The Berkeley MFE
Master of Financial Engineering

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THE BERKELEY-HAAS DEFINING PRINCIPLES
Question the Status Quo
Confidence Without Attitude
Students Always
Beyond Yourself

Master of Financial Engineering
Leading Through Innovation
The Berkeley Master of Financial Engineering Program provides you with the knowledge and skills to prepare for a career in the finance industry. In one year, you will be ready to take a leading role in a fast-growing field that demands individuals who can apply their education and skills at the cutting edge of finance in buy-side and sell-side firms around the world.

A Professional Program
to launch your new financial engineering career

A proven track record of launching successful careers: built on a personalized approach provided by a program team with the connections, reputation, and knowledge necessary to help secure jobs at the most selective firms.

A rigorous one-year business school curriculum that gives you in-depth understanding of the underlying frameworks of financial markets and prepares you to work as a financial engineer after graduation, starting on day one.

Expertise of renowned faculty members who are recognized worldwide as some of the best minds in finance.

A collaborative and powerful network for life: comprised of diverse peers and alumni that you can leverage from your first day as a Berkeley MFE student.

“Innovation is the foundation of our entire Berkeley MFE Program – from the cutting-edge nature of the coursework to the highly personal and successful approach to job placement. Around the world, Berkeley MFE graduates are helping to shape the future of global finance.”

Rich Lyons
Dean, Haas School of Business
When you join the Berkeley MFE Program, you are one year away from turning your specialized training in trading, risk management, derivatives, and commodities investments into a successful career in finance, strategy, or risk assessment. Because of the school’s deep ties to global firms and its highly personalized career services, Berkeley-Haas has an unrivaled history of helping students secure top jobs with premier firms in the world’s leading financial markets. Employers seek out Berkeley MFE graduates because they demonstrate not only a mastery of powerful financial engineering tools, but also a solid understanding of the best practices for the changing technological, global, and human dimensions of finance.

Opening Doors to Future Success

with the tools and connections that will set you apart

A Proven Track Record
Throughout the year, the MFE program staff works hard behind the scenes to secure job opportunities at dozens of leading firms, and to seek out top candidates and match you to determine the best possible career. Despite the ever-changing economic environment, the Haas School’s record is impeccable—Berkeley MFE graduates receive job offers at each of the previous five years at the highest average starting salary of any similar program.

Continuous Personalized Career Services
From your first day as a Berkeley MFE student, the program office works to prepare you to achieve your career goals. Starting as soon as orientation week, group workshops, panels, networking events, and dinners offer valuable information specific to all phases of the career search. You also have access to a wide range of personalized services, including individual career planning, resume writing, and interview preparation. Berkeley-Haas also offers career and internship fair opportunities for MFE students in San Francisco and participates in the Chicago New York Fair organized by the AFE (American Association of Financial Engineers) that together draw more than 150 organizations.

The Internship Advantage
A highlight of the Berkeley MFE experience is your 12-week internship. This gives you hands-on experience and ongoing connections with practitioners at firms such as Citi, BlackRock, Goldman Sachs, and Morgan Stanley. These connections can often lead to careers at these firms. Your internship gives you immediate opportunities to refine your skills and marketability and helps you build your professional network.

Your Worldwide Network
Career support doesn’t end after graduation. As a Berkeley MFE student, you have access to one of the best professional networks on the planet. More than 160,000 business school graduates are connected by the robust Haas Alumni Network, with chapters in major cities around the globe. The Haas online alumni community, Haas@Cal, offers Haas students and alumni a searchable alumni directory, online job postings, bi-weekly email forwarding options, and various career resources.

100% of students seeking internships among the class of 2013 were placed with an average monthly salary of $7,253.

Alumni Action
Carolina Marquez, MFE 04
VP, BlackRock
San Francisco, California

As vice president in the financial modeling group at BlackRock, Marquez works on the trading floor, gathering up-to-the-minute data and continually updating the models in the firm’s portfolio management system. ‘I love the market,’ she says. ‘I enjoy the work, which allows me to use all the training I received at Berkeley.’ MFE and PhD in economics from UC Berkeley, respectively.

