

# LEADING COMPLEX PROJECTS: STRATEGY, EXECUTION, AND AI-ENABLED IMPACT



# OVERVIEW

Completing projects on time, on budget, and on specification is critical to business success. As projects become more complex due to new technologies such as AI and ever-changing dependencies, it's critical to have a proven framework for leading them.

Project planning and execution is often accompanied by challenges and setbacks. Research shows that around one in every four projects fails and most organizations can't cope with uncertainty and complexity. One of the reasons for this low rate of success is the lack of adoption of project management frameworks and tools.

Success with critical projects hinges on developing an understanding of the types of complexities you're likely to encounter within the projects, from their structure and scope to the changing nature of the project, to the power and political dynamics within the project team and in wider stakeholder communities.

UC Berkeley Executive Education's Leading Complex Projects: Strategy, Execution, and AI-Enabled Impact program was created to help you strengthen your understanding of these complexities and learn to lead through them to drive successful outcomes.



# WHO IS THIS PROGRAM FOR?

This program was designed to help mid- to senior-level professionals across industries drive their projects to success. It is ideal for:

- **C-suite executives and senior managers** tasked with leading organization-wide projects
- **Project managers and program managers** looking to take on more complex projects
- **Mid- to senior-level managers** in technology involved in complex product development
- **Entrepreneurs and consultants** looking to improve the success of their projects
- **Other professionals** interested in pairing their practical experience with proven frameworks and tools for project management and leadership

## KEY TAKEAWAYS

As a participant in this 2-month online program, you will:



Apply tools, frameworks, and strategies to manage traditional and complex projects



Evaluate and monitor performance in complex projects to achieve business objectives



Implement strategic project planning and risk management methodologies to navigate uncertainty and change



Leverage adaptive leadership in complex projects to drive innovation



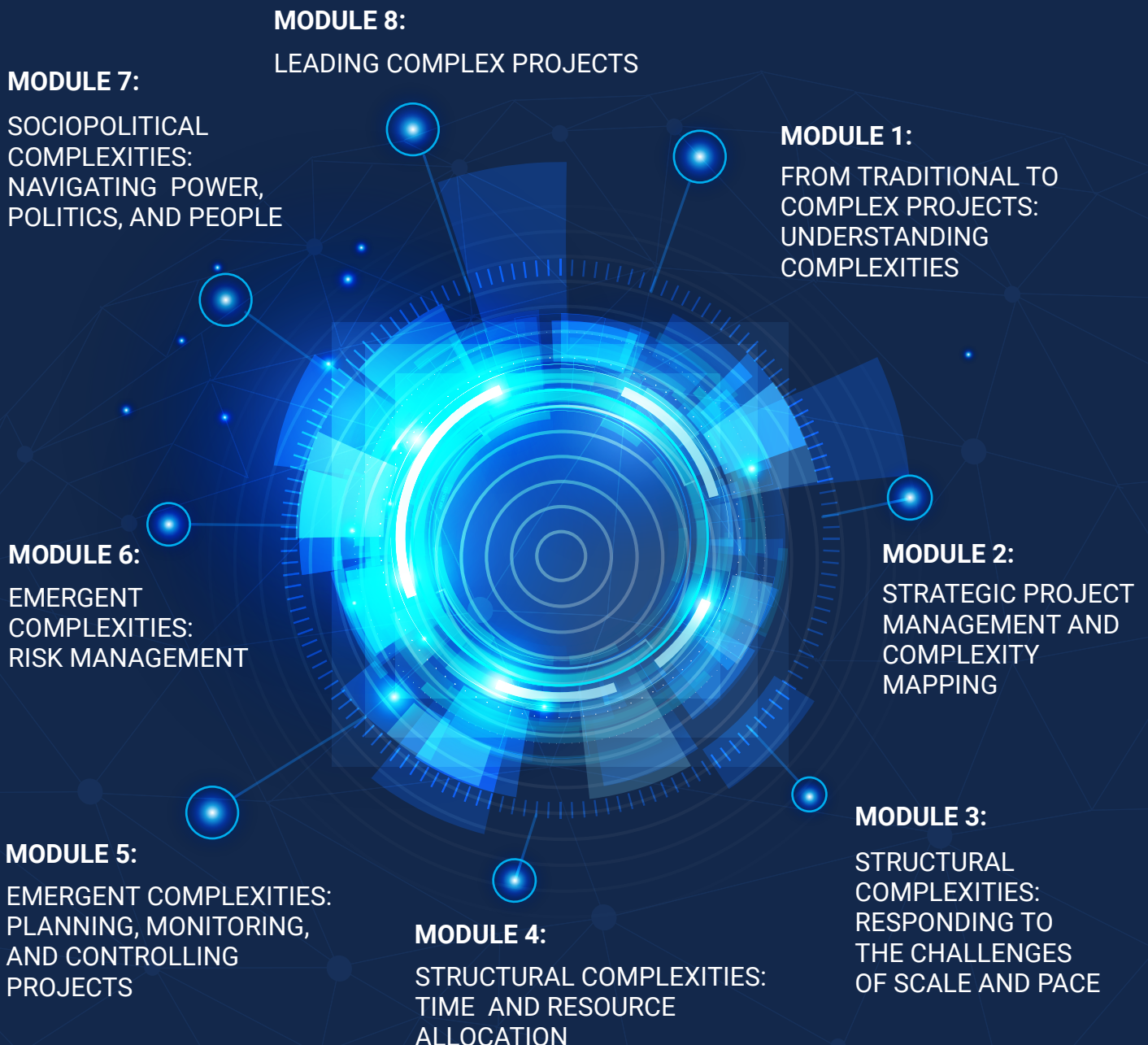
Build cohesive teams to improve performance and decision making in complex projects



