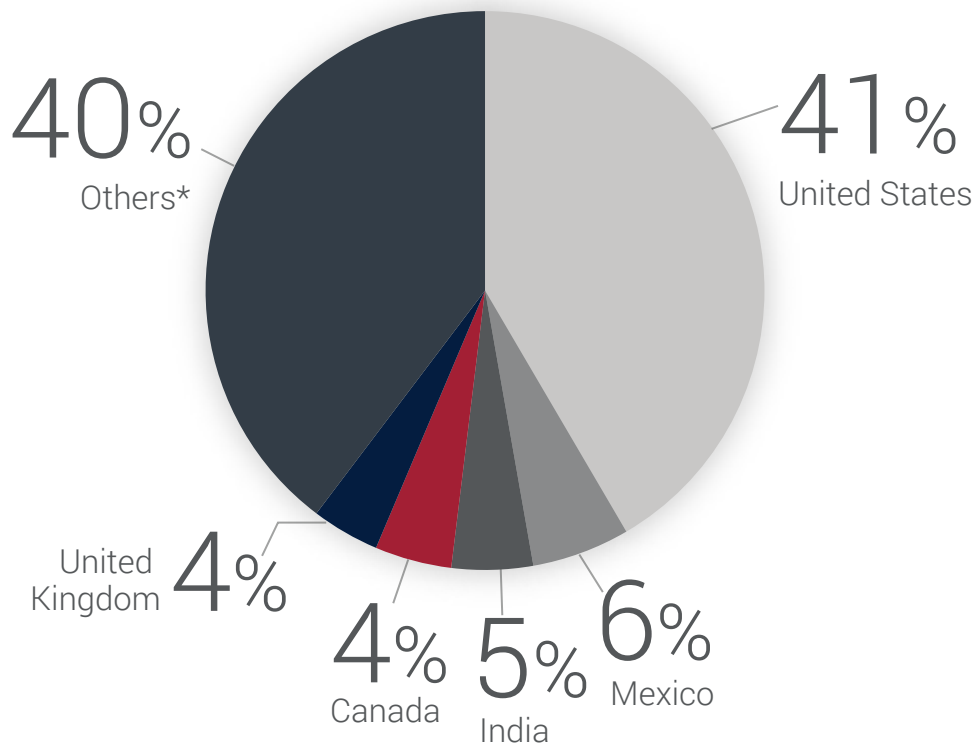
Participants by Job Function

Participants include entrepreneurs, intrapreneurs, individual contributors, and cross-functional teams. Representative job functions and titles include:

- Business Strategy Manager
- CEO (Chief Operating Officer)
- Digital Product Manager
- Director of Innovation
- Director of Design Research
- Director of Manufacturing
- Director of Sales
- Director of User Experience
- Founder
- Change Strategy Consultant
- Chief Information Officer
- General Manager
- Industrial Design Director
- Marketing Manager
- Project Manager
- QA Lead
- Senior Engineer
- VP Engineering
- VP Innovation

Participants by Region

Design thinking knows no borders, nor does our classroom. Participants from over 33 countries have joined the program, leveraging our advanced online learning platform. Connect to other innovators around the world.



Others - includes Belgium, Brazil, Chile, Colombia, France, Germany, Netherlands, Norway, Peru, Romania, Saudi Arabia, Singapore, Spain, Switzerland, United Arab Emirates and more.*

Representative Companies

Design thinking is an approach that any company can put into practice. Participants include employees from companies like:

- Accenture
- Apple
- Avanxo
- Bank of America
- BASF
- Cartier
- Cisco Systems
- Dow Chemical Company
- Epsilon
- Ernst & Young
- KPMG
- Nestlé
- PepsiCo
- PricewaterhouseCoopers
- Salesforce.com
- Sony Pictures Entertainment Inc.
- The Wall Street Journal
- Tiffany & Co.

