

ARTIFICIAL INTELLIGENCE: BUSINESS STRATEGIES AND APPLICATIONS



Learn how to leverage generative AI models and simulations for predictions

OVERVIEW

Bloomberg pegged the global artificial intelligence (AI) market value at US\$136.55 billion and anticipated generative AI becoming a US\$1.3 trillion market by 2032. A recent survey by New Vantage Partners found that 91.7 percent of top organizations are investing in AI activities, and according to a study by IBM, 54 percent of organizations using AI reported improvements in cost savings and efficiencies. With advancements in machine learning, automation, and natural language processing, AI is revolutionizing traditional business models in unprecedented ways and is poised to drive a new wave of innovation across industries. AI offers a vast array of capabilities with limitless potential, including automating repetitive tasks, providing predictive insights, enabling personalized customer experiences, optimizing supply chain management, and improving risk assessment.

The need for efficiency has led to rapid technological advancements in the field of AI. It is no longer limited to technology organizations. Businesses from all industries are realizing the promise that AI brings across the enterprise, from marketing to operations.

By embracing the AI revolution, leaders can position themselves at the forefront of innovation and growth. In this tech-driven economy, embracing game-changing technologies such as AI can enhance various business functions and propel your organization forward.



KEY TAKEAWAYS



Learn AI's current capabilities and applications—and its future potential



Leverage generative AI models and simulations for predictions



Organize and manage successful AI application projects



Grasp the technical aspects of AI to effectively communicate with technical teams and colleagues



Learn how to avoid pitfalls associated with these new technologies



Build your leadership credibility with a certificate of completion from Berkeley Executive Education

WHO IS THIS PROGRAM FOR?

- Senior leaders including C-suite executives overseeing the integration of AI into their organization's business strategy
- Senior managers and executives involved with managing teams and AI-driven projects
- Functional business heads interested in exploring AI opportunities across business functions
- Mid-career professionals looking to bolster their career opportunities through new technologies
- Data scientists and analysts involved in research for business intelligence or data analytics where AI may be useful
- Professionals eager to upskill and advance in their career with the recent advancement in applications of AI in business