Harness AI to streamline project scoping, risk management, and stakeholder communication while ensuring ethical governance

# YOUR LEARNING JOURNEY

In addition to the practical knowledge you'll gain from the video lectures, you'll learn from live webinars with faculty, case studies, notable guest speakers, peer discussions, assignments, interactive exercises, and other learning activities. At the end of the online program, you will complete a capstone project, creating a strategy to navigate the structural, emergent, and sociopolitical complexities of your project. Program leaders will provide guidance and personalized feedback, making this a highly effective use of your time.



# PROGRAM EXPERIENCE



Videos



Reflections



Polls



Discussions



Try-it activities



Crowd-sourced activities



Quizzes



Assignments



Peer Reviews



Capstone



Case Studies



Notable Guest Speakers



Live Sessions



Live Office Hours



Demonstrations



Simulations



## LIVE NETWORKING OPPORTUNITY HAPPY HOUR

A unique live opportunity for you to interact with one another and build your professional network! Participants can interact with each other and share personal backgrounds and thoughts on guided questions in an informal and fun way.

# PARTICIPANT TESTIMONIALS

“ It was great to learn from the variety of experiences and perspectives within the cohort, from instructors, and from fireside chats. ”

**Jennifer Cecil**  
**Project Manager, The Davenport Group**

“ The modules were really clear with related visuals to support conceptual understanding. I like the application-based assignments for each module that required us to apply the concepts to our own work. ”

**Shivesh Puri**  
**Principal, Rocketship Public Schools**

“ Professor Omar was excellent! He is a great presenter and very approachable. ”

**Laura Schaefer**  
**Chief Operating Officer, ProtoCall Services**

“ The fireside chats were a highlight of the program, as they were related to practical experiences. The simulation exercise in module seven was also great, as it offered an understanding of practical application of the information in the module. ”

**Deshnidevi Govender**  
**Fragrance Manager, Beiersdorf**

# PROGRAM MODULES

Over the course of two months, Leading Complex Projects: Strategy, Execution, and AI-Enabled Impact's systematic approach will better equip you to compete in a rapidly evolving world through these modules:

Module 1

## **From Traditional to Complex Projects: Understanding Complexities**

- What makes projects complex
  - How chaos and complexity affect projects
  - Applications of complexity theory to project management
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Module 2

## **Strategic Project Management and Complexity Mapping**

- Aligning projects to strategic goals and different future scenarios
  - Using checklist and weighted scoring models to select and prioritize projects
  - Incorporating complexity mindset into projects
  - Mapping the project complexity: independent, moderately complex, highly complex
  - Three types of project complexity: structural, emergent, and sociopolitical complexities
  - Applying AI to navigate different project complexities and ensure strategic alignment
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Module 3

## **Structural Complexities: Responding to the Challenges of Scale and Pace**

- 5 steps to define a project
  - The importance of Work Breakdown Structure (WBS) in identifying project deliverables
  - Applications in structural complex projects: large, long-duration projects
  - Applications in structural complex projects: highly innovative, urgent projects
  - How to lead in both planned and unplanned urgent projects
  - Leverage AI for project charters, WBS, and requirement clarification
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## **Structural Complexities: Time and Resource Allocation**

