FINANCE AND BUSINESS ECONOMICS

AREA CHAIR: SRIS CHATTERJEE, PROFESSOR

Fordham GBA offers three programs in Finance: an MBA in Finance, an MS in Quantitative Finance (MSQF) and an MS in Global Finance (MSGF). A dual degree in MSQF and MBA is also possible. Details of these programs are available at http://www.bnet.fordham.edu/academics/ms_programs/ms_quantitative_finance/index.asp, and are briefly described below.

The goal of the Finance MBA curriculum is to provide students with the conceptual foundation and technical skills necessary to make sound financial decisions in a changing domestic and international business environment. In particular, the program aims to develop a thorough understanding of global financial markets and instruments, business valuation and shareholder value creation, implementation of financial strategy through various forms of corporate restructuring, risk management in a global context and the nature of risk and reward in formulating long-term investment strategies. The curriculum emphasizes interaction with practitioners in a number of innovative course offerings.

The Finance and Business Economics area offers a concentration in Finance and elective courses in Business Economics. Students are encouraged to plan their program relatively early in the course of their studies with the help of faculty members who are available to assist in this process.

The MS in Quantitative Finance (MSQF) is a one-year, full-time program consisting of 55 credit hours, spread over three terms (fall, spring and summer). The MSQF program prepares students to meet the global financial service industry's need for graduates who have both a deep knowledge of finance and a command of the latest quantitative techniques for financial problem-solving.

The MS in Global Finance is offered in two formats: part-time and full-time. Initially launched in partnership with the Beijing International MBA (BiMBA) offered by Fordham in collaboration with Peking University, the MSGF part-time program offers several courses in compact, intensive, week-long formats in New York and Beijing. The new full-time MSGF program offers all 10 courses in a one-year format in New York.

MBA IN FINANCE

PROGRAM PREREQUISITES *(three courses, nine credits)*

BE 6220 Managerial Economics *(see page 32)*
DG 6810 Mathematical Methods for Business *(see page 45)*
DG 6820 Statistics *(see page 45)*

MBA CORE BUSINESS COURSES *(required) (eight courses, 24 credits)*

AC 6111 Fundamentals of Accounting *(see page 18)*
BL 6310 Business Law I *(see page 50)*
FN 6411 The Financial Environment *(see page 29)*
(Prerequisite AC 6111)
IS 6910 Management Information Systems *(see page 39)*
MG 6613 Fundamentals of Management *(see page 43)*
(Prerequisites BE 6220 & DG 6820)
MK 6710 Marketing Management *(see page 47)*
(Prerequisite BE 6220)
MG 6627 Operations Management *(see page 43)*
(Prerequisite MG 6613)
MG 7660 Business Policy *(see page 44)*
(Prerequisites all core courses)
MG 7660 Business Policy, the capstone course of the MBA, should be taken as close to the end of the program as possible and only after the other core courses have been completed. Because of its integral importance to the program, this course will not be waived.

CONCENTRATION *(five courses, 15 credits)*

Students concentrating in Finance take five courses beyond the Finance core requirement of FN 6411 The Financial Environment. FN 7421 Principles of Modern Finance is suggested as a prerequisite course for many upper-level courses and is strongly recommended.

Prerequisite courses can be waived upon review by the area chair.

FINANCE SPECIALIZATIONS

There are no specific required courses for students concentrating in Finance other than the Finance core requirement, FN 6411 The Financial Environment.

The following are some suggested specializations and course sequences for students interested in specific career paths.

1. Corporate Financial Management

Appropriate for students interested in corporate financing decisions and financial analysis.

FN 7421 Principles of Modern Finance
FN 7422 Corporate Finance
FN 7423 Mergers, Acquisitions and Leveraged Buyout
FN 7499 Special Topics: Investment Banking, Venture Capital, Risk Management
FN 7451 Financial Management of Multinational Companies

2. Investment Management

Intended for students interested in the evaluation of securities and non-financial assets, portfolio management and trading in financial markets.

FN 7421 Principles of Modern Finance
FN 7430 Investment Analysis
FN 7431 Options and Futures Markets
FN 7460 Portfolio Management
FN 7433 Fixed-Income Analysis
FN 7435 Pension Management

Students considering a career in investment management should be aware of the importance of obtaining their Chartered Financial Analyst's (CFA) designation from the CFA Institute in Charlottesville, Virginia. The CFA is awarded upon satisfactory completion of a series of examinations on ethical, financial, economic, legal, fixed income and equity valuation and portfolio management issues. Details of the CFA program can be obtained from the Finance faculty. Graduate business courses included in the investment management specialization cover many topics required for the CFA tests.