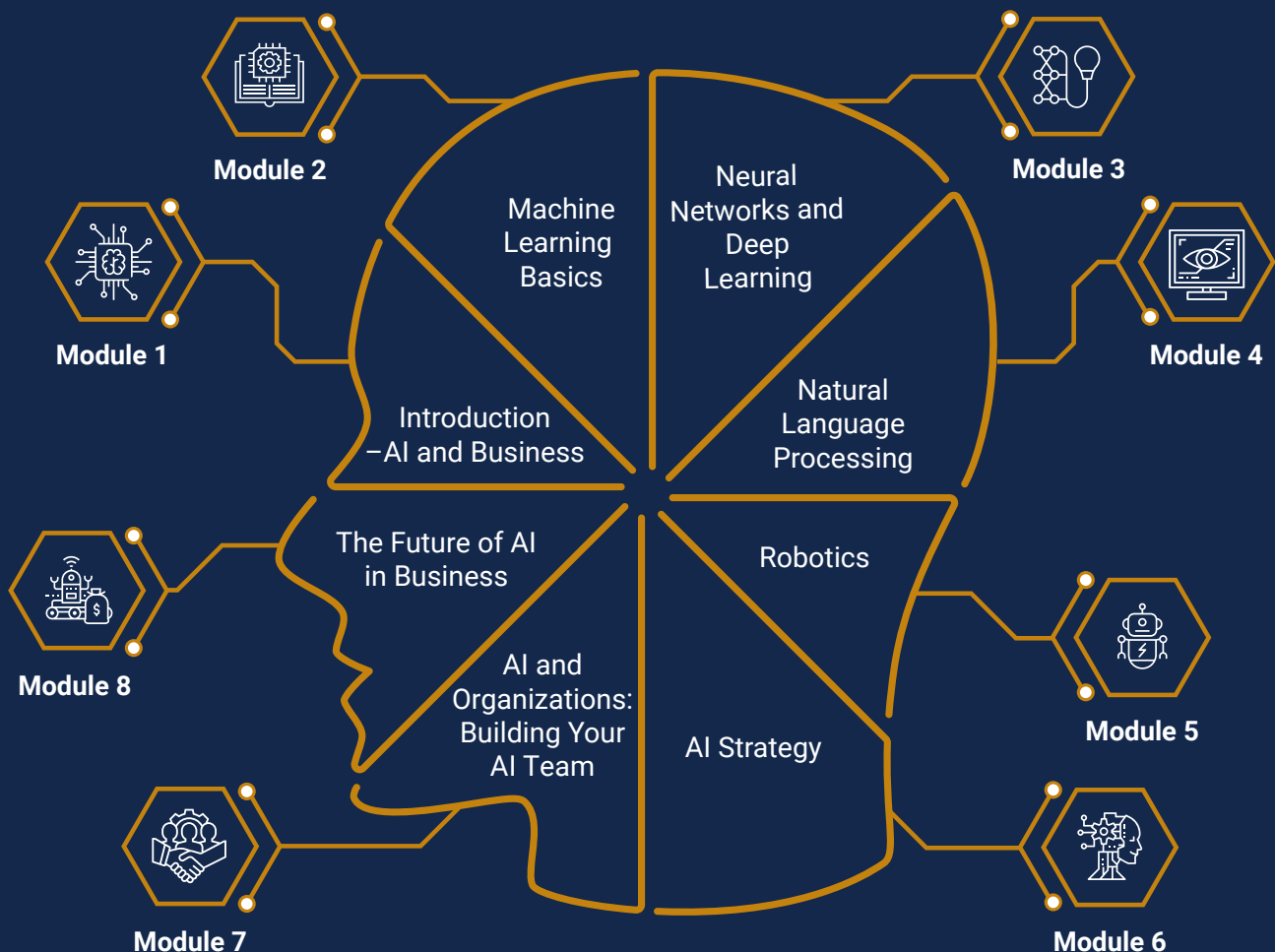
YOUR LEARNING JOURNEY

You will experience a hands-on approach that bridges the engineering and technical aspects of AI and its business applications. Leading faculty from both disciplines teach in the program, bringing their valuable industry expertise.

The program includes live and recorded sessions, case studies, assignments, applied learning opportunities, and interactive discussion groups. You will also benefit from four live teaching sessions, real-world examples, and a capstone

project. The live faculty sessions will delve into trending AI topics, such as the business and future of AI, prediction simulations, and building AI teams.

This program requires no engineering or technical experience. As the program progresses, you will learn the basics of AI technologies and how they can be applied to your organization. Through an engaging learning journey, you will gain a foundational understanding of AI and how it can be positioned to improve efficiency and effectiveness across your organization.



PROGRAM MODULES

Module 1

Introduction–AI and Business

- What Is AI?
- High-Level Overview of Technologies– Capabilities and Limitations
- AI Methods and Business Applications
- Machine or Humans? Interaction between AI and People

Module 2

Machine Learning Basics

- Supervised and Unsupervised Learning
- Training, Validation, Test
- The Importance of Data (Quantity and Quality)
- Obtaining and Managing Data for Machine Learning
- Descriptive Analytics, Predictive Analytics, and Algorithmic Bias

Module 3

Neural Networks and Deep Learning

- From Traditional Machine Learning to Neural Networks
- Deep Learning
- Convolutional Neural Networks
- Common Applications

Module 4

Key Applications: Computer Vision & Natural Language Processing

- How Machines See and Talk
- Computer Vision
- Natural Language Processing
- Recent Developments: GANs, RNNs

Module 5

Robotics

- Traditional Robotic Automation: What It Can/Cannot Do
- AI-Driven Automation: Robots with Eyes, Robots That Adapt
- Hardware Aspects
- The Automation Ecosystem
- Robotics Best Practices

Module 6

AI Strategy

- Implications of AI on Business Strategy: Developing & Executing an AI Strategy
- AI and Value Creation: AI as a Source of Competitive Advantage

Module 7

AI and Organizations: Building Your AI Team

- AI Experts and Supporting Functions in the Organization
- Embedding AI in the Organization
- The Challenges of Organizational Transformation