- Demonstrating how project activities are connected and the time estimates to complete them with the Project Network
  - Assigning resources and managing scheduling with the Integrated Project Schedule
  - Managing large, complex projects with tools, including The Convergence Plan, The Program Tool, and The Program Directorate
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## **Emergent Complexities: Planning, Monitoring, and Controlling Projects**

- Project management methodologies: traditional and adaptive
  - Iterative and adaptive methodologies, including Incremental Delivery model, Agile Methodology, Scrum Process, and Extreme Project Management
  - How to apply agile methods to complex projects
  - Performance evaluation, including Earned Value Analysis, Monitoring Time, Performance using Gantt Charts, Control Charts and Status Reports; and Evaluating Performance in Large, Dispersed, Multicultural Teams
  - Using complexity to deal with troubled projects
  - How to apply AI for project reporting and decision support
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## **Emergent Complexities: Risk Management**

- Importance and benefits of risk management
  - 4 steps in the risk management process: risk identification, risk assessment, risk response development, and risk response control
  - Qualitative and quantitative risk assessment, including Risk Severity Matrix and FMEA (qualitative), and PERT and Monte Carlo simulation (quantitative/statistical analysis)
  - How to embrace risk management and deal with complex projects with a large number of dependencies and external factors
  - How to apply AI to forecast risks and implement AI governance guardrails
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## **Sociopolitical Complexities: Navigating Power, Politics, and People**

- Stakeholders management
  - Creating high-performing teams
  - Building successful virtual teams
  - Change management and navigating change and uncertainty
  - Leveraging AI for stakeholder communication and team alignment
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## **Leading Complex Projects**

- ASE leadership framework for leading complex projects: Adaptive Intelligence, Social Intelligence, and Entrepreneurial Intelligence
  - Communicating a vision, and building cohesive teams in leading complex projects
  - Building in redundancy for key roles while keeping your core team lean
  - How to govern and leverage complexity
  - Leading with AI through governance, judgment, and executive responsibility
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## **Capstone Project**

As part of this final phase, you'll create a strategy to navigate the structural, emergent, and sociopolitical complexities of your own project.

*Note: This program may include optional reading material that requires a paid subscription.*

# CASE STUDIES

To get a clear understanding of how businesses mitigate risks and achieve project goals, you will examine several case studies involving these prominent companies:



## Autodesk

Learn how Autodesk adopted Integrated Project Delivery for risk management and multi-objective optimization in building projects.



## CarMax

Learn how the largest used vehicle retailer in the US has undertaken a major digital transformation to become a customer-centric, product-driven organization.



## PFM Devices

Learn how a traditional organization is transformed into an agile one.



## Sattva eTech

Learn how Sattva eTech manages uncertainty in the project network through the design, prototyping, and manufacturing of embedded system products.

# COMPANY EXAMPLES



## Microsoft

Learn how Microsoft uses status reports to create alignment and build a cohesive organization.



## Spotify

Learn how Spotify applies agile principles to encourage experimentation and drive innovation.



## Heathrow

Learn the importance of flexibility in decision making for complex, long-duration projects, such as the construction of Heathrow Airport Terminal 5.



## BMW

Learn how an ergonomics and digital transformation project enhanced job satisfaction and productivity.



## Nvidia

Learn how Nvidia has carved out a niche for itself to become a dominant force without competing with much larger firms.



## Southwest Airlines

Learn how Southwest tailors all its activities to deliver low-cost, convenient services and create a competitive advantage.

