MIT

MANAGEMENT

EXECUTIVE EDUCATION

BLOCKCHAIN AND CRYPTO APPLICATIONS:

FROM DECENTRALIZED FINANCE TO WEB 3

ONLINE SHORT COURSE

Now's the time to realize your crypto venture. Leverage the new wave of opportunities as you develop an early stage project idea in DeFi, Web 3, or the NFT space, guided by MIT experts.

ABOUT THIS COURSE

Regardless of current crypto trends, it's the underpinning blockchain technology that's proving to be a resilient and stable foundation for building vast business applications. Yet, there's still uncertainty about its widespread use-cases. As a result, businesses and professionals can see how the crypto space is evolving, but are struggling to capitalize on the technologies' future potential.

Designed by the MIT Sloan School of Management, the Blockchain and Crypto Applications: From Decentralized Finance to Web 3 online short course provides you with a balanced perspective of the crypto space. Over eight weeks, you'll gain insights into the economics of blockchain technologies, including digital assets, stablecoins, DeFi, NFTs, and Web 3 applications. You'll consider the major trends that characterize new waves in crypto, and explore public opinion regarding cryptotechnologies and the evolving legalities and regulations. You'll also learn about the future of blockchain technology and the possibilities that lie ahead in the crypto space — from finance to the metaverse.

Guided by diverse experiences of MIT faculty and experts in the field, you'll draft a primer — an overview document — for an early stage project idea, which takes into account key technical, market, and regulatory challenges.

WHAT THIS PROGRAM COVERS

This program begins by explaining how the cryptocurrency industry has evolved over the last decade. Looking at origins of blockchain as well as trends and terminology in the crypto ecosystem — from Bitcoin to Web 3 — you'll be empowered to separate fact from fiction. You'll then be introduced to industry experts as they reflect on their work in the crypto space, giving you insight into divergent viewpoints and regulatory issues. You'll unpack the potential of stablecoins, and explore public sector infrastructure and digital assets, and the future of money.

Next, you'll delve into DeFi and discover the opportunities and constraints of digital ownership and NFTs. You'll reflect on the economics and emerging technologies of Web 3, and evaluate the platforms, networks, and tokens used. You'll also explore cryptocurrency from a governance,

privacy, and regulation perspective. Finally, you'll gain insight into the future of crypto and develop an early stage project idea in DeFi, Web 3, or NFTs.

$3,500

8 weeks, excluding 1 week orientation.

6–8 hours of self-paced learning per week, entirely online.

THIS PROGRAM IS FOR YOU IF YOU WANT TO:

DISCOVER NEW OPPORTUNITIES
Navigate the trends shaping crypto and the role regulation plays in scaling its applications.

GROW YOUR INDUSTRY KNOWLEDGE
Build up your understanding of the potential of decentralized finance (DeFi) and the challenges for mainstream adoption.

REALIZE YOUR WEB 3, DEFI, OR NFT IDEA
Gain insight into the economics of Web 3 and capitalize on the evolving nature of the crypto industry with an early stage project idea.

WHO SHOULD TAKE THIS COURSE?

This program is designed to help participants build a realistic perspective of the crypto space with insight into the economics of blockchain. It's therefore suited to experienced professionals and leaders who are interested in improving their current role performance, enhancing their skill set, or embarking on a new career path. Those ready to invest and launch ventures related to blockchain or crypto will benefit from the program's focus on creating a primer for an early stage project idea.

> "At MIT Sloan Executive Education, we are focused on bridging the energy, engagement, and idea flow of physical in-person teaching and learning into online experiences. We aim to positively modify individual and collective behaviors that participants will take back to their teams and propagate throughout their organizations."

PAUL MCDONAGH-SMITH, SENIOR LECTURER (IT GROUP) AND DIGITAL CAPABILITY LEADER, MIT SLOAN SCHOOL OF MANAGEMENT

WHAT YOU'LL LEARN

ORIENTATION MODULE

WELCOME TO YOUR ONLINE CAMPUS

You'll be welcomed to the program and begin connecting with fellow participants, while exploring the navigation and tools of your Online Campus. Be alerted to key milestones in the learning path, and review how your results will be calculated and distributed.

You'll be required to complete your participant profile and submit a digital copy of your passport/identity document.