Module 8

The Future of AI in Business

- How Will AI Continue to Transform Business?
- What New Problems Will We Be Able to Solve?
- Ethical and Moral Issues
- Preparing for the Future of AI
- Intelligence & Augmentation: Humans and AI

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

Capstone Business Challenge Project

Across the eight modules, you will develop and refine an AI-related project or initiative for your own organization. The project culminates in a business case and plan that use AI to transform at least one aspect of the business. You have the opportunity to put the plan into action after testing its elements throughout the program. If you do not have an organizational project or initiative to develop, faculty will provide project ideas.



PROGRAM EXPERIENCE



Live teaching sessions
to deliver learning in real time



Cross-disciplinary approach
through diverse faculty



Real-world applications



Capstone project: AI initiative
for your organization



ORGANIZATIONAL EXAMPLES

In order to deepen your understanding of key concepts and encourage critical thinking, we will examine several example organizations.



Facebook



Google



HubSpot



Infinite Orbits



Starbucks



Tesla



Tailor Brands



United Airlines



Volvo



Zebra Medical Vision



Uber



Polgraf.ai



Humata.ai



HarvestCROO



Grail



Atomwise



Jasper



Everlaw



Kira



Phantom Auto



Regard



Companion Lab

Note: All product and organization names are trademarks or registered trademarks of their respective holders. The study of these products and/or organizations does not imply any affiliation with or endorsement by them.

CASE STUDY



Vodafone

Digital transformation has implications for organizational design. What is an appropriate change management strategy when implementing AI and machine learning? We'll tap Vodafone for insights.

Other case studies covered in this program are:

Skydio and Zipline, Self-driving cars, Warehouse and factory automation (Covariant)

PROGRAM FACULTY



ZSOLT KATONA

Professor of Marketing

Zsolt Katona holds a Ph.D. in computer science from the Eotvos University in his native Hungary and a Ph.D. in marketing from INSEAD France. He is a professor of marketing and the Cheryl and Christian Valentine Associate Professor at the Haas School of Business, University of California, Berkeley. He is an expert in online marketing strategy and social media. Zsolt's research focuses on online marketing strategy, networks, and social media. He studies how organizations can better take advantage of new internet technologies and how they can integrate them into their marketing mix. His research has appeared in leading scientific journals such as *Management Science*, *Marketing Science*, *Journal of Consumer Research*, *Journal of Marketing Research*, and *Journal of Applied Probability*. His research has been featured in Bloomberg Business News and the U.S. National Public Radio. He has consulting experience with companies such as Autodesk, IBM, Kelora Systems, Singtel, Telkomsel, and Vodafone.



THOMAS LEE

Associate Adjunct Professor, Research Scientist

Thomas Lee is an associate adjunct professor and research scientist in the Haas Operations and Information Technology Management Group at the Haas School of Business. He teaches and conducts research on information and communication technologies to support innovation and new product development. Specifically, he develops and applies text and data mining methods for processing user-generated content. His goal is to discover and select opportunities for product and service innovation. Recent research has mined the text of online customer reviews to induce market structure and mined electronic medical records to redesign emergency department healthcare service processes. He holds Ph.D. and M.S. degrees from MIT's Engineering Systems Division and B.A. and B.S. degrees in Political Science and Symbolic Systems (Artificial Intelligence) from Stanford University. He has served as a visiting scientist at the Computer Security Division of the National Institute of Standards and Technology, a research engineer at the MITRE Corporation, and as a contractor for DynCorp-Meridian supporting the Defense Advanced Research Projects Agency doing research on Internet privacy and security.



SAMEER B. SRIVASTAVA

Ewald T. Grether Professor of Business Administration and Public Policy | Co-Director, Computational Culture Lab | Co-Director, Berkeley Center for Workplace Culture and Innovation, Haas School of Business

Sameer B. Srivastava, an associate professor, studies the interplay of social group culture, individual cognition, and the relationships people build within and between groups. His research, often set in organizational contexts, uses computational methods to explore how these factors influence career outcomes.

