THINK IN THE NEXT

UCLA Anderson
SCHOOL OF MANAGEMENT
AS FINANCE BECOMES MORE QUANTITATIVE, THE MFE DEGREE OFFERS YOU A VALUABLE COMPETITIVE EDGE.
Learn how to apply your quantitative skills in today's financial markets.

Gain specialized knowledge and sought-after skills to advance your career.

Challenge yourself daily.

WHY AN MFE DEGREE?

• Learn how to apply your quantitative skills in today's financial markets.

• Gain specialized knowledge and sought-after skills to advance your career.

• Challenge yourself daily.

“I chose the UCLA Anderson MFE program because it was one of the few such programs taught within a business school. As a UCLA Anderson MFE, I was able to improve both my quantitative finance skills and my soft skills while building a professional network comprising both MFES and MBAs.”

ROMAN SANDOVAL VILLAMUERA ('14)

FROM:
Barcelona, Spain

PRE-MFE DEGREES:
B.Eng., B.A., Aerospace Engineering & Business Administration, Open University of Catalonia; M.S., Aerospace Engineering, Polytech University, Turin

CURRENT POSITION:
Associate, Risk and Quantitative Analysis, BlackRock, New York, NY
Brownian motion, PDEs, Monte Carlo simulations, Poisson distributions, serial correlations — this is the language of quantitative finance. Financial engineers apply cutting-edge quantitative modeling and analytical techniques in key positions within investment and commercial banks, asset management firms, hedge funds, insurance companies, trading firms, high-tech and multinational corporations. Financial engineers pursue careers in security design, structuring and trading, hedging and risk management, asset management, proprietary trading and corporate treasury management.
TOP-RATED FINANCE FACULTY
They’re known as trailblazers in financial engineering research and the practical implementation of current theory. UCLA Anderson faculty have developed ground-breaking financial models, many of which are widely used on Wall Street.

THE BUSINESS SCHOOL ADVANTAGE
Our innovative program affords a dynamic curriculum that combines theory, analytical skills and up-to-the-minute business practice. UCLA Anderson MFEs join one of the world’s largest and most renowned alumni networks, with more than 36,000 members in over 100 countries.

A DIVERSE MIX OF STUDENTS
From the Pacific Rim to Latin America, from Europe to the Middle East, students from around the globe are part of the MFE cohort. With an average of three years’ professional experience prior to starting the MFE, our students come from a range of academic backgrounds in engineering, finance/economics, mathematics, computer science, physics and business administration.

THE PERFECT LOCATION
An extraordinary international crossroads, Southern California is among the world’s most vibrant and exciting geographic areas, offering unparalleled access to commercial and financial opportunity, as well as virtually limitless cultural and recreational options.

OUR PROGRAM IS UNIQUE

“I chose the UCLA Anderson MFE program because of its strong reputation, excellent faculty and the supportive alumni network. It turns out that I made a great choice.”

XIRAN HOU (’13)
FROM: Beijing, China
PRE-MFE DEGREE: B.S., Finance, Peking University
CURRENT POSITION: Quantitative Financial Analyst, Moody’s Analytics, San Francisco, CA
FOCUSED CAREER DEVELOPMENT

The UCLA Anderson MFE program’s core goal is to expand our graduates’ abilities to meet the demand for talent in the financial marketplace.

The MFE career services team offers you personalized, one-on-one coaching to help you design, market and pursue your career interests. Our career development professionals will guide you and assist you with internships and full-time career placement.

“The UCLA Anderson MFE is a program where theory meets application, demonstrating how the most advanced concepts in financial engineering can be utilized to solve practical problems.”

IAN BROFF ('10)
FROM: San Francisco, CA
PRE-MFE DEGREE: B.S., Finance, Boston College
CURRENT POSITION: Vice President – Risk Manager, Market & Counterparty Risk Credit Strategies, Bank of the West, San Francisco, CA
A RIGOROUS AND WELL-BALANCED CURRICULUM

Our specialized MFE curriculum integrates mathematical, statistical and computer programming tools with finance theory application. MFE students are challenged with a financial engineering education that provides technical knowledge and the business expertise and skills to succeed in the financial industry.