CERTIFICATE

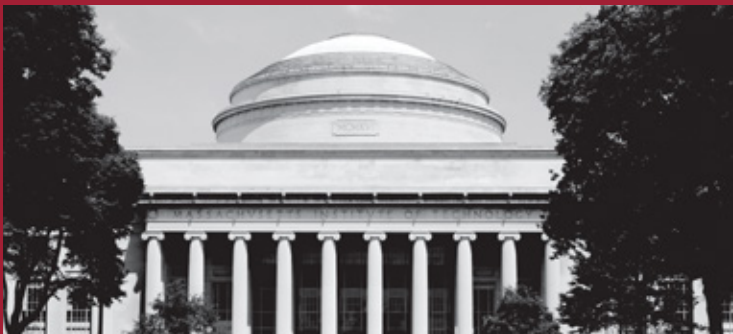
Get a verified digital certificate of completion from MIT Sloan School of Management. This program also counts towards an MIT Sloan Executive Certificate.

Note: After successful completion of the program, your verified digital certificate will be emailed to you in the name you used when registering for the program. All certificate images are for illustrative purposes only and may be subject to change at the discretion of MIT Sloan.



ABOUT MIT SLOAN SCHOOL OF MANAGEMENT

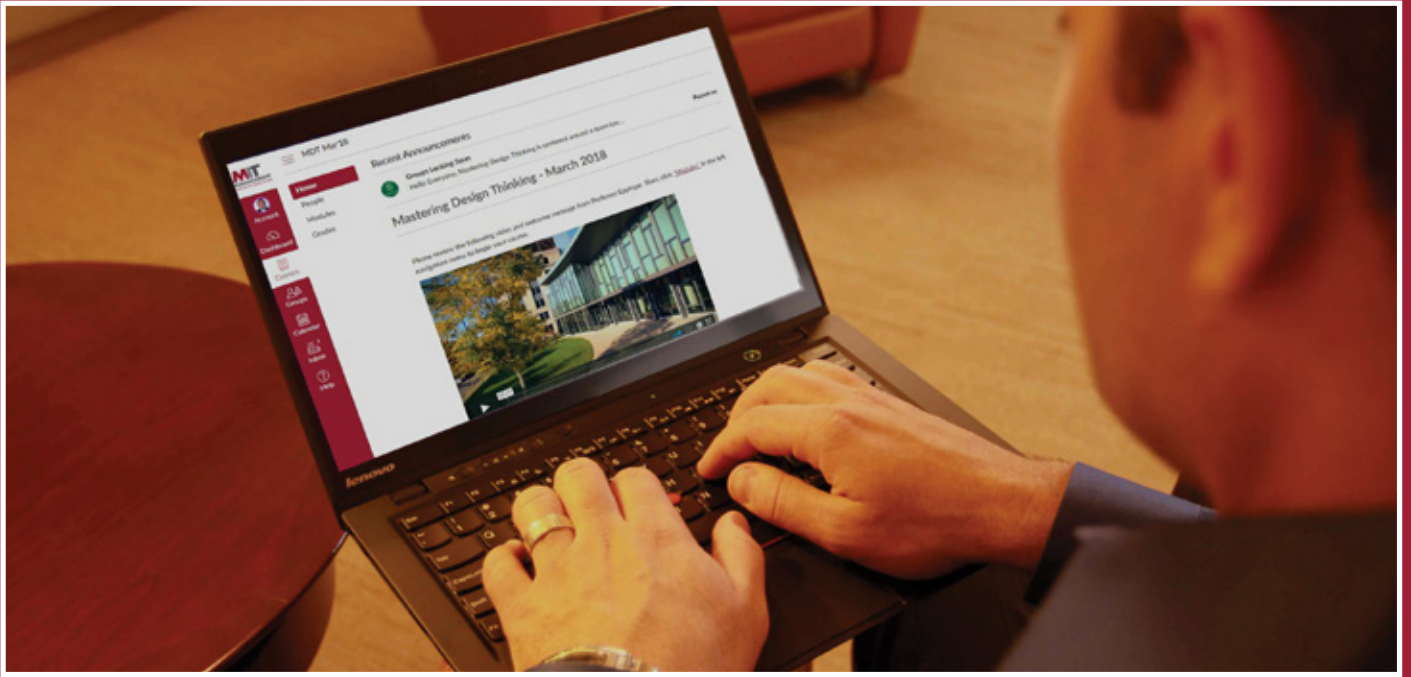
The MIT Sloan School of Management, located in Cambridge, Massachusetts, is one of the world's leading business schools and has a network of over 20,000 alumni across 90 countries. It is a part of the Massachusetts Institute of Technology, which has to its credit 89 Nobel Laureates, 47 Rhodes Scholars, and 48 MacArthur Fellows (as of 2017). MIT's motto is 'Mens et Manus', which literally means 'Mind and Hand', reflecting the educational belief of MIT's founders: education for practical application.