3. Management of Financial Institutions

Suggested for students interested in careers in banking.

FN 7410 Management of Financial Institutions
FN 7415 Credit Management
FN 7441 Money, Credit and Interest Rates
FN 7442 Commercial Banking
FN 74XX Special Topics: Credit Derivatives, Risk Management

4. International Finance

Designed for students seeking careers with multinational companies and international financial organizations.

FN 7443 Multinational Investment Analysis
FN 7451 Financial Management of Multinational Companies
FN 7455 Global Finance
BE 7258 Contemporary Issues in Global Finance
FN 74XX Special Topics: International Treasury Risk Management

5. Real Estate Finance

Structured for those pursuing careers in real estate development, underwriting and institutional acquisitions.

FN 7421 Principles of Modern Finance
FN 7470 Real Estate Finance
FN 7472 Real Estate Financing Alternatives
Two other Finance courses or the equivalent in mini-courses.

6. Personal Financial Planning

Developed for those seeking careers with financial institutions offering financial planning services.

Increasing complexity of the financial-planning field may require completion of a dual concentration in Accounting/Taxation and Finance. (For courses in Accounting/Taxation, please see the Accounting section.)

Some suggested courses include:

FN 7421 Principles of Modern Finance
FN 7430 Investment Analysis
FN 7431 Options and Futures Markets
FN 7460 Portfolio Management
FN 7470 Real Estate Finance

Students may also consider taking two free electives from either Finance and/or Accounting/Taxation or Special Topics offerings.

Students considering a career in personal financial planning should be aware of the importance of obtaining their Certified Financial Planner (CFP) designation from the CFP Board in Denver, Colorado. Details of the certification may be obtained directly from that institution. For more information, visit **www.cfp.net.**

BREADTH ELECTIVES *(five courses, 15 credits)*

Breadth electives are advanced-level courses outside the concentration. Students are limited to a maximum of two courses from a single area. Two recommended electives for students concentrating in Finance are BE 7230 Macroeconomics and AC 7125 Financial Statement Analysis. Students may select electives from specified International Business courses, subject to area distribution requirements, to receive an International Business designation on their official transcript (see page 10). With approval of an academic advisor, students may take graduate courses that relate to their professional objectives offered by other schools of the University.

FREE ELECTIVES *(two courses, six credits)*

These credits enable students to take advanced-level courses of their choice in either the concentration, elective areas or both, subject only to individual course prerequisites. Free electives are not subject to the breadth elective distribution requirement or concentration requirements.

Finance Courses

Each course carries three (3) credits unless otherwise indicated.

FN 6411 The Financial Environment (MBA REQUIRED COURSE)
Introduces the key concepts in finance and the environment in which they are applied. Students learn how to gauge the financial health of companies and measure and understand financial return in relation to risk. The course also surveys the uses and characteristics of different financial instruments and the function and operation of global financial markets.
PREREQUISITES: AC 6111, BE 6220 AND DG 6810.

FN 7410 Management of Financial Institutions
This applied finance course focuses on risk management at financial institutions. It emphasizes the development of data analysis, spreadsheet and simulation skills as used in internationally active financial institutions. The course discusses duration, value at risk and basis risk and extends the risk measurement and management tools to credit risk, with particular attention to credit derivatives and the New Basel Capital Accord.
PREREQUISITE: FN 7441.

FN 7415 Credit Management
This course focuses on the analytic approach (stemming from Basel II capital accords) and will help students make wise credit decisions and manage lending portfolios. Topics include the latest lending techniques based on cashflow, advanced forecasting methods (including simulation and stochastic optimization), pricing, portfolio management, default probability, valuation analysis risk rating and credit derivatives.
PREREQUISITE: FN 6411.
ENTREPRENEURSHIP COURSE.

FN 7421 Principles of Modern Finance
Provides a conceptual framework that allows both corporate finance and portfolio investment decisions to be viewed and understood in a unified context of risk and return. Examines concepts of valuation, risk and return, diversification, asset pricing and efficient markets.
PREREQUISITES: FN 6411, DG 6820.

FN 7422 Corporate Finance
Studies corporate finance and its specific decisions. Topics include evaluating capital expenditure proposals, forecasting financing requirements and selecting sources of financing. The course also discusses working capital management, dividend policy and contingency planning, and addresses the additional challenges of multinational firms.
PREREQUISITE: FN 7421.
(Students taking FN 7422 Corporate Finance will not receive credit for FN 7400 Business Finance.)