Marquez also likes the creativity involved in working with the mortgage market, which has a ‘huge behavioral element,’ she says. ‘People buy houses based on emotion. It’s a challenge to use math to model something that’s emotional.’

Global Connections
Alumni in Europe

Berkeley MFE alumni holding top jobs at leading firms across the globe. Some are currently working in Europe:

- Societe General Managing Director Krishan Rattan, MFE 03
- Goldman Sachs Vice President Delphine Bouyssarie, MFE 08
- Sator SPA Partner Luca Barone, MFE 05
- Acumen Global Partners Director Thomas LaRowe, MFE 04

More than 36,000 business school graduates are connected by the robust Haas Alumni Network, with chapters in major cities around the globe.
The Berkeley MFE Program’s highly regarded reputation in the finance community and its well-established relationships with managers and executives at the most prestigious firms provide you with an ideal gateway to the job you want after graduation. The program’s highly successful internship program places students at top firms all around the world. As a result, Haas has an unrivaled history of helping students secure top jobs—Berkeley MFE graduates received job offers in each of the previous four years at the highest average starting salary of any similar program. Berkeley MFE graduates quickly become well established members of premier firms in the world’s top financial markets, such as New York, London, and Tokyo.

2012-2013 Internship At-a-Glance

<table>
<thead>
<tr>
<th>Job Locations</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>56</td>
</tr>
<tr>
<td>Europe</td>
<td>4</td>
</tr>
<tr>
<td>Asia</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
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An Innovative Curriculum
preparing you to make an immediate impact

Anchored in the latest theories and best practices in quantitative finance, the Berkeley MFE curriculum prepares you to work as a financial engineer immediately after graduating. Designed exclusively for MFE students, courses are seamlessly integrated with one another, allowing the mathematical, statistical, and computer science methods to be incorporated with the theoretical framework and institutional setting in which they are applied.

Structured for Success
The MFE requires only one year of study, which makes it attractive to students with strong quantitative skills and focused career interests. The program kicks off with an informative and social week-long orientation, during which you’ll get to know other new students and gain a sense of what the classroom experience will hold. MFE students must complete 28 units of coursework, plus an internship or on-site project. Berkeley-Haas has an exceptional record of helping students secure internships, consistently placing more than 98 percent of students each year.

Applied Finance Project
In addition to the internship, MFE students are required to complete an applied finance project that develops or uses quantitative finance tools and techniques learned in the program or internship. This year, a $5,000 award sponsored by Morgan Stanley will be given to the best three-unit project.

Benefit from Industry Expertise
The curriculum also includes weekly Financial Practice Seminars featuring a diverse slate of finance practitioners. In the first term, speakers discuss jobs available to graduates of the MFE Program and the skills needed to contribute to a firm’s mission. In the second term, speakers provide insight into the way the financial world is changing: new products and needs; evolving data and information systems; and similar topics.

Curriculum Overview
Each semester represents eight weeks of study, offering a range of required and electives, and not necessarily aligned between fall and winter semesters.

Spring
Empirical Methods in Finance (2 units)
Introduction to Stochastic Calculus (2 units)

Summer
Derivatives: Quantitative Methods (2 units)
Fixed Income Markets (2 units)
Credit Risk Modeling (2 units)

Fall
Financial Risk Measurement and Management (2 units)
Financial Innovation in a Global Marketplace (2 units)
International Equity & Currency Markets (2 units)
Advanced Computational Finance (2 units)

Winter
Applied Finance Project (3 units)
Asset-backed Security Markets (2 units)
Behavioral Finance (1 unit)

Model of Financial Engineering Program - Haas School of Business

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Thought Leaders, Innovators, and Practitioners
at the forefront of new ideas

Pioneers of Financial Engineering

Many Haas School faculty members have long stood at the forefront of the quantitative finance industry. For example, Professor Mark Rubinstein is renowned for his work on the binomial options pricing model (also known as the Cox-Ross-Rubinstein model), as well as his early work on asset pricing. He is currently an associate editor of multiple journals in these areas, and many of his papers are frequently reprinted in survey publications. In 1993, he served as President of the American Finance Association, and in 1995, he was named International Financial Engineer of the Year.