His work has been published in leading journals, including the American Journal of Sociology, American Sociological Review, Administrative Science Quarterly, Management Science, and Organization Science. It has also been featured in The New York Times, Fortune, The Wall Street Journal, Financial Times, and Forbes.

Previously, Srivastava was a partner at Monitor Group (now Monitor Deloitte). He holds A.B., A.M., MBA, and Ph.D degrees from Harvard University.



PIETER ABBEEL

Professor UC Berkeley Electrical Engineering and Computer Sciences (EECS)

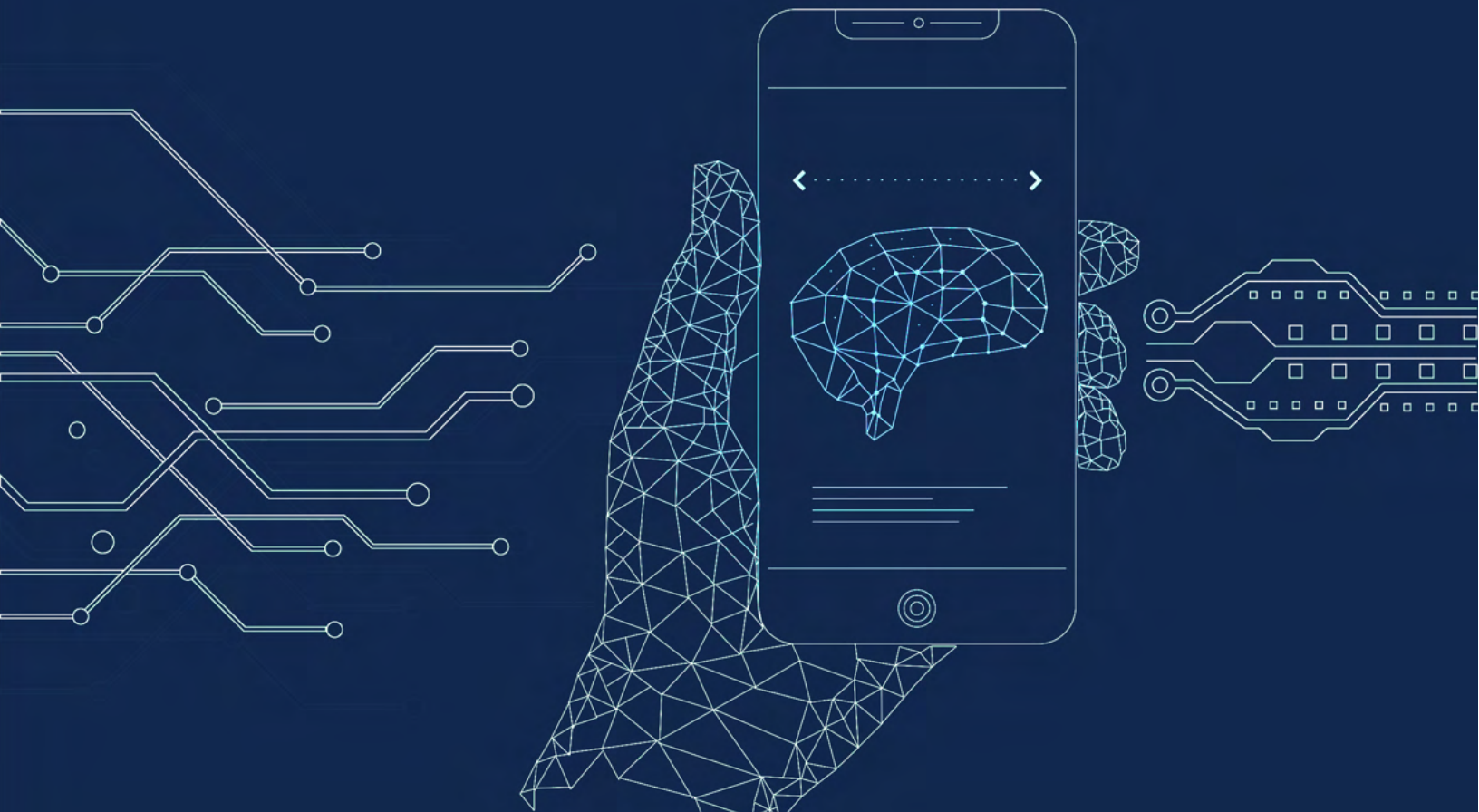
Pieter Abbeel is a professor at UC Berkeley's Electrical Engineering and Computer Sciences school and Director of the Berkeley Robot Learning Lab and co-director of the Berkeley Artificial Intelligence Research (BAIR) lab. He works in machine learning and robotics. In particular, his research focuses on making robots learn from people (apprenticeship learning), how to make robots learn through their own trial and error (reinforcement learning), and how to speed up skill acquisition through learning-to-learn (meta-learning). His robots have learned advanced helicopter aerobatics, knot-tying, and basic assembly, for example. Also, Abbeel, who has won numerous awards for his work, frequently hosts executive groups for lectures and discussions on recent advances and trends in AI. His work has been featured in publications such as *The New York Times*, *BBC*, *Bloomberg*, *Wall Street Journal*, *Wired*, *Forbes*, *Tech Review*, and *NPR*.



