

Course Descriptions

ACT 670: Financial Statement Analysis

Covers Techniques for the analysis of financial statement, for decision-making purposes by investment analysts, lenders, creditors, professional accountants and other business professionals. Special emphasis is placed on understanding how well the firm's financial statements reflect the economic effects of firm's decision and actions. Financial statements forecasting is introduced and use of financial forecasts in equity and firm valuation is demonstrated.

FIN 650: Finance for Decision Making

Exposure to financial principles by discussions of the functions of financial management. Various tools available to assist financial managers in making decisions are discussed and applied to case analyses. Specific topics include working capital management, capital budgeting applications, capital structure management and financial analysis and planning.

FIN 655: Quantitative Methods in Finance

Statistical methods that have wide applicability in business and financial decision making. The use of statistical software such as Eview or SPSS, Excel and Morningstar for analytics and database purposes will be emphasized.

FIN 670: Investment Analysis

In-depth examination of fixed income and equity securities and an introduction to recent innovations in the field. Emphasis is given to the place of derivatives in the portfolio, the active management of risk and the management of retirement assets and pension funds.

FIN 672: International Financial Management

Understanding the forces that affect the relative value of currencies in international markets, covering the major problems encountered by the firm in financing international operations.

FIN 675: Fixed Income Analysis

Fundamentals of both bond markets and fixed income derivative markets. These fundamentals include pricing and interest rates, the risks of investing in bonds, and the role of bonds in an investment portfolio. Topics include: U.S. Treasury securities, U.S. agency securities, corporate bonds, asset backed securities, loans, international sovereign debt, and markets for derivatives based on fixed income instruments.

FIN 684: Finance Seminar

Cases in business finance that develop students skills for identifying problems, analyzing relevant material, and using appropriate financial theory for making decisions in simulated business settings. Some of the core concepts involved in mergers and acquisitions: valuation, negotiation, deal structuring, corporate strategy, financing are also covered

FIN 685: Mergers and Acquisitions Analysis

Merger and acquisition (M&A) activities with global markets, financial liquidity and the outlook for individual countries/ industries/ companies. Topics include: Why do companies engage in M&A activities, Does M&A add value, How do companies and investors improve the success of their M&A activities, why many transactions do not work well or add value? Some of the core concepts involved in mergers and acquisitions: valuation, negotiation, deal structuring, corporate strategy, financing, are also covered.

FIN 686: Ethics in Finance

This is an advanced business ethics course that addresses the ethical challenges in finance. The aim of this course is to understand the ethical issues that arise in the various areas of finance, which include financial markets, financial services, and financial management, and to develop an ability to resolve these issues effectively and responsibly within actual financial practice.

FIN 691: Options, Futures, and other Derivatives

Valuation and practical application for both hedging and speculation. Topics include the characteristics of options, forward contracts, futures, and swaps; arbitrage and the valuation of derivatives; creating value and profit diagrams; and the structure of the derivatives markets. Ethical and economic issues associated with the use of derivatives s reported in the current financial press are also covered.

FIN 692: Financial Risk Management

Definition, measurement and management of risk in financial institutions as well as non-financial corporations, including, in particular, oil and gas companies. Major techniques of risk management such as portfolio diversification, asset-liability management, static and dynamic hedging with derivatives, estimating default probabilities, calculating Value-at Risk, stress testing, scenario analysis, and risk allocation are studied.

FIN 693: Advanced Corporate Finance

Advanced work in the management of corporate funds. Selected topics from the various fields of financial activity with emphasis on trends, current problems and research are studied. The topics emphasized include: capital expenditure policies, long-term and short-term financing problems, dividend policies, mergers and consolidations, and trends in financial markets.

FIN 697: Financial modeling

The course is an introduction to computation finance and financial econometrics. The emphasis of the course is on making the transition from the theory of financial modeling to the empirical ("heuristic") model using real data. Microsoft Excel is the primary tool to implement the different financial models. These models include but are not limited to asset return calculations, portfolio theory, index models, the capital asset pricing model, option pricing models, bond valuation and investment performance analysis. The course will also make some use of statistics and probability

FIN 698: Financial Institutions Management

The purpose of the course is to analyze the major issues in the financial management of financial institutions. Especially, the concepts and techniques required for the successful management of firms will be discussed. The course will get into some institutional detail by analyzing the interplay between (changes in) regulation and innovation, and their joint effects on the organizational structure of financial institutions. The main focus, however, will be on concepts rather than institutional details.

FIN 699: Internship in Finance

Internship course. Students will undertake relevant work experience while working with a faculty sponsor for credit.

