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.

Corporate-Sponsored Applied Finance Project

MFE Curriculum Structure

WINTER
January – March
- Corporate Finance
- Empirical Methods in Finance
- Derivative Markets
- Computational Methods in Finance

SUMMER
June – September
- Internship
- Applied Finance Project

SPRING
April – June
- Fixed Income Markets
- Financial Risk Management
- Special Topics in Financial Engineering (choose 2)
  - Data Analytics and Machine Learning
  - Financial Innovation
  - Quantitative Asset Management

FALL
September – December
- Investments
- Financial Accounting
- Stochastic Calculus
- Econometrics
- Financial Computing Workshops
- Applied Finance Project
- Special Topics in Financial Engineering (choose 2)
  - Advanced Stochastic Calculus
  - Behavioral Finance
  - Credit Markets
  - Statistical Arbitrage

A RIGOROUS AND WELL-BALANCED CURRICULUM

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MASTER OF FINANCIAL ENGINEERING

110 Westwood Plaza
Entrepreneurs Hall, Suite C-401
Los Angeles, CA 90095-1481
mfe@anderson.ucla.edu
(310) 825-3103
anderson.ucla.edu/mfe

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

MASTER OF FINANCIAL ENGINEERING
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?

“...I chose the UCLA Anderson MFE for the cutting-edge curriculum, renowned faculty and business school advantage. The program provided me with a solid understanding of modern financial theory and quantitative analysis. The first-class education I received from Anderson has ignited my career in business finance.”

GEORGE BONEBRIGHT (’16)
FROM:
San Diego, CA
PRE-MFE DEGREE:
B.S., Electrical Engineering, United States Naval Academy
CURRENT POSITION:
Operations Analyst, Facebook, Menlo Park, CA
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, corporate treasury management and data science.
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.

“...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
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MFE Curriculum Structure

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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:
Quantitative Researcher, Kemnay Advisory Services, 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.

Sample of Internship and Full-Time Employers

AllianceBernstein
AQR
Bank of America
Barclays Capital
BlackRock
Bloomberg
Capital Group
China International Capital Corporation (CICC)
Citigroup
Credit Suisse
Deutsche Bank
Dimensional Fund
DRW Trading
Duff & Phelps
FactSet
Federal Reserve Bank of New York
First Quadrant
Franklin Templeton Investments
Goldman Sachs
Google/Alphabet
Jane Street
KPMG
Mellon Capital
McKinsey & Company
Moody’s Analytics
Morgan Stanley
MUFG Union Bank
Société Générale
State Street
Susquehanna International Group LLP

Examples of Financial Engineering Jobs

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"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: Director of Quant Research, Risk Premium Investment Management Company, New York, NY

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continued on next page
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CLASS OF 2018 PROFILE

TOTAL CLASS SIZE: 88

Undergrad Majors
- Engineering: 40%
- Other: 9%

Graduate Majors
- Engineering: 31%
- Finance/Economics/Business: 24%
- Computer Science: 4%
- Finance/Economics/Business: 24%
- Math/Stats: 11%
- Physics: 4%

91% INTERNATIONAL STUDENTS
- Canada
- Chile
- China
- Germany
- India
- Iran
- Macau
- Netherlands
- Republic of Korea
- Taiwan
- Turkey
- United States

12 NATIONS OF ORIGIN 1 STUDENT BODY

MFE countries of origin

710/92% AVG TOTAL GMAT RESULT
168/95% AVG QUANT GRE SCORE
28% CFA LI OR HIGHER

PREVIOUS EMPLOYERS
- Accenture
- Bank of China
- Bank of Spain
- BNP Paribas
- Boeing
- China Galaxy Securities
- CIBC Capital Markets
- CitiGroup
- Commerzbank
- Credit Suisse
- Deloitte
- Deutsche Bank
- Ernst & Young
- Federal Reserve
- Goldman Sachs
- HSBC
- Intel Corporation
- J.P. Morgan
- KPMG
- Moody’s Analytics
- Morgan Stanley
- Nomura
- PwC
- RBL Bank
- Simpson Gumpertz & Heger
- UBS
- WorleyParsons

Grade Point Average
- Undergrad Avg: 3.58
- Graduate Avg: 3.80

mfe@anderson.ucla.edu
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 DEGREE: B.A., Mathematics and Financial Economics, University of Rochester
CURRENT POSITION: Quantitative Engineer, Western Asset, Los Angeles, CA

"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 DEGREES: 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
The UCLA Anderson MFE is a 15-month full-time program, beginning in September 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 GUIDELINES

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 (R, C++ and Python).
- 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).
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.

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.

PASS A COURSE in macroeconomics.

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.

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

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
Coursework in my quantitative asset management class proved directly applicable to the work I’ve done over the past seven 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: Vice President, Model Portfolio and Solutions, BlackRock, Hong Kong

“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: Technology Strategist, 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.”

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"Upon graduation, my post-MFE career options included going into prop trading, going back to investment banking or looking for something different. Being in California among fintech entrepreneurs and learning about the ground-breaking work that larger tech companies are doing solidified my decision to focus my job search on finance-related roles in the tech industry."

KATE MAPSTONE (’16)
FROM: London, England
PRE-MFE DEGREE: B.S., Physics, Durham University
CURRENT POSITION: Quantitative Financial Analyst, Google, Sunnyvale, CA

For a list of hiring organizations, visit anderson.ucla.edu/mfe
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