ABOUT EMERITUS

MIT Sloan Executive Education is collaborating with online education provider EMERITUS Institute of Management to deliver its executive programs through a dynamic, interactive, digital learning platform. By working with EMERITUS, MIT Sloan Executive Education brings its growing portfolio of courses online to address the evolving demands of executives. EMERITUS' approach to learning is based on a cohort-based design to maximize peer to peer sharing and includes live teaching with world-class faculty and hands-on project based learning. In the last year, more than 30,000 students from over 150 countries have benefited professionally from EMERITUS' courses.

THE LEARNING EXPERIENCE

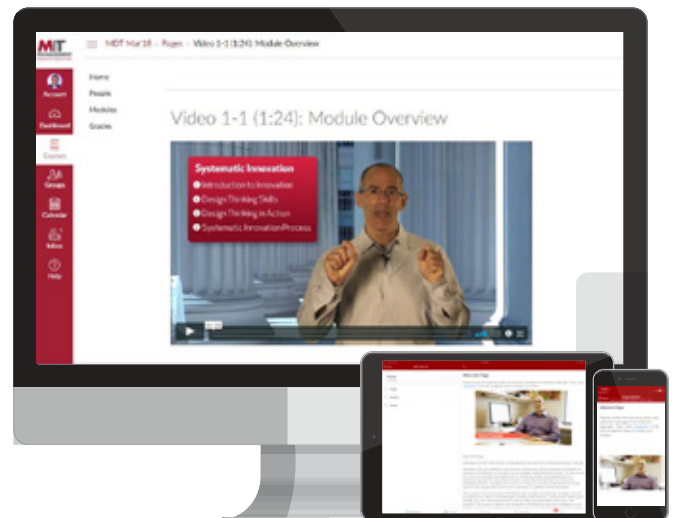


Our programs are designed to meet the needs of individual learning styles, while also leveraging the power of peer learning. This is achieved through a user-friendly learning platform that enables participants to easily navigate the program content to achieve learning objectives.

KEEPING IT REAL

Our pedagogical approach, designed to bring concepts to life, includes:

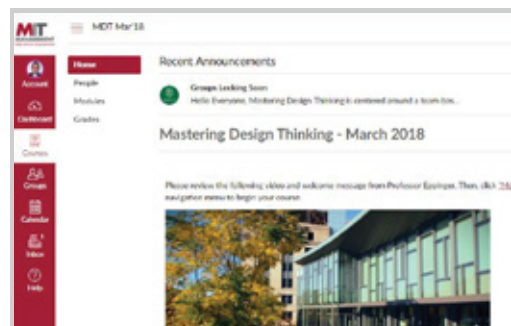
- Byte-sized learning elements
- Real-world application
- Peer learning discussions
- Capstone project
- Live interactive teaching



KEEPING IT CONVENIENT

Access to program content is flexible, available through multiple devices allowing working professionals to easily manage schedules and learn remotely — anytime, anywhere. Participants enrolled in the program obtain access to learning materials via a modular approach, with new content released weekly. Program modules include a variety of teaching instruments, such as:

- Video lectures
- Discussions
- Class materials: articles, cases
- Quizzes
- Surveys
- Assignments



To further personalize the program modules, live teaching sessions are scheduled during the program term, often with Q&A. For participants who are unable to attend these sessions live, a recording is made available so nothing is missed. Our industry-leading learning platform allows participants to create a profile, connect and collaborate with peers, and interact with academic/industry experts such as program leaders, coaches, and teaching assistants. Assignments are often linked to participant’s real-world situations, making these concepts inherently practical.

KEEPING IT INTERESTING

Our globally-connected classrooms enables participants to seamlessly interact with their peers to complete group assignments and stay on track towards program completion — with culturally-enriching encounters along the way.