POM 681: Business Analytics and Data Mining

Introduction to business analytics and data mining. Topics covered include data mining, exploratory data analysis, methods for classification and prediction, affinity analysis, multiple regression, logistic regression, discriminant analysis, and clustering. Applications of business analytics and data mining methodologies to a wide variety of real world business data are included

Foundation courses

ACT 500: Financial Accounting

This course stresses both the significance of accounting information and the necessity for its smooth flow through the organization so managers can efficiently make plans and control resources. Topics include: interpretation, use, and analysis of accounting data for internal reporting, planning, and controlling of business activities and managerial decision-making. The course includes the impact of accounting on people in both services and manufacturing operations.

FIN 500: Economic Concepts for Managers

This course introduces the fundamental concepts in microeconomics and macroeconomics essential for managers in the private, public and not-for-profit sectors of the economy. The microeconomic section focuses on the role of the firm in a global market economy under regulatory, ethical and competitive constraints. The macroeconomic section examines the impact of fiscal and monetary policy and the growing importance of international trade from the perspective of the business community and government planners.

POM 500: Statistical Analysis

A case study approach involving the following statistical concepts: descriptive statistics, probability, sampling, probability distribution, statistical estimation, chi-square testing, analysis of variance and simple regression-correlation analysis.



Master of Science | Finance | General or Quantitative Finance Concentration

Program overview

The Charlton College of Business Master of Science in Finance (MSF) program provides advanced and affordable education in finance for those with finance, business or non-business baccalaureate degrees. The MSF is a ten course, 30 credit degree program that aims to equip students with the theoretical knowledge and practical skills to be innovative, well informed, and experienced finance professionals. The curriculum is based on the financial theory and empirical methods employed by professionals practicing corporate finance, financial security valuation, financial modeling, portfolio management, financial services management, financial risk management, and corporate governance. The focus is on a high-quality yet well-rounded program designed to meet student demand for integrated and experiential learning and developmental experiences that prepare them to be competitive, market-ready, and successful in a rapidly changing global environment.

Students can choose between either a **general finance** or **quantitative finance** concentration for their degree.

The quantitative finance concentration has mathematical and capital market focus that will appeal to students interested in quantitative financial analysis, risk management, investment management, and financial technology careers. The quantitative finance concentration is STEM (science, technology, engineering and math) designated, offering students on a VISA an extended OPT upon completion of the degree

The MSF program will also prepare students for obtaining nationally and globally recognized credentials including the Chartered Financial Analyst (CFA) designation. Our program covers the major topic areas of the CFA exams, so graduates of the program will have a strong foundation from which to draw in taking the exams.

Selected faculty and principal areas of expertise

► **Michael Anderson**, PhD, CFA, Indiana University; sub-prime financing, information economics/game theory, financial intermediation, corporate finance.

► **Duong Nguyen**, PhD, CFA, FRM, Florida International University; empirical asset pricing, market microstructure, corporate finance.

► **Zhenzhen (Tina) Sun**, PhD, University of Rhode Island; asset pricing, fixed income and corporate finance

► **Zhaolin (Lily) Xu**, PhD, Virginia Tech; mutual funds, institutional investors, behavioral finance, empirical investments.

► **Gopola Vasudevan**, PhD, New York University; corporate finance, mergers and acquisitions, security offerings, dividend policy, corporate restructuring.

► **Jia Wu**, PhD, Rutgers University; accounting information systems and auditing, and analytical controls in continuous auditing.

► **B.K. Rai**, PhD, Wayne State University; multivariate diagnosis/pattern recognition and data mining, developing meta-models using computer experiments, prediction of unexpended warranty costs, and field performance studies from large warranty datasets

Program strengths and highlights

The Charlton College of Business (CCB) Master of Science in Finance (MSF) Program

- CCB is AACSB accredited, the international gold standard. Only 10% of business schools have all undergraduate and graduate programs accredited by AACSB.
- Helps students gain a high-level understanding of corporate finance, investment, risk management, international finance, among other topics to prepare them for careers in different finance areas.
- Prepares students for the CFA and other finance certificates. Having both MSF degree and CFA designation will set students apart from much of the competition within the financial industry.
- Is taught by leading scholars and practitioners in the field.
- Offers great classroom experience and career opportunities in finance.
- Offers a Bloomberg certification program prior to graduation. Having an employee who is already Bloomberg-certified provides an advantage to the employer and can also make the prospective employee a better candidate among similarly qualified competition.