MFE Curriculum Structure

<table>
<thead>
<tr>
<th>Foundation Building</th>
<th>Winter (January – March)</th>
<th>Spring (March – June)</th>
<th>Summer (June – September)</th>
<th>Fall (September – December)</th>
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<td>November – December</td>
<td>Corporate Finance</td>
<td>Computational Methods in Finance</td>
<td>Internship</td>
<td>Credit Markets</td>
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<tr>
<td>Introduction to Econometrics</td>
<td>Derivatives Markets</td>
<td>Quantitative Asset Management</td>
<td>Financial Institutions Seminars</td>
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<td>Financial Computing Workshops</td>
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Corporate-Sponsored Applied Finance Project

The Applied Finance Project (AFP) provides MFE students the opportunity to apply knowledge acquired in the classroom to solve a practical, real-world financial engineering problem. By partnering and interacting directly with a corporate client, students showcase their knowledge of quantitative finance, hone their communication skills, gain valuable exposure to potential employers, and delve more deeply into an area of interest beyond the classroom. Past projects have been sponsored by organizations such as PIMCO, Citi, PwC, Accenture, AXA Rosenberg and Research Affiliates.
“"I liked how the curriculum covered a broad range of theory and practice, from stochastic calculus to implementing quantitative trading strategy. As a data scientist at Airbnb I found these skills incredibly useful for understanding market data and deriving actionable business intelligence.”

TAN VACHIRAMON ('13)
FROM: Bangkok, Thailand
PRE-MFE DEGREES: M.Eng., Engineering with Computer Science; D.Phil., Communications Engineering, Oxford University
CURRENT POSITION: Data Scientist, Airbnb, San Francisco, CA

LEARN MORE ABOUT THE MFE PROGRAM.
VISIT US AT ANDERSON.UCLA.EDU/MFE
WHEN YOU GRADUATE FROM OUR PROGRAM, YOUR CAREER — AND YOUR LIFE — LEAP FORWARD.

“Gaining exposure to real financial questions in the collegial and collaborative academic environment that UCLA Anderson fostered was instrumental in preparing me for a career in the financial services industry.”

KAI ROSS ’10
FROM:
Davis, CA
PRE-MFE DEGREE:
B.Eng., Princeton University
CURRENT POSITION:
Quantitative Investment Associate, Goldman Sachs, New York, NY

“My UCLA Anderson MFE studies completely changed my life. They enhanced my knowledge in financial engineering and, most important, helped me prepare for my career.”

XIAOWANG ZHANG ’14
FROM:
Nantong, China
PRE-MFE DEGREE:
B.Eng., Computer Engineering, National University of Singapore
CURRENT POSITION:
Analyst, Complex Securities, Duff & Phelps, San Francisco, CA

“Coursework in my quantitative asset management class proved directly applicable to the work I’ve done over the past five years, and I would not have been as successful without it.”

VICTORIA QUACH ’10
FROM:
San Francisco, CA
PRE-MFE DEGREE:
B.A., Applied Mathematics, UCLA
CURRENT POSITION:
Associate, Multi-Asset Strategies, Model Portfolio & Solutions, BlackRock, San Francisco, CA
### Placement Statistics

#### Class Year

#### Percentage of Students Placed
- **3 months after graduation**: 2010 - 75%, 2011 - 80%, 2012 - 72%, 2013 - 94%, 2014 - 93%
- **5 months after graduation**: 2010 - 89%, 2011 - 92%, 2012 - 85%, 2013 - 100%, 2014 - 100%

#### Salary - Domestic
- **Average**: 2010 - $98,000, 2011 - $96,000, 2012 - $95,000, 2013 - $93,800, 2014 - $83,000
- **Median**: 2010 - $95,000, 2011 - $100,000, 2012 - $95,000, 2013 - $100,000, 2014 - $85,000
- **Range**: 2010 - n/a, 2011 - $70k – $155k, 2012 - $80k – $120k, 2013 - $90k – $100k, 2014 - $60k – $105k

#### Salary - International
- **Average**: 2010 - $95,700, 2011 - $75,000, 2012 - $87,200, 2013 - $88,655, 2014 - $85,000
- **Median**: 2010 - $95,000, 2011 - $93,000, 2012 - $85,000, 2013 - $90,000, 2014 - $90,000
- **Range**: 2010 - n/a, 2011 - $70k – $155k, 2012 - $80k – $120k, 2013 - $90k – $105k, 2014 - $60k – $120k