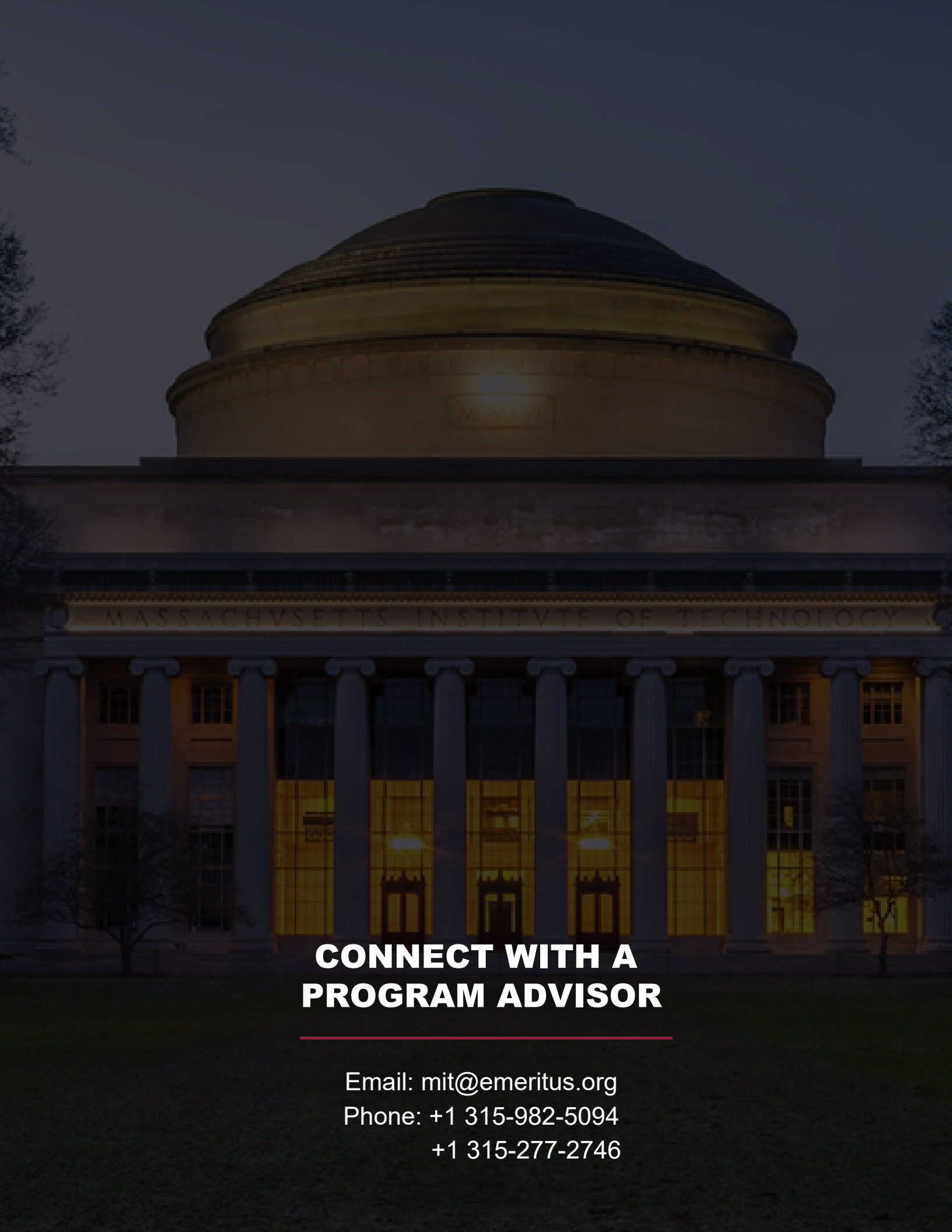
Program Requirements

To access our programs, participants will need the following:

- Valid email address
- Computing device connected to the internet: PC/laptop, tablet, or smartphone
- Latest version of their preferred browser to access our learning platform
- Microsoft Office suite and PDF viewer to view content such as documents, spreadsheets, presentations, PDF files or transcripts

Other Requirements

Programs may necessitate the usage of different software, tools, and applications. Participants will be informed about these additional requirements at the registration stage or during program commencement. Our program advisors are also available to respond to any queries about these requirements.



CONNECT WITH A PROGRAM ADVISOR

Email: mit@emeritus.org

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