Please note that module titles and their contents are subject to change during course development.

MODULE 1

THE CRYPTO ECOSYSTEM: FROM BITCOIN TO WEB 3

Explore the fundamental trends that characterize the cryptocurrency space.

- Discuss the similarities and differences between the evolutionary waves in the cryptocurrency space
- Interpret Bitcoin and Ethereum's uses within the crypto ecosystem
- Determine the basic economics of blockchain technology

MODULE 2

FORMING YOUR PERSPECTIVE ON CRYPTO

Explore the differing views of investors, academics, developers, and journalists within the crypto ecosystem.

- Discuss the dichotomous views of cryptocurrencies
- Articulate challenges facing Bitcoin and crypto
- Investigate protocol and regulatory challenges facing crypto
- Predict the potential regulatory challenges for incumbents and crypto innovators
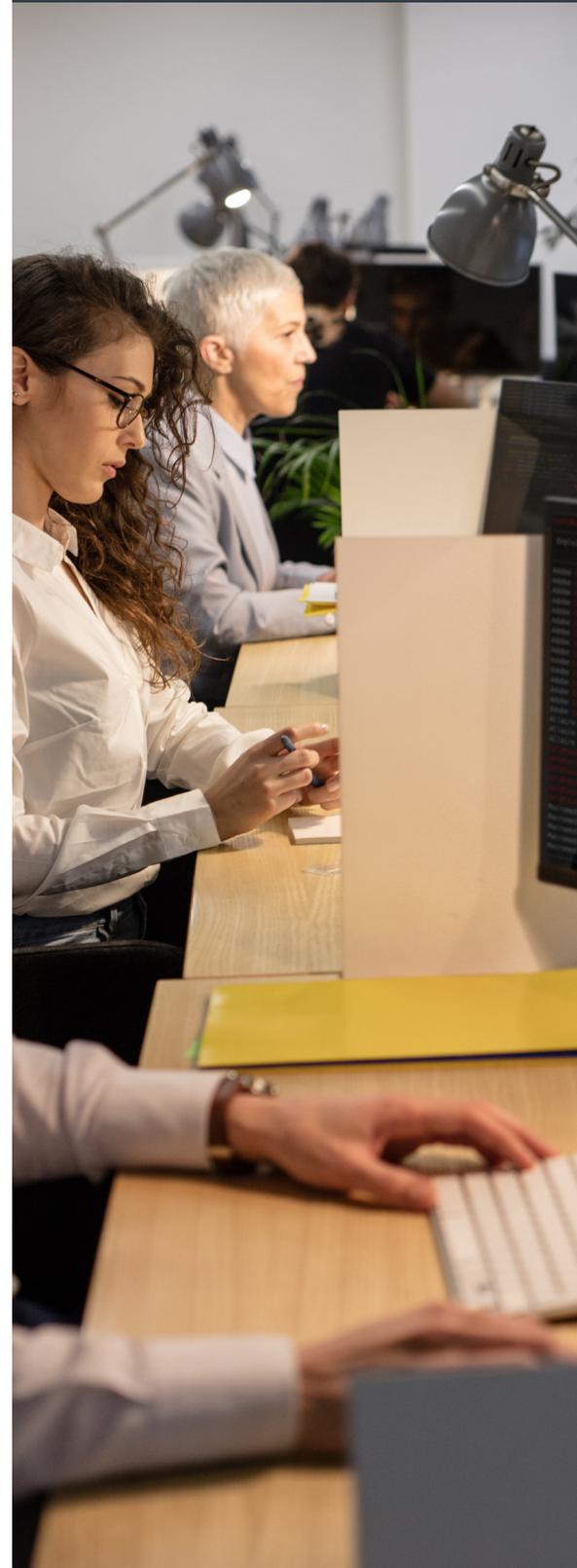
SCALING CRYPTO APPLICATIONS: THE FUTURE OF PAYMENTS

Explore the role of stablecoins and public sector infrastructure in the payments space.

- Outline the relevance and potential benefits of stablecoins in the crypto payments space
- Articulate the legal and regulatory challenges associated with developing and scaling crypto applications
- Compare the trade-offs between public and private sector involvement when scaling crypto applications
- Decide between competition and collaboration with incumbents as an approach for crypto scaling in your context

MODULE 4

DEFI AND THE FUTURE OF FINANCE

Discover the opportunities and the regulatory challenges of decentralized finance (DeFi).