FN 7423 Mergers, Acquisitions and Leveraged Buyouts
Focuses on identifying and evaluating target companies and structuring deals. Also considers the economic and social impact of such changes in corporate ownership. Students analyze recent cases, evaluate strategic rationale, examine deal structuring and assess financial impact.
PREREQUISITE: FN 7421.
ENTREPRENEURSHIP COURSE.

FN 7430 Investment Analysis
Provides the foundation for choosing sound investment vehicles that meet investors' objectives. Identifies the wide variety of available investment instruments and examines their risks and benefits. Studies philosophies and techniques of investing, such as fundamental analysis, technical analysis and uncovering market inefficiencies.
PREREQUISITE: FN 7421.
ENTREPRENEURSHIP COURSE.

FN 7431 Options and Futures Markets
Examines the institutional aspects of options and futures markets and discusses the strategies of hedgers, arbitrageurs and speculators. Provides an introductory analytical foundation for pricing futures and option contracts.
PREREQUISITE: FN 6411.

FN 7433 Fixed-Income Analysis
Introduces techniques for valuing fixed income securities and their derivatives. Emphasizes pricing and risk-measurement for government, corporate and mortgage-backed instruments. Analyzes embedded options using the binomial model. Develops fixed-income trading and portfolio management techniques, including the use of repo, futures, options, swaps and credit derivatives. Examines theory and empirical evidence on the term structure of interest rates, including the derivation of spot and implied forward yield curves.
PREREQUISITE: FN 7421.

FN 7435 Pension Management
Presents an integration of corporate finance and investment analysis techniques aimed at the financial management of corporate pension plans. Provides an overview of the American retirement system and introduces actuarial techniques and pension accounting. Topics include pension liabilities, decisions on how to fund retirement plans, the effects of inflation on assets and benefits, investment strategy and evaluation and tax and legal issues.
PREREQUISITE: FN 7421.

FN 7441 Money, Credit and Interest Rates
Studies the role of money, credit and interest rates in the efficient and ethical functioning of domestic and global financial markets. This building-block course assumes a background in macroeconomics and finance, and it establishes a foundation for further study in all areas of finance. Topics include: flow of funds and interdependency within the financial system; the Federal Reserve System and its role in money creation; interest rates; the links between interest rates and the growth of money; and the effects of inflation and term structure.
PREREQUISITES: BE 7230, FN 6411. ALSO OFFERED AS BE 7240.
ENTREPRENEURSHIP COURSE.

FN 7442 Commercial Banking

Explores the evolution of commercial banking. Examines the international character of the money-center banks and the rise of the regional banks. Also studies asset and liability management, international bank management, syndicated lending, project financing and lending policies in developing countries.
PREREQUISITE: FN 7441

FN 7443 Multinational Investment Analysis

Examines investment strategies that encompass international financial markets. Studies international money markets, the foreign exchange market, forward markets for commodities and financial instruments and stock and bond markets. Investment alternatives are analyzed under fixed, floating and managed exchange-rate regimes.
PREREQUISITES: FN 7421.
INTERNATIONAL BUSINESS COURSE.

FN 7451 Financial Management of Multinational Companies

Focuses on aspects of financial planning for corporations with international operations. Topics include: managing the firm's foreign currency exposure; financial control of foreign operations; international capital budgeting analysis; managing multicurrency working capital; international cost of capital and capital structure issues; foreign project evaluation techniques; analysis of foreign subsidiary performance and foreign fund management techniques. Particular emphasis on foreign investment opportunities not normally available to a domestic firm.
PREREQUISITE: FN 7421
ENTREPRENEURSHIP COURSE.
INTERNATIONAL BUSINESS COURSE.

FN 7455 Global Finance

Surveys the structure of the international financial environment. Topics studied are world trade and the balance of payments, foreign exchange markets, the long- and short-term determinants of exchange rates and the major international financial institutions. Explores how the international community adjusts to financial shocks and the role of the Eurocurrency markets. A background in macroeconomics is recommended.
PREREQUISITE: FN 6411.
INTERNATIONAL BUSINESS COURSE.
ALSO OFFERED AS BE 7244.

FN 7458 Contemporary Issues in Global Finance

Explores current issues relevant to the global financial system, including international commercial and investment banking and international investments. Emphasizes the underlying conditions and fundamental trends in various sectors of international finance.
PREREQUISITE: FN 6411.
INTERNATIONAL BUSINESS COURSE.
ALSO OFFERED AS BE 7243.