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- ▶ Students can choose between either a **general finance** or **quantitative finance** concentration for their degree. The quantitative finance concentration has mathematical and capital market focus that will appeal to students interested in quantitative financial analysis, risk management, investment management, and financial technology careers. The Quantitative Finance concentration is STEM (science, technology, engineering and math) designated, offering students on a VISA an extended OPT upon completion of the degree

Application requirements

Admission to the MSF program is available to qualified candidates who hold a bachelor's degree from an accredited institution of higher education. Candidates must submit the required application materials and application fee to the Graduate School. Applications are reviewed and judged on the following criteria:

- ▶ Previous College Experience. An official transcript from all institutions of higher education ever attended is required. The transcript must show dates attended, final grades, and credits earned. Applicants who attended a college/university outside the United States must have their official transcripts translated into English, by a credit evaluation service, showing final GPA scores
- ▶ GMAT exam (or equivalent). LSAT or GRE could be substituted for the GMAT exam
- ▶ Two letters of recommendation
- ▶ An essay of 200-300 words describing the applicant's motivation and goals
- ▶ A Current Resume
- ▶ Candidates whose Bachelor's degree was not earned in an approved English language country must submit either the TOEFL exam (minimum score of 72 internet-based or 533 paper-based) or IELTS exam (minimum band score of 6.0).
- ▶ The GMAT requirement for MSF program admission consideration at UMass Dartmouth is waived if the applicant proves, to UMass Dartmouth's satisfaction, any of the following:
 - An earned baccalaureate degree (or the equivalent of a USA baccalaureate degree) in any major/discipline from an accredited college/university with a cumulative GPA of at least 3.00 on a 4.00 scale
 - An earned terminal graduate degree (PhD, MD, JD, etc.) from an accredited institution
 - Licensure in the United States as a Certified Public Accountant or Certified Financial Planner. Other similar certification programs may also qualify for this waiver at the discretion of UMass Dartmouth.
 - At least five (5) years of managerial/supervisory work experience

- An earned Graduate Certificate from the Charlton College of Business at the University of Massachusetts Dartmouth with a cumulative GPA of at least 3.30
- Applicants whose GMAT requirement is waived may still be required to take Foundation courses prior to beginning the MSF coursework.

To earn a degree

MSF candidates must complete 30 credits of course work. Three foundation courses are required for those who have not taken these courses or their equivalents, previously. The foundation courses are not counted toward the degree. The MSF curriculum includes both core courses and elective courses in finance. Once enrolled in the program, candidates are expected to take all courses at UMass Dartmouth. However, up to 6 credits may be transferred into this sequence, either at the time of admission or after enrolling in the MSF program, to satisfy elective course requirements. Course waiver depends on prior course work and may be granted on a case by base basis.

For more information

MSF Coordinator

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Questions about credentials?

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MSF General Finance Program Curriculum Outline

Major Required (Core) Courses (Total courses required = 7)

Course Number	Course Title	Credit Hours
ACT 670	Financial Statement Analysis	3
FIN 650	Finance for Decision Making	3
FIN 655	Quantitative Methods	3
FIN 670	Investment Analysis	3
FIN 672	International Financial Management	3
FIN 691	Options, Futures, and other Derivatives	3
FIN 698	Financial Institutions Management	3
SubTotal	# Core Credits Required	21

Concentration Course Choices (Total courses required = 3) (any 3 courses)

FIN 675	Fixed Income Analysis	3
FIN 684	Finance Seminar	3
FIN 685	Mergers and Acquisitions Analysis	3
FIN 686	Ethics in Finance	
FIN 692	Financial Risk Management	3
FIN 693	Advanced Corporate Finance	3
FIN 697	Financial Modelling	3
FIN 699	Internships/ Practicum	3
	Other graduate business course approved by the MSF program coordinator	3
SubTotal	# Concentration Credits Required	9

Curriculum Summary

Total number of courses required for the degree	10
Total credit hours required for degree	30
Prerequisite or Other Additional Requirements (total of 9 credits if needed)	
1. ACT 500 (3 credits): Financial Accounting	
2. FIN 500 (3 credits): Finance and Economics for Managers	
3. POM 500 (3 credits): Statistical Analysis	

MSF Quantitative Finance Concentration Curriculum Outline

Major Required (Core) Courses (Total courses required = 7)

Course Number	Course Title	Credit Hours
ACT 670	Financial Statement Analysis	3
FIN 650	Finance for Decision Making	3
FIN 655	Quantitative Methods	3
FIN 670	Investment Analysis	3
FIN 672	International Financial Management	3
FIN 691	Options, Futures, and other Derivatives	3
FIN 698	Financial Institutions Management	3
SubTotal	# Core Credits Required	21

Concentration Course Choices (Total courses required = 3) (any 3 courses)

FIN 675	Fixed Income Analysis	3
FIN 692	Financial Risk Management	3
FIN 697	Financial Modelling	3
POM 681	Business Analytics and Data Mining	3
	Other graduate course in mathematics, statistics, computer science, data analytics approved by the program coordinator	3
SubTotal	# Concentration Credits Required	9

Curriculum Summary

Total number of courses required for the degree	10
Total credit hours required for degree	30
Prerequisite or Other Additional Requirements (total of 9 credits if needed)	
1. ACT 500 (3 credits): Financial Accounting	
2. FIN 500 (3 credits): Finance and Economics for Managers	
3. POM 500 (3 credits): Statistical Analysis	

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