- Identify the ways in which DeFi adds value to financial markets
- Discuss the feasibility of DeFi as the future of finance
- Articulate the financial considerations pertaining to different categories of DeFi applications
- Investigate the risks and challenges that need to be overcome for DeFi to be feasible for mainstream adoption
- Evaluate DeFi applications in terms of opportunities and challenges

The distributed ledger technology at the heart of cryptocurrency and DeFi is a core innovation that can potentially change the architecture of our existing financial infrastructure.

ANTOINETTE SCHOAR, FINANCE PROFESSOR, MIT SLOAN SCHOOL OF MANAGEMENT

MIT Sloan (Jul 2022)

NFTS: THE FUTURE OF DIGITAL PLATFORMS AND THE METAVERSE

Explore the economics of Web 3, digital ownership, and tokens, as well as the associated costs.

- Discuss how crypto enables new forms of digital ownership and how this impacts crypto applications and contracts
- Determine the conditions required for interoperability and portability to enable new forms of competition and the resultant costs
- Deduce how composability in Web 3 applications can introduce risks and competitive threats
- Critique the economic qualities of interoperability, portability, and composability

MODULE 6

DESIGNING FOR WEB 3: NETWORK EFFECTS

Learn about the last mile frictions and challenges in Web 3.

- Discuss how Web 3 changes network effects from a utopian and dystopian perspective
- Articulate how tokens can be used to measure different types of contributions
- Compare the challenges of measurement to the concept of incomplete smart contracts
- Evaluate the network effects and token economics applicable to Web 3 platforms

MODULE 7

KEY CHALLENGES FOR CRYPTO: PRIVACY, GOVERNANCE, AND REGULATION

Explore the battle for regulation and the complexities of governance in the crypto space.

- Discuss the privacy concerns, regulatory tensions, and diverging opinions within the crypto space and how best to navigate them
- Articulate your position on the dichotomous views of crypto
- Contrast the last mile frictions and challenges in Web 3 governance to DAOs and their potential to add value
- Evaluate potential gaps in the Web 3 governance and DAO market and how to fill them

BUILDING ON THE CRYPTO FRONTIER

Discover the possibilities that lie ahead in the crypto space from finance to the metaverse.

- Articulate the opportunities for, and tensions between, incumbents and new entrants in the crypto space
- Explore the ways in which industries are driving innovation in the crypto space
- Reflect on the impact of the evolving crypto space on various industries
- Compile an early stage project idea in your own business context

"*For markets to thrive, buyers and sellers need to be able to trust the information they use to decide when and with whom to transact. Whenever the asymmetry of information between buyers and sellers is too large, markets unravel, and beneficial trades do not take place. Blockchain technology, by lowering the cost of verification, can make markets more secure and efficient, and expand the types of transactions we are willing to engage in.*"

CHRISTIAN CATALINI, RESEARCH SCIENTIST, MIT SLOAN SCHOOL OF MANAGEMENT

Forbes (Oct, 2017)
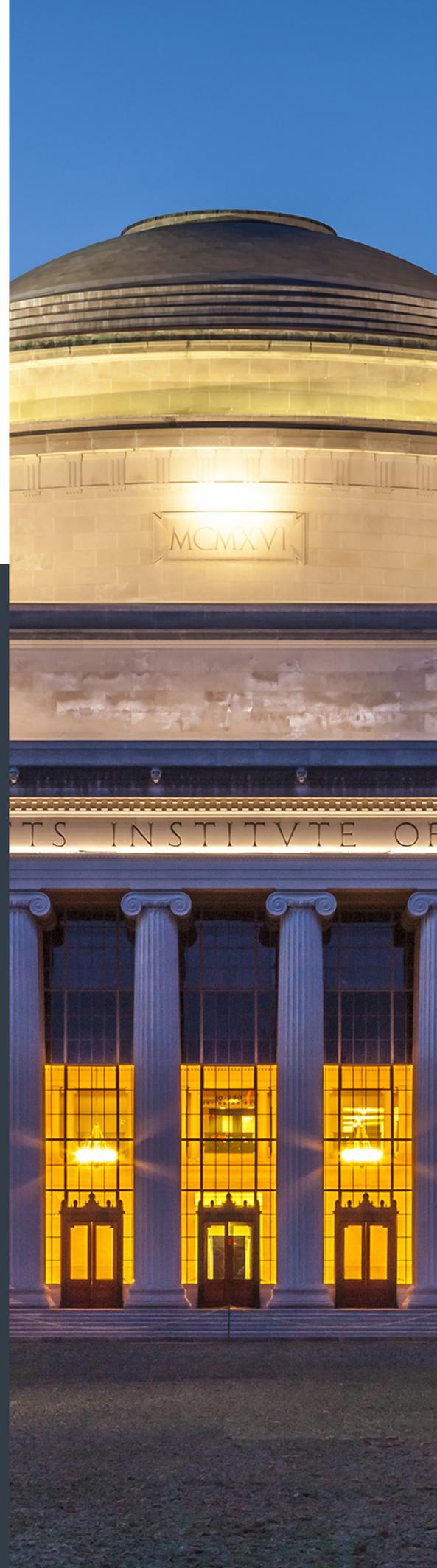
WHO YOU'LL LEARN FROM