MATTHEW STEPKA

Visiting Scholar/Executive in Residence UC Berkeley Haas School of Business

Matthew Stepka is a visiting scholar and executive in residence at UC Berkeley Haas School of Business. In addition, he is managing partner at Machina Ventures, an investment firm focused on early stage, artificial intelligence, and data science-enabled organizations. Previously, he served as vice president for business operations/special projects (strategy) at Google, where he led and incubated strategic initiatives. Nowadays, he is also a public speaker on technology, particularly AI and blockchain, is reshaping society and the economy. Stepka has a B.S. in computer science from Case Western University and a J.D. from University of California Los Angeles School of Law.



PARTICIPANT TESTIMONIALS

"I really enjoyed interactions with other students, perspectives offered from different angles, and the reflections about what AI really is, the problems it can really solve (and the ones it can't) and finally, the most important, clear guidelines and practical examples of applications."

—**Romain Jourdan, Senior Director Technical Evangelist**

"Getting tactical with how to implement AI/ML into your organization was useful. The program was not just theory based, but gave us, as students, the tools necessary to become engaged in such conversations."

—**Dalain Williams, Technical Project Manager**

"The ability to take complex science and link it to real-world application and business decisions or cases (Vodafone) brought it all to life. It was the real-world application which made this worthwhile and 100 percent applicable."

—**Todd Zavodnick, CEO**

"The program gives you a clear view on how a business could adopt AI and how to spot opportunities and risks."

—**Hector Gonzalez, Customer Engineer**

"The capstone project and its ability to include all the dimensions involved in a real world scenario was great."

—Naveen Kolla, Manager, Technology Management

"The capstone project was the best part of this program because it made me apply most of what I learned simultaneously in finding a solution to a business challenge."

—Olabode Opeseitan, Chairman

"The program was thought-provoking in terms of how and why to apply AI. Not too tech orientated, but enough to give us a good top-level understanding."

—Gerald McGuire, Organization Owner

"Superbly organized, informative, and succinct."

—Wallace Andrew Pennington, AI/ML Strategist

"I like the balance between technical and non-technical. For people like me with only a basic understanding, it is a perfect fit."

—Theo Knegtel, CEO

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: Completing 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.



BerkeleyHaas

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 **Artificial Intelligence: Business Strategies and Applications** program can be 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:

- Get a 15 percent discount on the list price of future eligible Berkeley Executive Education programs.
- Activate an @haas.executivealumni.berkeley.edu email forwarding address.
- Get a 30 percent discount on the list price of future eligible programs after completion of your Certificate of Business Excellence.
- Receive 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.

[Learn More](#)

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 is designed to bring concepts to life, including:

- Byte-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:
articles, cases



Quizzes



Surveys



Assignments

To further personalize the program modules, live teaching sessions are scheduled during the program, often with Q&As. 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/industry experts such as program leaders and teaching assistants. Assignments are often linked to participants' real-world situations, making 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 more than 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.

