MASTER OF SCIENCE IN FINANCE

The MS in Finance (MSF) provides a unique opportunity for individuals who want to enhance their career opportunities in the areas of investment management, corporate finance, or investment banking. Students may begin the program in September or January. This STEM-designated program is designed to be completed either in one year's time (full time) or over two years (part time).

The MSF program is especially useful for those who want to pursue advanced certification, such as the CFA. MSF students may elect to pursue a specialization in either business analytics, corporate finance or, with a related undergraduate degree, in accounting. Applicants should hold an undergraduate degree and have an adequate background in the areas of economics, financial accounting, and statistics. The GMAT/GRE requirement may be waived for MSF applicants. Please see our website for more information about requesting a GMAT/GRE waiver.

The overarching learning goals of the program are:

GOAL I: Understand and apply major corporate finance theories.

GOAL II:Understand the structure, evolution, and role of financial markets, instruments, and institutions through a global lens.

GOAL III: Understand and apply fundamental analysis and valuation frameworks to financial instruments.

GOAL IV: Understand and apply major stock and bond portfolio management concepts including diversification and risk measurement.

GOAL V: Understand and apply the relationships and factors that influence the market value of derivatives.

GOAL VI: Understand and create investment strategies involving derivatives.

GOAL VII: Understand and measure the major types and sources of financial risk.

GOAL VIII: Understand and create both financial and operational risk management strategies.

GOAL IX: Understand and apply modern econometric techniques to real data and problems in finance and demonstrate the ability to draw inferences.

Program

Requirements

The program consists of 10 three-credit courses: seven required and three electives.

Code	Title	Credits
FNCE 6530	Corporate Finance	3
FNCE 6540	Investment Analysis	3
FNCE 6545	Portfolio Management	3
FNCE 6560	Global Financial Markets and Institutions	3
FNCE 6565	Derivative Securities	3
FNCE 6580	Financial Risk Management	3
FNCE 6595	Research Methods in Finance	3
Select a specialization (detailed below) or three elective courses from the following: [1]		9
FNCE 6500	Stakeholder Value	
FNCE 6555	International Financial Management	
FNCE 6570	Fixed Income Securities	
FNCE 6575	Capital Budgeting	
FNCE 6900	Contemporary Topics Seminar	
FNCE 6990	Independent Research Seminar	
FNCE 6991	Blockchain and Digital Assets	
FNCE 6992	Decentralized Finance	
FNCE 6993	Algorithmic Trading	
FNCE 6994	Ethical Considerations in and Regulation of FinTech	
Total Credits		**30**

[1] Students are required to complete nine elective credits (three courses) of graduate work at the 6000 level. Students may choose elective courses from finance to fulfill the requirements of one of the specializations listed below, or to enrich their studies in an area of interest relevant to the study of finance at the graduate level.

Accounting Specialization

To be eligible to pursue an Accounting specialization within the MSF, students must have an undergraduate degree (BS or BA) with a major in Accounting or the equivalent.

To complete a specialization in Accounting, students take any three graduate Accounting or Taxation courses at the 6000 level for their required three electives. All course selections should be made in consultation with the Directors of Graduate Finance and Accounting Programs.

Business Analytics Specialization

Analytics refers to the skills, technologies, applications and practices for continuous iterative exploration and investigation of past business performance to gain insight and drive business planning by using data and statistical methods. A variety of industries are in need of professionals who can take on positions of responsibility for collecting, analyzing and interpreting data in order to make sound strategic business decisions. To complete a specialization in Business Analytics, students take three DATA classes as a replacement for the three Finance electives.

Code	Title	Credits
Select three 6000-level DATA courses [1]		9
Total Credits		**9**

[1] Course selections should be made in consultation with the Directors of Graduate Finance and Business Analytics Programs.

Corporate Finance Specialization

For those students would like to broaden and deepen skills in corporate development/strategic planning and/or risk management, the program offers a specialization in Corporate Finance.

Code	Title	Credits
To complete a specialization in Corporate Finance, the following course is required:		
FNCE 6500	Stakeholder Value	3
Select two courses from the following:		6
DATA 6530	Statistics and Forecasting	
FNCE 6555	International Financial Management	
FNCE 6575	Capital Budgeting	
Total Credits		**9**

Dual Degree MBA and MS in Finance

Students may pursue dual degrees, earning both a Master in Business Administration and a Master of Science in Finance, in less time and with fewer credits than if they were to complete both degrees separately. Please see the Dual Degree MBA/MSF section of this catalog for details.

Dual Degree MS in Finance and MS in Accounting

Students may pursue dual degrees, earning both a Master of Science in Finance and a Master of Science in Accounting, in less time and with fewer credits than if they were to complete both degrees separately. Please see the MSF/MSA Dual Degree section of this catalog for details.

Dual Degree MS in Finance and MS in Business Analytics

Students may pursue dual degrees, earning both a Master of Science in Finance and a Master of Science in Business Analytics, in less time and with fewer credits than if they were to complete both degrees separately. Please see the Dual Degree MSF/MSBA section of this catalog for details.

