

# MASTER OF SCIENCE IN QUANTITATIVE FINANCE

Prepare for the Future of Finance



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UNLV | LEE BUSINESS SCHOOL

## EMPOWER STUDENTS TO REACH THEIR POTENTIAL AND PREPARE FOR THE FUTURE OF FINANCE

The Master of Science in Quantitative Finance (MSQF) at UNLV is an innovative, leading-edge, and affordable 12-month degree program. Students will obtain strong knowledge of finance, learn advanced statistical and econometric skills to analyze large financial datasets (e.g., CRSP, Compustat, Execucomp, Institutional Shareholder Services, Factset, Wharton Research Data Services), and gain exposure to the latest fintech applications.

### Program Highlights

- The most innovative program that prepares students for the future of finance.
- Courses taught by research-active faculty with Ph.D. degrees from reputable universities who bring the most current subject knowledge into the classroom.
- A STEM-designated program that allows international students to work in the U.S. for 36 months after graduation without a work visa.
- Preparation for obtaining the Chartered Financial Analyst (CFA) designation, one of the highest distinctions in the investment management profession.
- UNLV is among the top three percent of U.S. universities that receive the “very high research activity” designation by the Carnegie Foundation. Lee Business School is among the top one percent of business schools worldwide that hold dual accreditation in business and accounting by AACSB.

### Program Snapshot

Credits needed to complete program: 30

Core credits: 18

Elective credits: 12

Full-time option: 12-months with a fall semester start

**Culminating Experience and Graduation Requirements:** A capstone project is a required culminating experience for the MSQF program and should apply knowledge obtained from the coursework to a project involving significant data analysis using large financial datasets. The capstone project will be a group project of 4-5 students working on a company project or research project identified by faculty or the students. To graduate, a minimum of 30 credit hours of MSQF program course work (excluding prerequisites) is required with an overall GPA of at least 3.00.

**Class Availability:** Courses will be offered primarily in the late afternoon or early evening and meet once or twice a week.



## Core Course

- Econometrics I, Statistical Modeling (ECO 770)
- Advanced Corporate Finance (FINQ 708)
- Investment Management (FINQ 710)
- Corporate Finance Modeling (FINQ 761)
- Investments Modeling (FINQ 762)
- Capstone Project (FINQ 773)



## Elective Courses

- Financial Statement Analysis and Valuation (FINQ 754)
- Special Topics in Corporate Finance (FINQ 757)
- Quantitative Investment Strategies (FINQ 763)
- Derivatives and Risk Management (FINQ 764)
- Fixed Income Securities (FINQ 765)
- Fintech (Financial Technology) (FINQ 766)
- CFA Level I Prep (FINQ 721)
- Finance Internship (FINQ 781)
- Finance Independent Study (FINQ 790)
- Econometrics II (ECO 772)

At most one elective from the following existing MBA courses:

- Applied Topics in Finance (FIN 709)
- Financial Markets and Institutions (FIN 712)
- Risk Management (FIN 740)
- International Financial Management (FIN 750)

The number of electives offered each year will depend on enrollment.

## Select Course Descriptions

### **CORPORATE FINANCE MODELING (FINQ 761):**

This course will teach how to use statistical software to analyze large financial databases to facilitate corporate financial decision making.

Examples of statistical software include Excel, SAS, and Stata. Examples of financial databases include Compustat, Execucomp, and Factset.

Advanced statistical and econometric methods will be covered, such as univariate analysis, regression methods, panel data analysis, statistical prediction, and Monte Carlo simulation.

### **INVESTMENTS MODELING (FINQ 762):**

This course will provide a strong knowledge of econometric techniques and programming skills needed to manipulate large financial data sets. Widely used statistical factor models are developed to form tradable portfolios using firm-specific characteristics (e.g., market cap and momentum) and market information (e.g., interest rate and GDP growth). The objective is to provide master's level instruction (both theory and application) for topics on asset pricing, market efficiency, and statistical estimation. This course builds a solid empirical foundation for implementing quantitative techniques of selecting equities commonly used by industry practitioners.

### **FINTECH (FINANCIAL TECHNOLOGY) (FINQ 766):**

This course will expose students to different fintech applications. Various topics on blockchain technology will be covered. Analysis of non-numerical data (textual analysis) will also be covered. Finally, students will be exposed to various machine learning techniques such as random forests, regression trees, LASSO, and other predictive analytic techniques which are useful in applications where predictive performance is important.