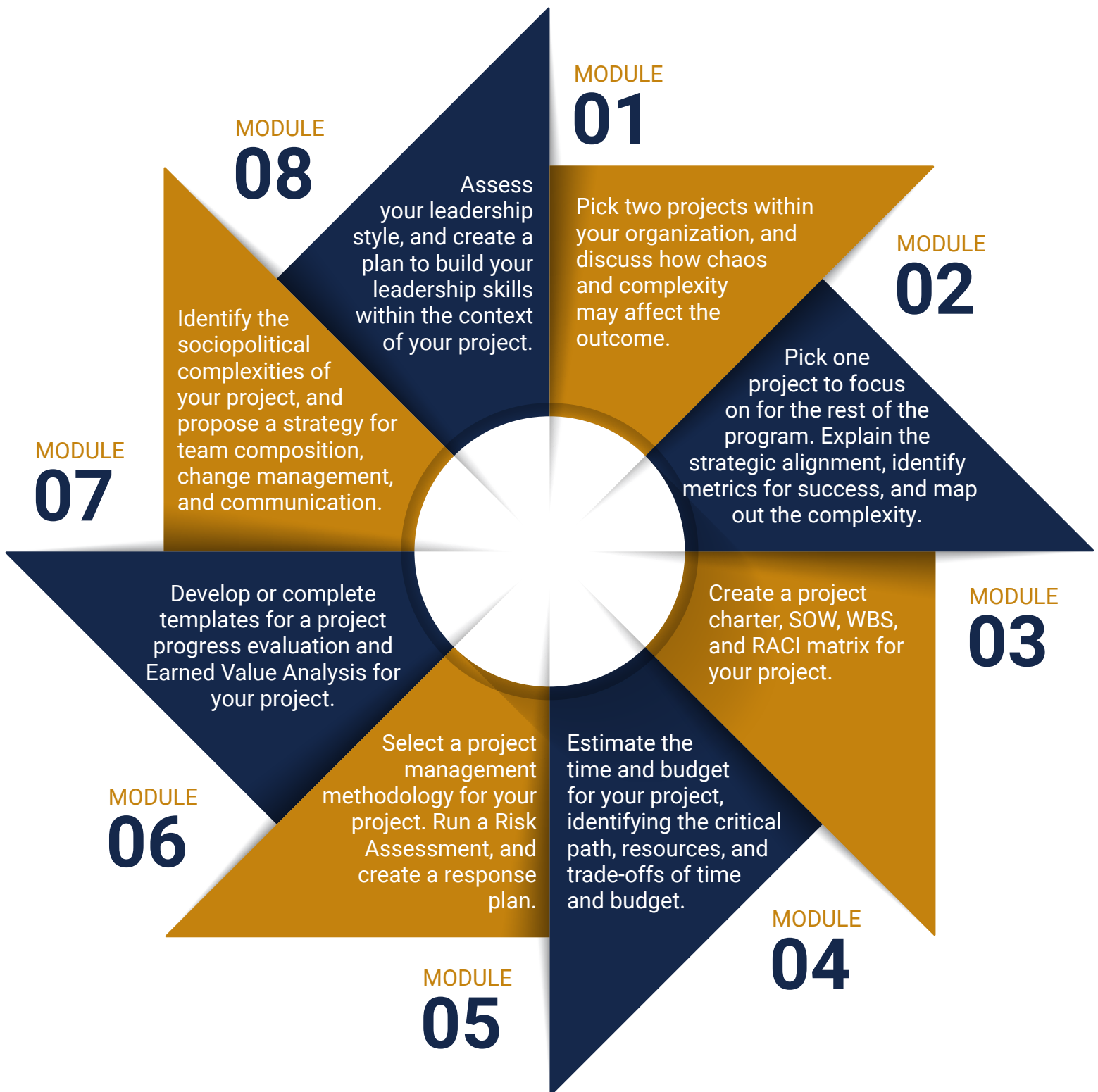


## Simulation

Explore how to persuade key stakeholders to adopt a change initiative through Change Management Simulation: Power and Influence.

# ASSIGNMENTS

After each module, participants apply the frameworks and tools that they've learned to their own projects. The capstone project will incorporate all assignments and create a strategy to navigate structural, emergent, and sociopolitical complexities in their projects.



# PROGRAM FACULTY



## Omar Romero-Hernandez

Continuing Lecturer

Business and Social Impact | Operations and IT Management | Sustainability

Omar Romero-Hernandez is a continuing lecturer in the Haas Operations and IT Management Group and the Institute for Business and Social Impact at the Haas School of Business. He leads the Advanced Project Management Practice for the Graduate Programs.

Romero-Hernandez is a Chemical Engineer with graduate studies in Economic Policy and Government and a PhD in Process Economics and Environmental Impact from Imperial College, England. He has worked for a diverse range of public and private organizations, such as Procter & Gamble, PEMEX (Oil & Gas), Accenture, and the Federal Government. He has over 25 years of experience working in medium and large complex projects. He has led several internationally awarded projects in the field of digital transformation, sustainable business strategies, renewable energy, and business processes — sponsors include the United Nations, USAID, industry consortiums, S&P 500 companies, the Stock Exchange, and NGOs.