Courses

Finance

FNCE 5400 Principles of Finance   **3 Credits**
Prerequisites: ACCT 5400, DATA 5400.
This course examines the fundamental principles of modern finance that are helpful in understanding corporate finance, investments, and financial markets. More specifically, the course examines the time value of money; the functioning of capital markets; valuation of stocks, bonds, and corporate investments; risk measurement; and risk management. Students learn to use sources of financial data and spreadsheets to solve financial problems.

FNCE 6500 Stakeholder Value   **3 Credits**
Prerequisite: FNCE 5400.
This course examines business decision-making with the aim of creating and managing value for stakeholders. Accordingly, students learn how to lead and manage a business in a competitive environment. This involves the formulation of corporate objectives and strategies, operational planning, and integration of various business functions leading to greater stakeholder value. Topics include investment and strategic financial decision-making. A business simulation facilitates the learning process.

FNCE 6530 Corporate Finance   **3 Credits**
Prerequisite: FNCE 5400.
This course provides an exploration of theoretical and empirical literature on corporate financial policies and strategies. More specifically, the course deals with corporate investment decisions, capital budgeting under uncertainty, capital structure and the cost of capital, dividends and stock repurchases, mergers and acquisitions, equity carve-outs, spin-offs, and risk management.

FNCE 6540 Investment Analysis   **3 Credits**
Prerequisite: FNCE 5400.
This course examines the determinants of valuation for bonds, stocks, options, and futures, stressing the function of efficient capital markets in developing the risk-return trade-offs essential to the valuation process.

FNCE 6545 Portfolio Management   **3 Credits**
Prerequisite: FNCE 6540.
Students examine how individuals and firms allocate and finance their resources between risky and risk-free assets to maximize utility. Students use an overall model that provides the sense that the portfolio process is dynamic as well as adaptive. Topics include portfolio planning, investment analysis, and portfolio selection, evaluation, and revision.

FNCE 6555 International Financial Management   **3 Credits**
Prerequisite: FNCE 6530.
The globalization of international financial markets presents international investors and multinational corporations with new challenges regarding opportunities and risks. This course examines the international financial environment of investments and corporate finance, evaluating the alternatives available to market participants in terms of risk and benefits. Topics include exchange rate determination, exchange rate exposure, basic financial equilibrium relationships, risk management including the use of currency options and futures, international capital budgeting and cost of capital, and short-term and international trade financing.

FNCE 6560 Global Financial Markets and Institutions   **3 Credits**
This course examines financial markets in the context of their function in the economic system. The material deals with the complexity of the financial markets and the variety of financial institutions that have developed, stressing the dynamic nature of the financial world, which is continually evolving.

FNCE 6565 Derivative Securities   **3 Credits**
Prerequisite: FNCE 6540 (concurrency allowed).
This course offers in-depth coverage of financial derivative securities, such as options futures and swaps. The course focuses on the principles that govern the pricing of these securities as well as their uses in hedging, speculation, and arbitrage activities.

FNCE 6570 Fixed Income Securities   **3 Credits**
Prerequisite: FNCE 6540.
This course deals extensively with the analysis and management of fixed income securities, which constitute almost two-thirds of the market value of all outstanding securities. The course provides an analysis of treasury and agency securities, corporate bonds, international bonds, mortgage-backed securities, and related derivatives. More specifically, this course provides an in-depth analysis of fixed income investment characteristics, modern valuation, and portfolio strategies.

FNCE 6575 Capital Budgeting   **3 Credits**
Prerequisite: FNCE 6530.
This course examines the decision methods employed in long-term asset investment and capital budgeting policy. The course includes a study of quantitative methods used in the capital budgeting process: simulation, mixed integer programming, and goal programming. Students use these techniques and supporting computer software to address questions raised in case studies.

FNCE 6580 Financial Risk Management   **3 Credits**
Prerequisite: FNCE 6540.
This course focuses on the evaluation and management of corporate and portfolio risk. More specifically, this course examines the methods of evaluating and managing risk with the objective of contributing to value maximization. Risk assessment methodologies such as value-at-risk (VaR) and cash-flow-at-risk (CaR) are analyzed and used extensively.

FNCE 6595 Research Methods in Finance   **3 Credits**
Prerequisite: FNCE 6540.
This course, open to MS in Finance students only, deals extensively with applied research methods in finance, a highly empirical discipline with practical relevance in the models and theories used. The central role of risk distinguishes research methodology in finance from the methodology used in other social sciences, necessitating the creation of new methods of investigation that are adopted by the finance industry at an astonishingly fast rate. For example, methods of assessing stationarity and long-run equilibrium, as well as methods measuring uncertainty, found a home in the finance area. This course covers traditional and new research methods that are directly, and in most instances, solely applicable to finance problems.