#### Aggregate Salary Data
- **Average**: 2010 - $98,000, 2011 - $90,857, 2012 - $88,000, 2013 - $88,000, 2014 - $84,000
- **Median**: 2010 - $95,000, 2011 - $95,000, 2012 - $85,000, 2013 - $85,000, 2014 - $85,000
- **Range**: 2010 - $70k – $155k, 2011 - $70k – $120k, 2012 - $60k – $165k, 2013 - $60k – $165k, 2014 - $60k – $120k

#### Location
- **New York**: 2010 - 7%, 2011 - 9%, 2012 - 24%, 2013 - 22%, 2014 - 18%
- **San Francisco**: 2010 - 39%, 2011 - 30%, 2012 - 10%, 2013 - 25%, 2014 - 10%
- **Asia**: 2010 - 3%, 2011 - 17%, 2012 - 10%, 2013 - 3%, 2014 - 5%
- **Other US Cities**: 2010 - 3%, 2011 - 4%, 2012 - 24%, 2013 - 22%, 2014 - 26%
- **Other Countries**: 2010 - - 5%, 2011 - - 5%, 2012 - - 5%, 2013 - - 5%, 2014 - 3%

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### Employers
- Accenture
- Axioma
- BlackRock (2)
- Capital Group
- Duff & Phelps
- E&Y (2)
- Fannie May
- Goldman Sachs
- Green Street Advisors
- Hyundai Capital
- Interactive Data Corporation
- InvestBank Corp.
- Mellon Capital
- Morgan Stanley
- Motolease
- MSCI
- MUFG Union Bank (4)
- NY Federal Reserve
- Pacific Life (2)
- PwC
- Sabra Health Care
- SCE
- SRR (2)
- State Farm
- State Street
- TPG
- Western Asset Management
- Wilshire Associates
- World Quant

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### Sample Job Titles
- Acquisition Associate
- Actuarial Analyst
- ALM Modeling Analyst
- Analyst
- Associate Product Manager
- Associate / Sr. Associate
- Business Systems Analyst
- Financial Engineer
- Investment Analyst
- Price Forecasting Analyst
- Quant Analyst
- Quant Associate
- Quant Researcher
- Quant Risk Analyst
- Research Analyst

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**Placement Statistics**

**2014 Full-Time Hiring Organizations**

**EMPLOYERS**
- Accenture
- Axioma
- BlackRock (2)
- Capital Group
- Duff & Phelps
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- Fannie May
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- Sabra Health Care
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- State Street
- TPG
- Western Asset Management
- Wilshire Associates
- World Quant

**SAMPLE JOB TITLES**
- Acquisition Associate
- Actuarial Analyst
- ALM Modeling Analyst
- Analyst
- Associate Product Manager
- Associate / Sr. Associate
- Business Systems Analyst
- Financial Engineer
- Investment Analyst
- Price Forecasting Analyst
- Quant Analyst
- Quant Associate
- Quant Researcher
- Quant Risk Analyst
- Research Analyst

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**mfe@anderson.ucla.edu**
Class of 2015 Profile

Total Class Size: 66

- 46 Males
- 20 Females

Average age at admittance: 26 years

Previous Employers
- American Express
- AVIC Securities
- Bank of China
- Capital One
- China Telecom
- Chrysler Group
- CITIC Securities Co.
- Citigroup
- EnTech Engineering
- Erste Group Bank AG
- Goldman Sachs
- IBM
- ION Trading
- JP Morgan
- Kayton Inc.
- Northrop Grumman
- NXP Semi Conductors
- Quant Economics
- Saudi Credit and Savings Bank
- S&P

International Students: 79%

13 Nations of Origin
- Austria • Canada • China
- Chile • India • Iran • Korea
- Lebanon • Montenegro
- Saudi Arabia • South Africa
- Taiwan • United States

Graduate Majors
- Engineering 47%
- Computer Science 7%
- Business 9%
- Math / Stats 6%
- Finance / Econ 6%

Undergrad Majors
- Economics 19%
- Finance / Econ 19%
- Business 15%
- Other 6%
- Math / Stats 6%

Average Quant Gmat Score: 166/94%
Average Total Gmat Score: 710/92%
Average Undergrad Gpa: 3.67
Average Graduate Gpa: 3.7

CFA Level Higher: 33%

Contact: mfe@anderson.ucla.edu

PREVIOUS EMPLOYERS

American Express • AVIC Securities • Bank of China
Capital One • China Telecom • Chrysler Group
CITIC Securities Co. • Citigroup • EnTech Engineering
Erste Group Bank AG • Goldman Sachs
IBM • ION Trading • JP Morgan
Kayton Inc. • Northrop Grumman
NXP Semi Conductors • Quant Economics
Saudi Credit and Savings Bank • S&P
OUR DIVERSE STUDENT BODY ENTERS THE MFE WITH A RANGE OF EXPERIENCES

“As a world-class business school, the UCLA Anderson brand definitely generated additional buzz for my résumé.”