Currently, he is an international educator, board member, national researcher, and author of various books, including: *Introduction to Engineering, Renewable Energy Technologies and Policies, and Industry and the Environment* and several peer-reviewed international publications on project management, business modeling, green operations, and sustainable development.

In 2010, Romero-Hernandez was a first place laureate for the Franz Edelman Award, the world's most prestigious award on operations research and management science applications.



## Homa Bahrami

Senior Lecturer  
Management of Organizations

Homa Bahrami is an international educator, advisor, board member, and author, specializing in organizational flexibility, team alignment, and dynamic leadership in global, knowledge-based industries. She is a senior lecturer at the Haas School of Business, University of California, Berkeley and a faculty director at the Haas Center for Executive Education, and has served on the Board of the Haas Center for Teaching Excellence.

Bahrami is the co-author of a major textbook (with Harold Leavitt, Stanford University), *Managerial Psychology: Managing Behavior in Organizations*, published by the University of Chicago Press, and translated into many languages. Her latest book, *Super-Flexibility for Knowledge Enterprises*, (second edition published by Springer and co-authored with Stuart Evans, Carnegie Mellon) focuses on practical approaches for strategizing, organizing, and leading knowledge workers based on their collective experience and field research in Silicon Valley during the past 30 years.

She has served on the boards of directors of three public technology companies and has been a member of all three board committees: audit, compensation, and governance. She is a member of the National Association of Corporate Directors and is active in executive education and executive development in the US, Europe, and Asia.

# GUEST SPEAKERS

How do you lead projects and teams to success? Learn from those who have done it.



**Michael Kobori**  
Chief Sustainability  
Officer at Starbucks



**Paul Swenson**  
Chief Strategy Officer  
at Kaiser Permanente



**Juan Manuel La Cruz**  
Senior Project  
Manager at Webcor



**Sean McDonald**  
Former Program  
Director at  
AstraZeneca



**Carin Kaltschmidt**  
Former Principal  
at Ernst & Young



**Michael Lebow**  
Data Center Project  
Lead, Global  
Infrastructure and  
Energy at Google

# CERTIFICATE

Get recognized! Upon successful completion of the program, UC Berkeley Executive Education grants a verified digital certificate of completion to participants. Participants must complete 80 percent of the required activities, including a capstone project (if any), to obtain the certificate of completion. This program also counts toward a Certificate of Business Excellence.



*Note: This program results in a digital certificate of completion and is not eligible for degree credit/CEUs. 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 UC Berkeley Executive Education.*



This program counts toward a  
**Certificate of Business Excellence**

**CURRICULUM DAYS**

**Two Days**

**PILLAR(S)**

**Entrepreneurship & Innovation or Strategy & Management**

A UC Berkeley Certificate of Business Excellence gives individuals the opportunity to create a personal plan of study structured by our four academic pillars. Participants will earn a mark of distinction with certification from a world-class university and enjoy the flexibility of completing the program in up to three years.

**LEARN MORE**

# PATH TO ALUMNI BENEFITS

Enrolling in the **Leading Complex Projects: Strategy, Execution, and AI-Enabled Impact** program can become your first step toward pursuing the UC Berkeley Executive Education **Certificate of Business Excellence (COBE)**. The Certificate of Business Excellence gives individuals the opportunity to acquire and hone new skills and do it on a timeline that works with your busy schedule. Participants will earn a mark of distinction with certification from a world-class university, and enjoy the flexibility of completing the program in up to three years. Learn more about the program and associated alumni benefits [here](#)

## Keeping it interesting

- Join local alumni chapters or clubs in your region.
- Participate in the annual Berkeley Haas Alumni Conference.
- Attend select Berkeley Haas and Berkeley Executive Education Networking events open to the COBE community.

## Berkeley exclusive resources

- 5% discount on the list price of future eligible Berkeley Executive Education programs.
- Activate an @haas.executivealumni.berkeley.edu email forwarding address.
- 30% discount on the list price of future eligible programs after completion of your Certificate of Business Excellence.
- Public visitor access to select campus libraries and university database services.

## News and communication

- A one-year complimentary digital subscription to *California Management Review*.
- Berkeley Haas Alumni newsletter.
- Berkeley Haas Alumni Jobs e-newsletter featuring job postings from distinguished employers.
- Haas Insights offering the latest research and thought leadership from industry speakers and faculty.