### **SPECIAL TOPICS IN CORPORATE FINANCE (FINQ 757):**

The course focuses on selected topics in corporate finance including mergers & acquisitions, other corporate restructuring, corporate governance, and executive compensation. Classical studies, as well as recent developments in these areas are reviewed. Students will be exposed to both theory and empirical research that can help them develop their capstone projects.

### **DERIVATIVES AND RISK MANAGEMENT (FINQ 764):**

This course discusses the pricing of financial derivatives, such as options, futures and swaps and provides tools required to develop financially engineered products and solutions. The course will also cover real-world case studies to illustrate practical application of financial derivatives to solve complex risk management problems faced by corporations.

### **QUANTITATIVE INVESTMENT STRATEGIES (FINQ 763):**

This course introduces quantitative investment strategies used by active traders such as hedge funds and provides a methodology to analyze them. Through case studies and a portfolio management project, students will learn to use real data to back-test or evaluate several of the most successful trading strategies used by active investment managers. The course also covers issues related to performance measurement, transaction costs, risk management, and portfolio construction.

### **FINANCIAL STATEMENT ANALYSIS AND VALUATION (FINQ 754):**

This course develops a strong understanding of how to interpret financial statements using real company data. It examines how cash flows provide a vital link between the income statement and balance sheet, and how to use financial ratios to compare financials across firms as well as the performance of a firm over time. Major items on the assets and liabilities side of the balance sheet and how different accounting methods impact other financial statements will be studied. Topics on valuation of stocks will also be covered.

## Applicant Requirements

Satisfactory GMAT or GRE score is required. Preference is given to applicants with GMAT scores above 550 (or the GRE equivalent). Successful applicants need to have earned a B grade (or equivalent) in the following courses (or equivalent courses):

- Introductory Finance (FIN 301)
- Introductory Financial Accounting (ACC 201)
- Introductory Microeconomics (ECON 102)
- Introductory Statistics (ECON 261)
- Introductory Mathematical Economics (ECON 440) or Calculus I (Math 181)

Interested students, regardless of undergraduate major, are encouraged to apply. Applicants with undergraduate degrees in business or quantitative areas (such as Engineering, Mathematics, and Physics) can likely spend less time fulfilling the prerequisite requirements. But applicants without a business or quantitative background, after satisfactorily completing the prerequisite requirements, can certainly succeed in the program. The program is targeted at full-time students, but part-time enrollment is feasible with a longer time frame for completion. Students can apply for admission before all prerequisites have been met, but they must complete the prerequisite courses prior to starting the program.

## Potential Career Opportunities

### WHAT HAPPENS AFTER GRADUATION?

Graduates with quantitative finance degrees often work in various analyst or leadership positions in corporate finance, investment management, investment banking, hedge funds, mutual funds, private equity, risk management, trading, commercial banking, insurance, or regulatory institutions.

This program will prepare students interested in pursuing doctoral studies in finance.

The finance department at UNLV engages with reputable prospective employers to facilitate internship and placement opportunities for students. Networking opportunities through various speaker and student events are a part of student life on campus. The LEE Career and Professional Development Center and UNLV Office of International Students and Scholars office provides advising to students seeking employment opportunities. Based on reported data from other U.S. MS Finance programs, salaries of graduates obtaining employment in the U.S. often exceed \$65,000 per year on average.

## Tuition and Fees

### ESTIMATED PROGRAM TUITION AND FEES FOR 30 CREDITS OF MSQF COURSEWORK:

Nevada Residents: \$21,152.00  
Out-of-State U.S. Residents: \$39,259.00  
International Residents: \$39,549.00

### ESTIMATED ADDITIONAL EXPENSES:

Other UNLV Related Fees: \$ 1,240 per year  
Health Insurance (full time students): \$ 2,892 per year  
[Fall, Spring, Summer]  
Rent, Utilities, Food: \$ 17,644 per year  
Travel and Miscellaneous Personal Expenses:  
\$6,596 per year

## Program Deadlines

### APPLICATION DEADLINE FOR FALL ADMISSION

Regular Deadline: June 1 (domestic applicants)  
May 1 (International applicants)  
Priority Deadline 1: February 1  
Priority Deadline 2: March 1

Applicants are encouraged to apply and submit their GMAT/GRE scores by the priority deadlines. The earlier you apply, the greater chance of being accepted. Students who need to complete prerequisite courses in the Summer should apply early.