In addition to having early innovators and scholars, the Berkeley MFE faculty also draws from some of the most successful minds in today's business community, including Lecturer Amnon Levy, head of portfolio research at Moody's Analytics, and Jing Zhang, head of research at Moody's Analytics. The faculty also includes BlackRock executives Ronald Kahn, managing director and global head of equity research, and Michael Melvin, managing director and head of currency research at UBS. The faculty also includes Deepak Agarwal, head of research at DCI; Eric Reiner, head of firm-wide risk control and methodology at UBS; Yu Meng, head of asset allocation at the California Public Employees' Retirement System; and Julia Belford, senior vice president of market strategies at Wedbush Securities.

A History of Shaping Business Policy

Berkeley MFE faculty have also played important roles in shaping national and international business policy, serving as consultants to industry leaders, and speaking at major business conferences and seminars. Professor Dwight M. Jaffee has been an advisor to the World Bank, the Federal Reserve System, the Office of Federal Housing Enterprise Oversight, and the US Department of Housing and Urban Development. Professor Nancy Wallace was recently selected to serve on the new Financial Research Advisory Committee of the Office of Financial Research charged with advising the US Department of Treasury on improving the quality of financial data and improving analysis of risks to the financial system.

A Cutting-Edge Learning Environment

Our new high frequency finance lab will give students the ability to manage and analyze tick-level data, including real-time data. With access to tick-level data, students will be able to research high-frequency trading strategies using high-performance computing, real-time data analytics, and real-time data processing tools. This lab will support students in the upcoming high frequency trading course, taught by Professor John O’Brien, and will be a key part of the MFE program. For this class, the lab will focus on historical and real-time equity data provided by NASDAQ.
A Collaborative Culture
cultivates a unique, dynamic community

Striving for Success
Resourceful, intelligent, energetic, and above all highly motivated: all of these hallmarks of Berkeley-Haas students are characteristic of Berkeley MFE students. Many have already achieved significant success in their careers, as well as in their prior academic endeavors, and many continue their education at leading universities to pursue advanced degrees in related areas of expertise. Most MFE students have backgrounds in quantitative disciplines upon entering the program.

A Wealth of Diversity
With more than 120 countries and more than 50 undergraduate institutions typically represented in each incoming class, the Berkeley-MFE Program attracts a diverse range of backgrounds and experiences. Because they are diverse and unique as individuals, Berkeley-MFE students contribute to the wealth of their classmates’ experiences while in school, and add great value to one another as fellow alumni in future endeavors around the world. The relatively small size of the MFE program permits students to get to know most members of their class—strong connections develop between faculty and students, and among students.

A Vibrant, Thriving Community
As a complement to their coursework, students also have the opportunity to participate in a wide range of extracurricular activities. The Institute of Financial Engineering (IFE) represents students interests to the MFE and Haas administrations and coordinates events specifically tailored to MFE students. Coming to Haas also means joining the dynamic community of a top-ten business school at a premier university. From networking mixers to annual conferences, guest speakers to school-wide events, there’s always something happening at Haas.

Maximum Talent. Minimum Risk.
A collaborative culture at Berkeley-Haas is integral to shaping its MFE students. Berkeley-Haas students question the status quo, possess confidence without attitude, think beyond their insight and importance as well as to know where they may not be examined carefully—both to understand even well respected theories must be beyond limits. It encourages me to accomplish challenges I did not even think I was capable of. This principle fits the Berkeley MFE Program since I am just the humble beginning of my learning experience.

Question the Status Quo

Confidence Without Attitude
To me, Confidence Without Attitude means that when I face a problem I feel confident I can solve, I do so without assuming that only my method is correct. We learn this attitude by example. We are expected daily by the faculty at Haas.

Students Always
"Going Beyond Yourself means putting beyond limits. It encourages me to accept challenges I did not think I could take on. I feel this principle fits the Berkeley MFE Program since it is just the humble beginning of my learning experience."