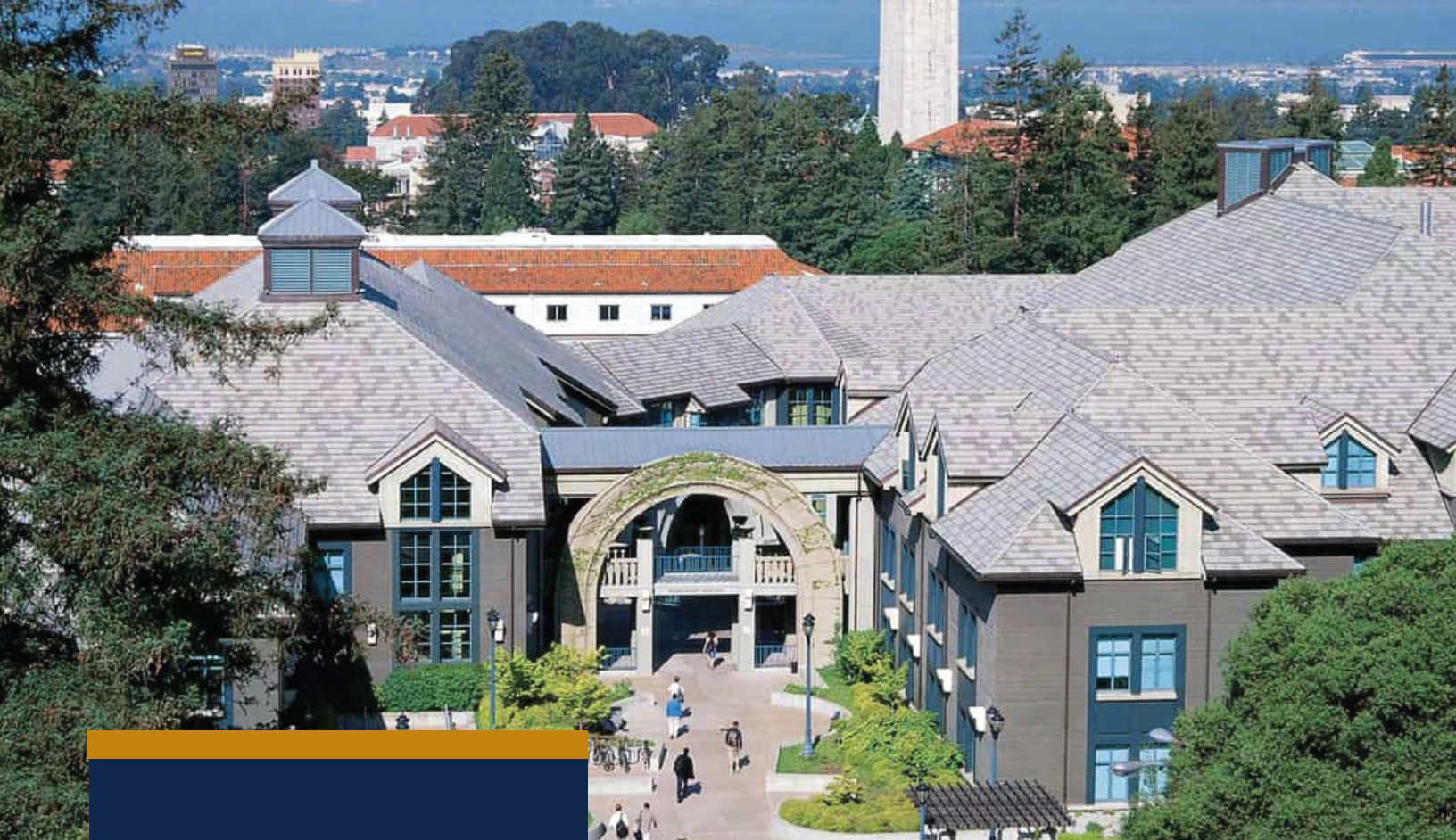
ABOUT THE HAAS SCHOOL OF BUSINESS

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 more than 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

\$2,950

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-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 100,000 students from more than 80 countries have benefitted professionally from Emeritus courses.



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