*Successful completion of this program fulfills two curriculum days (minimum requirement of 17 curriculum days) toward the UC Berkeley Certificate of Business Excellence (COBE). Learn more on how it works [here](#).*

*Note: All benefits are subject to change. The discounts mentioned may not be combined with other promotions or special offers.*

# 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 navigate the program content easily to achieve learning objectives.

## Keeping It Real

Our pedagogical approach is designed to bring concepts to life and includes:

- Bite-sized learning techniques
- Real-world application
- Peer-learning discussions
- Live, interactive teaching

## Keeping It Convenient

Access to program content is flexible and 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 in a modular approach, with new content released weekly. Program modules include a variety of teaching instruments, such as:



Video lectures



Discussions



Class materials



Knowledge checks



Coding assignments



A capstone project

To further personalize the program modules, live teaching sessions are scheduled during the program, often with Q&A. For participants who are unable to attend these live sessions, 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 and industry experts, such as program leaders and teaching assistants. Assignments are often linked to the participants' real-world situations, making the concepts inherently practical.

## Keeping It Interesting

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

## Other Requirements

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

## Program Requirements

To access our programs, participants will need the following:

- A valid email address
- A computing device connected to the internet: PC or laptop, tablet, or smart phone
- The latest version of their preferred browser to access our learning platform assignments
- Microsoft Office and a PDF viewer to access content, such as documents, spreadsheets, presentations, PDF files, and transcripts



# ABOUT UNIVERSITY OF CALIFORNIA, BERKELEY

The University of California, Berkeley is a public research university in Berkeley, California. Founded in 1868, UC Berkeley serves as the flagship of the 10 University of California campuses. Since its founding, UC Berkeley has grown to instruct over 40,000 students per year in approximately 350 undergraduate and graduate degree programs, covering numerous disciplines on campus and online.

UC Berkeley ranks among the top five in the U.S. News & World Report Best Global Universities Rankings.

## BY THE NUMBERS



107 Nobel laureates



25 Turing Award winners



14 Fields Medalists



19 Wolf Prizes



45 MacArthur Fellowships



20 Academy Awards



19 Pulitzer Prizes



207 Olympic medals

## ABOUT UC BERKELEY EXECUTIVE EDUCATION

UC Berkeley Executive Education offers a portfolio of online and in-person programs developed by the most forward-thinking minds in academia and industry to accelerate the careers of professionals around the globe. Here, executives have abundant resources at their fingertips, from award-winning faculty and national laboratory research to the vibrant ecosystem of Silicon Valley. These tools, engaged in one of the most dynamic learning environments in the world, combine to create a powerful experience for business executives seeking a competitive edge.

# ABOUT THE HAAS SCHOOL OF BUSINESS

As the second oldest business school in the United States, the Haas School of Business at the University of California, Berkeley has been questioning the status quo since its founding in 1898.

Berkeley Haas is a leading producer of new ideas and knowledge in all areas of business, inspiring new thinking for the new economy. We invite you to learn more about Haas, our exceptional faculty members – including two Nobel Prize laureates in Economics – and our community of dedicated students and alumni. Our mission is to help extraordinary people achieve great things. At Haas, we live our distinctive culture out loud by embracing our four defining leadership principles: question the status quo, confidence without attitude, students always, and beyond yourself.

Each year, nearly 5,000 undergraduate and graduate students as well as Executive Education participants from around the world learn on our campus and online. They join a network of over 41,000 graduates eager to help each other grow and thrive in their professional lives.





## **DURATION**

2 months, online  
4–6 hours per week

## **PROGRAM FEES**

\$2,750

## **ABOUT EMERITUS**

UC Berkeley Executive Education is collaborating with online education provider Emeritus to offer a portfolio of high-impact online programs. These programs leverage UC Berkeley Executive Education's thought leadership in management practice, developed over years of research, teaching, and practice. By working with Emeritus, we are able to broaden access beyond our on-campus offerings in a collaborative and engaging format that stays true to the quality of the University of California, Berkeley. Emeritus' approach to learning is based on a cohort-oriented design to maximize peer-to-peer sharing and includes live teaching with world-class faculty as well as hands-on project-based learning. In the last year, more than 100,000 students from over 80 countries have benefitted professionally from Emeritus programs.



## CONTACT US

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