This subject matter expert from MIT Sloan guides the course design and appears in a number of program videos, along with a variety of industry professionals.

YOUR FACULTY DIRECTOR

CHRISTIAN CATALINI
Research Scientist, MIT Sloan School of Management

Catalini's main areas of interest are the economics of digitization, entrepreneurship, and science. His research focuses on blockchain technology and cryptocurrencies, and the economics of equity crowdfunding and start-up growth. Catalini is one of the principal investigators of the MIT Digital Currencies Research Study, which gave MIT undergraduate students access to Bitcoin in the fall of 2014. He is also part of the MIT Initiative on the Digital Economy and the Digital Currency Initiative and was previously the Theodore T. Miller Career Development Professor at MIT, and Associate Professor of Technological Innovation, Entrepreneurship, and Strategic Management at the MIT Sloan School. He holds a PhD from the University of Toronto (Rotman School of Management), and MSc (summa cum laude) in economics and management of new technologies from Bocconi University, Milan. In 2009-10, he was a visiting student at Harvard University.

His work has been featured in *Nature, Science*, the *New York Times*, the *Wall Street Journal*, *The Economist*, *WIRED, NPR, Forbes, Bloomberg, TechCrunch*, the *Boston Globe*, and the *Washington Post* among others. He has presented his research at a variety of institutions including Harvard University, Stanford University, MIT, the Wharton School, Yale University, London Business School, New York University, UC Berkeley, the Federal Reserve Bank, the SEC, the U.S. Treasury, the U.S. Department of Defense, the World Bank, and the White House OSTP.
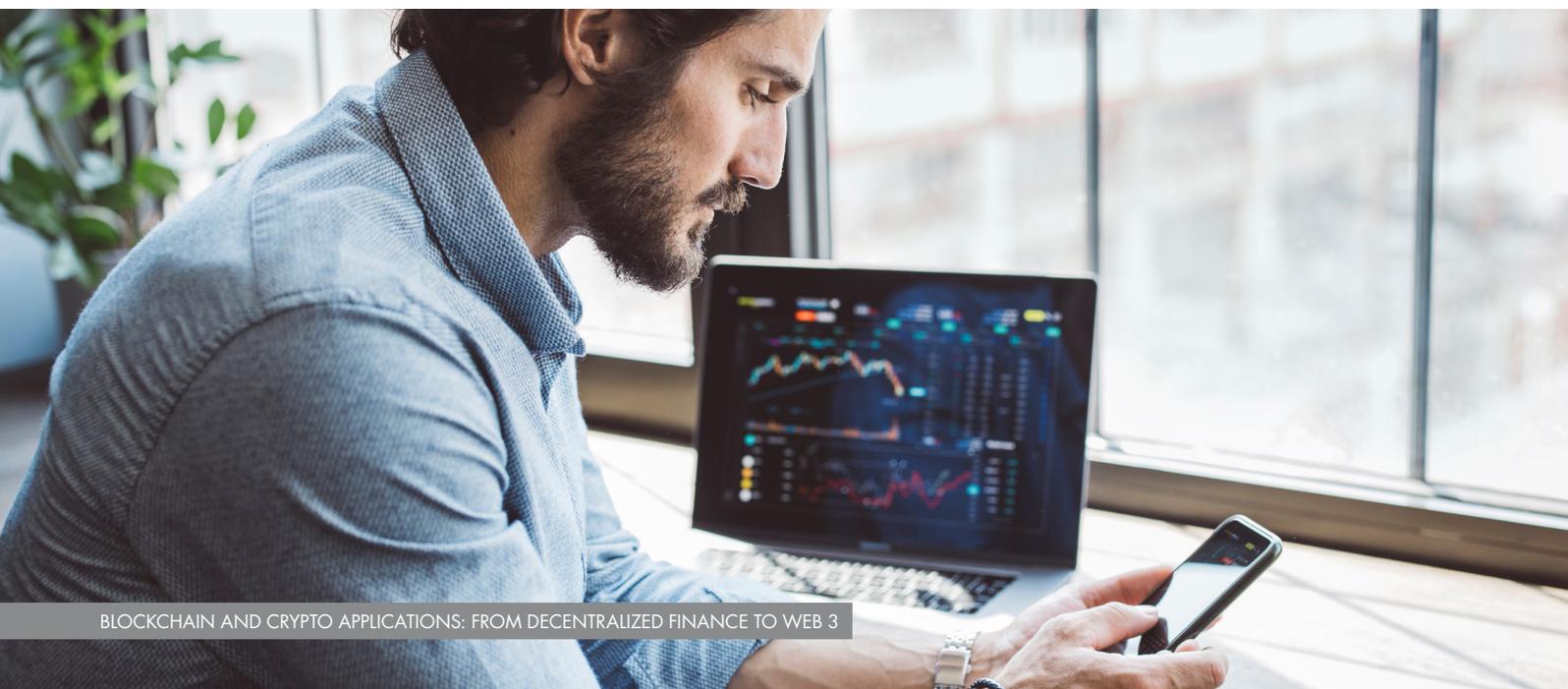
GUEST FACULTY