BO WANG (’13)
FROM: Shenzen, China
PRE-MFE DEGREES: B.A., Mathematics and Financial Economics, University of Rochester
CURRENT POSITION: Associate Vice President of Business Intelligence, Morgan Stanley, New York, NY

“The right mix of finance, math, statistics and programming in the courses offered by the UCLA Anderson MFE program helped me leverage my background toward a career in quantitative finance.”

MAHEE SRINIVASAN (’14)
FROM: Bangalore, India
PRE-MFE DEGREE: B.Com., Accounting and Business Management, Bangalore University; Graduate Diploma, Statistics and Operations Research, Royal Melbourne Institute of Technology
CURRENT POSITION: Risk Analytics Associate, Federal Reserve Bank of New York, New York, NY
ADMISSIONS GUIDELINES

The UCLA Anderson MFE is a 13-month full-time program, beginning in November and ending in December of the following year.

MFE students possess a strong quantitative skill set and computational expertise. Applicants are expected to fulfill key admissions criteria and application requirements.

ADMISSIONS CRITERIA

• Four-year bachelor’s degree from a college or university of fully recognized standing.
• Degree in computer science, engineering, mathematics, physics, statistics or economics.
• Strong quantitative aptitude and analytical skills. This includes coursework in linear algebra, multivariate calculus, differential equations, numerical methods or analysis, and advanced probability and statistics.
• Proficiency in computer programming and mathematical tools (C++ and Matlab).
• Excellent writing, speaking and presentation skills in English.

APPLICATION REQUIREMENTS

• Scanned copies of transcripts from all educational institutions attended must be uploaded in the online application.
• GMAT or GRE scores.
• A non-refundable application fee of $200.
• 2 essays.
• 2 letters of recommendation.
• TOEFL or IELTS for international students.
• Submit application online.

RECOMMENDED QUALIFICATIONS

• Work or research experience in a quantitative discipline.
• Pass a course in macroeconomics.
• Progress toward obtaining CFA and/or FRM certification.
• Experience with statistical and econometric applications (R and SAS).
RECOMMENDED PREPARATION

It is recommended that students review and enhance their knowledge and skills as needed before the start of the MFE program.

1 PREPARATORY CLASSES

UCLA Anderson MFE Preparatory Online Classes:

• Math, Statistics and Probability
• C++ for Financial Engineering

Both are offered prior to the start of the MFE program. They are open to the general public and highly recommended for all incoming UCLA Anderson MFE students.

2 PREPARE FOR AND PASS THE CFA LEVEL I EXAM by June before starting the MFE. Students will not have time to prepare for the CFA exam during the MFE program.

3 PASS A COURSE in macroeconomics.

4 OTHER COMPUTER PROGRAMMING PREP

• R and SAS: Introduction to R and SAS courses offered by the UCLA Institute for Digital Research and Education.
• MATLAB: A series of MATLAB workshops will take place during the Foundation Building Module. The workshops will cover basic MATLAB and the toolboxes that will be used throughout the MFE program.

5 READING LIST

“Options, Futures & Other Derivatives”
by John C. Hull

“Heard on the Street: Quantitative Questions from Wall Street Job Interviews” by Timothy Falcon

“Corporate Finance”
by Ivo Welch (available online)

“A Practical Guide to Quantitative Finance Interviews”
by Xinfeng Zhou

“My Life as a Quant: Reflections on Physics and Finance”
by Emanuel Derman

“How I Became a Quant: Insights from 25 of Wall Street’s Elite”
by Barry Schachter

WE INVITE YOU TO LEARN MORE ABOUT PREPARATION FOR THE MFE PROGRAM.

Visit us at anderson.ucla.edu/MFE-Prep

mfe@anderson.ucla.edu
What is financial engineering?