Aude Barthelmy, MFE 13
Internship: Citigroup, New York, New York
Previous degree: BS, Mathematics and Computer Science, ENSAE, Paris, France
Job prior to Haas: Equity Derivatives Structurer, HSBC, Paris, France

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Yutong Chen, MFE 13
Internship: JP Morgan, San Francisco, California
Previous degree: BS, Econometrics and Finance, University of Copenhagen.
Job prior to Haas: Data Integrity Analyst, Kapitza, LLC, Chicago, Illinois

"To me, Confidence Without Attitude means that when I face a problem I feel confident I can solve, I do so without assuming that only my method is correct. We learn this attitude by example. We are expected daily by the faculty at Haas.

Ritesh Sinha, MFE 13
Internship: Sun Trading, LLC, Chicago, Illinois
Previous degree: BS, Computer Science, IIT, Bombay, India
Job prior to Haas: Quant Strategy Consultant (PCS), Deutsche Bank Group, Mumbai, India

"To me, Confidence Without Attitude means that when I face a problem I feel confident I can solve, I do so without assuming that only my method is correct. We learn this attitude by example. We are expected daily by the faculty at Haas."
In addition to attending one of the premier business schools in the world, Berkeley MFE students earn a degree from a university whose name and reputation open doors around the globe. The mission of the University of California is to excel in research, teaching, and public service. Over the decades, this mission has developed a culture at UC Berkeley that stimulates greatness.

A Distinguished Record

The Berkeley MFE Program enjoys on the incredible breadth and depth of the University of California at Berkeley, whose graduate programs are consistently ranked among the best in the world, and whose undergraduate programs are among the most selective. The proof is in the university's distinguished record of Nobel-level scholarship, constant innovation, a concern for the betterment of our world, and consistently high rankings of its graduate programs in the US for the third decade in a row—of the 52 programs assessed, 48 were in the top 10 in their categories.

A History of Path-Bending Innovation

Since its founding in 1868, UC Berkeley has grown with the rapidly expanding population of California and has responded to the educational needs of the developing state. By the 1930s, research at UC Berkeley burgeoned in nuclear physics, chemistry, and biology, leading to the development of the first cyclotron, the isolation of the human polio virus, and the discovery of all the artificial elements heavier than uranium, including Berkelium and Californium. Twenty-one members of the UC Berkeley faculty have been awarded Nobels for these and subsequent achievements in science, literature, and economics. In 2011, the Times of London ranked UC Berkeley the 4th best university in the world. The National Research Council in 2010 awarded UC Berkeley the largest number of PhDs in the US for the third decade in a row—of the 52 programs assessed, 48 were in the top 10 in their categories.

A Legendary Campus Setting

The San Francisco Bay Area commonly designated the world’s most popular tourist destination—and for good reason. The area’s stunning natural beauty and seductively benign climate complete with a world-famous Olympic runs at Lake Tahoe. The Bay Area is one of the two places on earth where canoers and financial speculators live in the same valley of towering waterfalls and granite mountains, or ski the world-famous Olympic runs at Lake Tahoe. The Berkeley campus is perched on a hillside; its beautiful gardens, and some of the best bookstores anywhere.

The Perfect Location

With its exquisite glacier-carved valley of towering waterfalls and granite mountains, or ski the world-famous Olympic runs at Lake Tahoe. The Bay Area is one of the two places on earth where canoers and financial speculators live in the same valley of towering waterfalls and granite mountains, or ski the world-famous Olympic runs at Lake Tahoe. The Perfect location

The Berkeley Experience

a university second to none

UC Berkeley Academic and Faculty Distinctions

Ranked first nationally in the creation of PhD programs in the top 10 in their fields. National Science Foundation

226 American Association for the Advancement of Science Fellows

24 American Academy of Arts and Sciences Fellows

47 Fullbright Scholars

29 Guggenheim Fellows

83 MacArthur Fellows

52 National Academy of Engineering Awards

141 National Academy of Sciences Awards

28 National Medal of Science Awards

117 Sloan Fellows

4 Nobel Prizes

4 Pulitzer Prizes

1 National Poet laureate

UC Berkeley's University Library was ranked the #1 public research university library in North America by the Association of Research Libraries. In addition, the Haas School of Business is a leading institution in providing doctoral degrees to minorities and women

UC, Berkeley, the quintessential university town, complete with a multitude of coffee houses, shops, churches, theaters, world-famous government restaurants, charming neighborhood stores, beautiful gardens, and some of the best bookstores anywhere.