FNCE 6900 Contemporary Topics Seminar   **3 Credits**
Prerequisites: FNCE 6530, FNCE 6540.
This course presents recent practitioner and academic literature in various areas of finance, including guest speakers where appropriate. Topics vary each semester to fit the interests of the seminar participants.

FNCE 6990 Independent Research Seminar   **3 Credits**
Prerequisite: FNCE 6595.
This course, open to MS in Finance students only, provides participants with the opportunity to explore a financial topic of interest in depth, immersing students in detailed investigations requiring substantial research and analysis.

FNCE 6991 Blockchain and Digital Assets   **3 Credits**
The sudden rise in the value of Bitcoin and other digital assets focused the world's attention on cryptocurrencies as a means of payment. Blockchain technology powers Bitcoin and has been hyped as the next new, transformative technology. This class will first discuss the technical underpinnings of blockchain and review key concepts such as decentralization and consensus algorithms. The class will then discuss practical applications of blockchain technology. It will then then examine blockchain as an asset and review the dynamics of the cryptocurrency markets. It will conclude with the discussion of the future of blockchain.

FNCE 6992 Decentralized Finance   **3 Credits**
Prerequisite: FNCE 6991.
Decentralized finance (DeFi) allows parties to trade in a peer-to-peer, decentralized manner by replacing financial institutions and other intermediaries with blockchain-based smart contracts and by replacing traditional, physical currencies (e.g. U.S. dollars) with cryptocurrency (e.g. stable-coins pegged to a physical currency). This course will examine how FinTech companies are disrupting the traditional financial services industry and assess the pros and cons of these new technologies. Students in this course will also survey relevant aspects of banking and securities law, with a focus on current regulatory issues pertaining to DeFi and considerations of the future regulatory landscape.

FNCE 6993 Algorithmic Trading   **3 Credits**
This class introduces the necessary background knowledge and processes to design and implement algorithmic trading models including an introduction to financial markets, mechanics, participants, order types and execution, microstructure, and more. The course walks students through the process of generating trading strategies, quantifying the trading process, risk-based modeling concepts, back-testing and optimization techniques, technology and infrastructure, regulatory compliance, and key metrics of algorithmic trading model performance evaluation.

FNCE 6994 Ethical Considerations in and Regulation of FinTech   3 Credits
Prerequisite: FNCE 6992 (concurrency allowed).
While FinTech provides the world of finance with exciting new opportunities and innovations, they come with a new set of ethical considerations and potential new regulations. Ethical issues include potential breach of privacy of the data obtained through social media and other means. Artificial intelligence and machine learning and the use of large datasets of proprietary data could unintentionally lead to discrimination and adverse effects on diversity and inclusion efforts. Since much of the FinTech applications are linked to the internet, avoiding cyberattacks poses a large risk to successful implementation of any models. Successful leaders in the field of FinTech must understand ethical considerations associated with FinTech. It is also crucial for the manager to understand current regulation of FinTech and anticipate possible new regulation. This course will consider these and other ethical and legal considerations associated with FinTech.

Dual Degrees

A dual graduate business degree program allows students to pursue two graduate degrees, combining a Master of Business Administration (MBA) with specialized Master of Science (MS) graduate degree in a specific field, or combining two specialized MS programs. The goal is to provide a broader skill set, enabling graduates to apply business knowledge in specialized industries or roles.

The advantage of dual-degree programs is that they can be completed in less time than pursuing the degrees separately. These programs are ideal for individuals looking to expand their expertise across multiple disciplines, enhance career prospects, and increase their versatility in the job market.

For students that are interested in pursuing two degrees within the Dolan School of Business, Fairfield University allows for a maximum of 25% overlap of courses for students. The dual degree program options include:

MBA/MS Dual Degree

Students will complete the seven core MS courses, five MBA subject area courses, and four MBA concentration courses. The MBA concentration will be in a different discipline the MS program. The MBA concentration courses will count as MS electives. A minimum of 16 courses/48 credits is required.

The MS in Business Analytics has two required prerequisite courses DATA 5400 Applied Business Statistics and DATA 5405 Python Fundamentals. There is a test-out option for these courses.

Any prerequisite courses required for either the MBA or any of the MS programs will be required.

Sample Plans of Study: MBA/MSBA, MBA/MSF, MBA/MAS

MS/MS Dual Degree

Students will take the seven core MS courses from the first program, the seven core courses from the second program, plus an additional elective/capstone in one of the areas. A minimum of 15 courses/45 credits is required.

The MS in Business Analytics has two required prerequisite courses DATA 5400 Applied Business Statistics and DATA 5405 Python Fundamentals. There is a test-out option for these courses.

Any prerequisite courses required for either the MBA or any of the MS programs will be required.

Sample Plans of Study: MSF/MSA, MSF/MSBA

Career Development

The Dolan Career Development Center provides professional development services that enrich graduate students' academic experiences and inspire tomorrow's business leaders. For more information, reference the Career Development section of this catalog.