Financial engineering refers to the mathematical modeling, quantitative research and analysis involved in pricing, selling, trading and investing in a wide range of financial instruments. These can include stocks, bonds, foreign currencies, commodities and a virtually unlimited array of so-called derivatives (options, futures and swaps) whose payoffs are linked to prices of underlying assets.

“I really enjoyed the UCLA Anderson MFE’s geographical and professional diversity. We were all different in terms of age, work experience and wisdom; but at the same time we were all the same in terms of our thirst for knowledge and our desire to make an impact.”

VITALII IHNATIUK (‘14)

FROM: Kiev, Ukraine

PRE-MFE DEGREE:
B.A., Economics, National University of Kiev

CURRENT POSITION:
Analyst, Electronic Trading Strats Team, Morgan Stanley, New York, NY
Where do financial engineers work?

Financial engineers pursue rewarding careers in a variety of areas: some work within banks that create, sell and trade financial instruments, also known as the “sell side”; and many work on the “buy side” within investment firms, mutual funds, hedge funds or corporations and governments that need to earn a return on their investors’ money, raise capital and manage various risks.

“As a UCLA Anderson MFE student, I was able to network with hedge fund managers and secure an internship offer from an industry advisor on the MFE Board. The experience helped me become more qualified to pursue a career as a quantitative researcher in the hedge fund world in New York.”

ANDREA OVELAR ('14)
FROM:
Caracas, Venezuela

PRE-MFE DEGREES:
B.S., Electrical Eng., University of Simón Bolívar; M.S., Computer and Communication Networks Engineering, Polytechnic University of Turin

CURRENT POSITION:
Quant Research Associate, TPG, New York, NY
COMPLEX ASSET ANALYST
Values financial derivatives and other complex securities, and analyzes equity/debt/commodities market data and history using time series analysis, Monte Carlo simulation, multivariate statistics and other quantitative techniques.

RISK ANALYST
Responsible for producing daily and weekly market risk reports that monitor factor sensitivity, Value At Risk (VAR) and issuer exposure against independent market risk limits. The analyst performs audits and stress tests and maintains data metrics to measure the market risk infrastructure.

“...The MFE program taught me how best to apply my technical and analytical skills toward the financial services industry while giving me the support of UCLA Anderson and access to world-class faculty.”

TODD GROTH (’10)
FROM:
San Diego, CA
PRE-MFE DEGREES:
B.S., Mechanical Engineering, UC San Diego; M.S., Mechanical Engineering, UCLA
CURRENT POSITION:
Vice President, Investcorp, New York, NY

Examples of Financial Engineering Jobs

Sample of Internship and Full-Time Employers

Barclays Capital
BlackRock
Bloomberg
China International Capital Corporation (CICC)
Citigroup
Credit Suisse
Deutsche Bank
DRW Trading
Duff & Phelps
FactSet
Federal Reserve Bank of New York
First Quadrant
Franklin Templeton Investments
Goldman Sachs
Google
KPMG
Mellon Capital
Moody’s
Morgan Stanley
MUFG Union Bank
Nomura Investment Bank
Oppenheimer Funds
PAAMCO
PIMCO
PwC
Research Affiliates
ROW Asset Management
State Street
Susquehanna International Group
TPG
TransMarket Group LLC
Thomson Reuters
Wilshire Associates
What is financial engineering?
Financial engineering refers to the mathematical modeling, quantitative research and analysis involved in pricing, selling, trading and investing in a wide range of financial instruments. These can include stocks, bonds, foreign currencies, commodities and a virtually unlimited array of so-called derivatives (options, futures and swaps) whose payoffs are linked to prices of underlying assets.

ENTRY-LEVEL QUANT STRATEGIST
Performs statistical and economic research to develop new investment strategies and improve current investment strategies; applies risk control methodologies related to classic hedge fund strategies and researches portfolio management; analyzes performance attribution.

DESK STRATEGIST
Responsible for creating valuation models, trading strategy analytics and risk and valuation tools used by traders and fellow desk strats to better understand risk and to better identify market opportunities.

HEDGE FUND STRATEGY RESEARCHER
Performs statistical and economic research to improve and develop new investment strategies; implements risk control methodologies related to different strategies; analyzes portfolio performance attribution; and performs daily account rebalancing.

ALGORITHMIC TRADER OR DEVELOPER
Works closely with other traders in identifying new markets and strategies most suitable for algorithmic trading; designs and implements new algorithms and optimizes their performance.