ANTOINETTE SCHOAR

Stewart C. Myers-Horn Family Professor of Finance, MIT Sloan School of Management

CATHERINE TUCKER

Sloan Distinguished Professor of Management, MIT Sloan School of Management

MICHAEL A. CUSUMANO

Sloan Management Review Distinguished Professor of Management, MIT Sloan School of Management

ROBERTO RIGOBON

Society of Sloan Fellows Professor of Management Professor, Applied Economics, MIT Sloan School of Management

SILVIO MICALI

Turing Award Winner, Ford Professor of Engineering, MIT CSAIL

YOUR SUCCESS TEAM

GetSmarter, with whom MIT Sloan is collaborating to deliver this online program, provides a personalized approach to online education that ensures you're supported throughout your learning journey.

HEAD LEARNING FACILITATOR

A subject expert from GetSmarter, approved by the University, will guide you through learning-related challenges.

SUCCESS ADVISER

Your one-on-one support at GetSmarter, available during University hours (9a.m.–5p.m. EST) to address technical or administrative questions.

GLOBAL SUCCESS TEAM

This team from GetSmarter is available 24/7 to solve your tech-related queries and concerns.

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A POWERFUL COLLABORATION

The MIT Sloan School of Management is collaborating with online education provider, GetSmarter, to create a new class of learning experience — one that's high-touch, intimate, and personalized for the working professional.

ABOUT MIT SLOAN

The MIT Sloan School of Management is one of the world's leading business schools, emphasizing innovation in practice and research, with a mission to develop principled, innovative leaders who improve the world, and to generate ideas that advance management practice. The school's focus on action learning means that students are able to apply concepts learned in the classroom to real-world business settings. Through its collaborative spirit, MIT Sloan welcomes and celebrates diverse viewpoints, creating an environment where new ideas grow and thrive.

WHAT IS MIT SLOAN EXECUTIVE EDUCATION?

MIT Sloan Executive Education offers nondegree executive programs led by MIT Sloan faculty to provide business professionals from around the world with a targeted and flexible means to advance their career development goals and position their organizations for future growth. By collaborating with GetSmarter, a leader in online education, MIT Sloan Executive Education is able to deliver its executive programs through a dynamic, interactive, digital learning platform.