To apply, visit  
<https://www.unlv.edu/graduatecollege/futurestudents>  
Application Fee:  
\$95 for international applicants  
\$60 for domestic applicants

## Scholarships

All scholarship deadlines are dates prior to the fall semester you intend to start the program.

### GRADUATE COLLEGE SCHOLARSHIPS AND FELLOWSHIPS

Deadline: Dec. 1  
For more information and to apply visit  
[www.unlv.edu/graduatecollege/scholarships](http://www.unlv.edu/graduatecollege/scholarships)

### MERIT-BASED GRADUATE ASSISTANTSHIPS

Deadline: March 1  
3-4 assistantships chosen each year  
For more information contact Dr. Daniel Chi at [daniel.chi@unlv.edu](mailto:daniel.chi@unlv.edu)

### NEED-BASED SCHOLARSHIPS

Deadline: March 1  
Several scholarships are available each year  
For more information and to apply visit [www.unlv.edu/finaid](http://www.unlv.edu/finaid)

## Meet the Faculty

Courses required for the Master of Science in Qualitative Finance degree are taught by research-active faculty with Ph.D. degrees from reputable universities who bring the most current subject knowledge into the classroom. For more details about the faculty, visit [www.unlv.edu/finance/directory](http://www.unlv.edu/finance/directory).

Saeyoung Chang; Ph.D. Finance, Ohio State University; M.B.A, Indiana University  
Robert Chatfield; Ph.D. Economics, M.S. Economics, Purdue University  
Jianxin Daniel Chi; Ph.D. Finance, Texas A&M University; M.B.A, Idaho State University  
Seungmook Choi; Ph.D. Economics, M.A. Mathematics, University of Texas – Austin  
Steven Ho; Ph.D. Finance, University of North Carolina at Chapel Hill; M.A. Statistics, Yale University  
Melvin Jameson; Ph.D. Economics, M.A. Statistics, University of California – Berkeley  
Ankur Pareek; Ph.D. Finance, Yale University; M.S. Risk Management, London School of Economics  
Percy Poon; Ph.D. Finance, Louisiana State University; M.B.A, Texas State University  
Michael Sullivan; Ph.D. Finance, Florida State University; M.B.A, University of Florida  
Paul Thistle; Ph.D. Economics, M.S. Economics, Texas A&M University  
Zihan Ye; Ph.D. Finance, Penn State University; M.S. Financial Economics, Oxford University  
Andrew Jianzhong Zhang; Ph.D. Finance, University of Arizona; M.B.A, University of Louisiana

## About Lee Business School

Established in 1967 as the College of Business, the now Lee Business School is one of the largest schools at UNLV with approximately 3,500 undergraduate students, 500 graduate students, and 100 faculty and staff. The school offers 10 undergraduate majors, 14 minors and seven graduate degree (MBA, Executive MBA, MS in Accounting, MS in Data Analytics and Applied Economics, MA in Applied Economics, MS in Management Information Systems and MS in Quantitative Finance) programs. In addition to its scholastic endeavors, Lee Business School is home to three centers that connect faculty and students with business and industry. These include the Troesh Center for Entrepreneurship and Innovation, Center for Business and Economic Research, and Lied Institute for Real Estate Studies. With more than 20,000 graduates, the Lee Business School Alumni Chapter is one of the largest alumni chapters on campus.



## About University of Nevada, Las Vegas

UNLV is a doctoral-degree-granting institution of approximately 30,000 students and more than 3,000 faculty and staff that is classified by the Carnegie Foundation for the Advancement of Teaching as a research university with very high research activity. UNLV offers a broad range of respected academic programs and is on a path to join the top tier of national public research universities. The university is committed to recruiting and retaining top students and faculty, educating the region's diversifying population and workforce, driving economic activity through increased research and community partnerships, and creating an academic health center for Southern Nevada that includes the launch of a new School of Medicine. UNLV is located on a 332-acre main campus and two satellite campuses in Southern Nevada.

UNLV is located in the vibrant city of Las Vegas, a city that boasts one of the most connected airports in the world, most prestigious conventions, headquarters of leading hospitality, entertainment and gaming companies, world-class hotels, dining and entertainment, beautiful parks, miles of jogging and bike trails, numerous hiking and rock climbing opportunities, and year-round sunshine.

## CONTACT US

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