ABOUT GETSMARTER

GetSmarter, a 2U, Inc. brand, collaborates with the world's leading universities and institutions to select, design, and deliver premium online short courses with a data-driven focus on learning gain.

Technology meets academic rigor in GetSmarter's people-mediated model, which enables lifelong learners across the globe to obtain industry-relevant skills that are recognized by the world's most reputable academic institutions.

ABOUT THE CERTIFICATE

This program offers you the opportunity to earn a digital certificate of completion from one of the world's leading business schools — the MIT Sloan School of Management. This program also counts toward an MIT Sloan Executive Certificate, which you can earn upon completion of four programs where at least three of the four come from your chosen certificate track and at least one is completed in person. Find full details here.

Completion is based on a series of practical online assignments. In order to be issued with a digital certificate you'll need to meet the requirements outlined in the course handbook. The handbook will be made available to you as soon as you begin the program.

Your certificate will be issued in your legal name and sent to you digitally upon successful completion of the program, as per the stipulated requirements.

HOW YOU'LL LEARN

Every course is broken down into manageable, weekly modules designed to accelerate your learning process through diverse activities:

- Work through your downloadable and online instructional material
- Interact with your peers and learning facilitators through weekly class-wide forums and reviewed small group discussions
- Enjoy a wide range of interactive content, including video lectures, infographics, live polls, and more
- Investigate rich, real-world case studies
- Apply what you learn each week to quizzes and ongoing project submissions, culminating in the ability to distinguish between hype and reality in the crypto space

TECHNICAL REQUIREMENTS

BASIC REQUIREMENTS

In order to complete this program you'll need a current email account and access to a computer and the internet, as well as a PDF Reader. You may need to view Microsoft PowerPoint presentations, and read and create documents in Microsoft Word or Excel.

BROWSER REQUIREMENTS

We recommend that you use Google Chrome as your internet browser when accessing the Online Campus. Although this is not a requirement, we have found that this browser performs best for ease of access to program material. This browser can be downloaded here.

ADDITIONAL REQUIREMENTS

Certain courses may require additional software and resources. These additional software and resource requirements will be communicated to you upon registration and/or at the beginning of the program. Please note that Google, Vimeo, and YouTube may be used in our course delivery, and if these services are blocked in your jurisdiction, you may have difficulty in accessing program content. Please check with an Enrollment Adviser before registering for this program if you have any concerns about this affecting your experience with the Online Campus.

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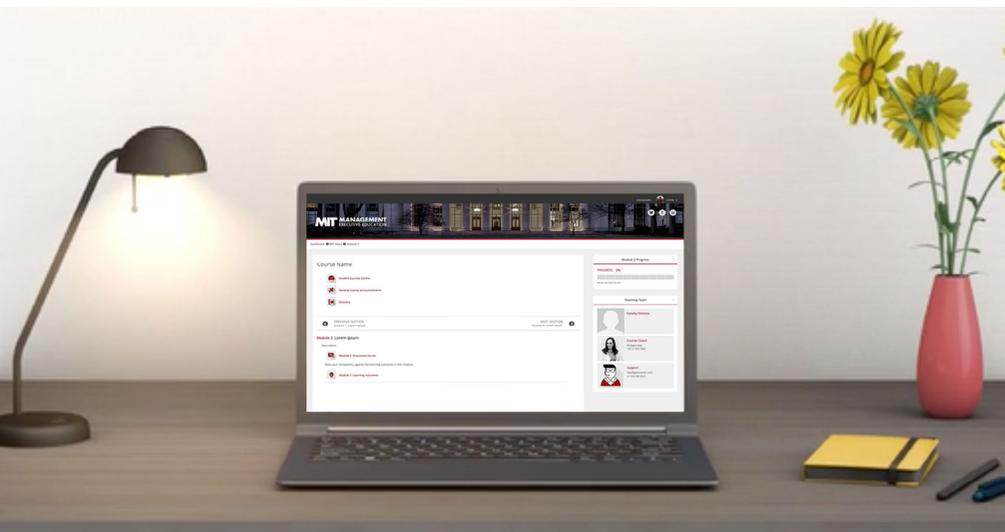
WHY MIT SLOAN EXECUTIVE EDUCATION?

Learn more about
THE MIT SLOAN ADVANTAGE

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REGISTER NOW

CONTACT US

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