FN 7460 Portfolio Management

Examines portfolio objectives and links them to appropriate investment strategies. Considers the asset-allocation decision, equity and fixed-income portfolio management, return enhancement/risk control techniques and performance evaluation. Commercial-level portfolio optimization software is applied to a range of institutional portfolio problems.
PREREQUISITE: FN 7421.

FN 7470 Real Estate Finance

Discusses the major factors affecting the valuation and financial structuring of real estate, including general tax and depreciation policies. Presents the roles of principal lending institutions, mortgage banks and investment banks in real estate lending, syndications and partnerships. Also surveys real estate-related securities and their markets.
PREREQUISITE: FN 6411.
ENTREPRENEURSHIP COURSE.

FN 7496 Financial Management of Nonprofit Organizations

Financial management techniques are adapted to the goals, regulations and accounting procedures of nonprofit organizations, such as schools, foundations, government agencies and hospitals. Topics include fund accounting systems, budget preparation and administration, financial reporting, management control, public accountability and tax-exempt status.
PREREQUISITE: FN 6411.
GLOBAL SUSTAINABILITY COURSE.

FN 749X Special Topics in Finance

These courses are offered periodically to permit faculty and students to explore a finance topic of particular interest. The specific topic and prerequisites are announced when the course is offered. Note: Some of the FN 749X Special Topics in Finance courses are also designated as Entrepreneurship courses.

FN 749X Special Topics: Credit Derivatives

This course introduces students to credit derivatives and covers single-name credit default swaps (CDS), as well as more sophisticated applications. Pricing, applications, trading strategies and recent professional readings are discussed.

FN 749X Special Topics: Equity Analysis

A comprehensive exploration of equity analysis, this course features a series of guest lecturers who are highly regarded experts within specific industry sectors, such as financial services, energy, technology and pharmaceuticals.

FN 749X Special Topics: Financial Modeling

This course helps students develop the type of Excel-based financial models that businesses use every day to analyze a wide range of financial problems and make decisions. Students deliver written and oral presentations of their models and practice skills critical for a successful career in finance.

FN 749X Special Topics: Fixed-Income Investment Management

Featuring a series of guest lecturers who are experts in specific industry sectors, this course is a comprehensive exploration of fixed-income analysis.

FN 749X Special Topics: International Treasury Risk Management

This course draws on case studies to illustrate the important role derivatives can play in managing the treasury function in multinational corporations and financial institutions. Topics include forward rate agreements, currency and interest rate futures, special option clauses and swaps. Cross-currency regulatory differences and the concept of comparative advantage are considered in examining global financing opportunities.

FN 749X Special Topics: Introduction to Technical Analysis

Study how the markets and individual stocks behave (i.e., technical analysis), and how they differ from the economy and individual companies (i.e., fundamental analysis). The goal of this course is to demonstrate how technical analysis augments fundamental analysis. Technical indicators, including trend and momentum, psychology, supply/demand and inter-market analysis are discussed.
ENTREPRENEURSHIP COURSE.

FN 749X Special Topics: Investment Banking

This course is intended to give students a practical introduction to investment banking and its role in helping corporations raise capital from the global capital markets. Topics include: venture capital, public offerings, private placements, going public, stock and bond financing, convertibles and other hybrid instruments, design of innovative securities, swaps and other derivative instruments, mergers and acquisitions and leveraged buyouts.
ENTREPRENEURSHIP COURSE.

FN 749X Special Topics: Investment Management and Retirement Planning for Individuals

Based on the results of the last four decades of research in securities markets, portfolio theory and behavioral finance, this course develops a comprehensive investment management program for individuals. Asset allocation is explored in detail as is how individuals should plan, save and invest for retirement, taking advantage of various tax deductions and deferral opportunities.
ENTREPRENEURSHIP COURSE.

FN 749X Special Topics: Risk Management

This course covers Basel II and risk regulation, market risk and volatility, calculation of VaR (Value at Risk), Monte Carlo Simulation, credit risk and use of credit derivatives, operational risk and other topics.

FN 749X Special Topics: Venture Capital Financing

When it comes to raising capital for start-up companies, entrepreneurs, venture capitalists, agent bankers and their research analysts often find themselves at cross purposes. By examining the issues of valuation, structure and control in this course, students gain the perspective needed in the fund-raising process. Given that objective, team case studies are chosen to illustrate how different viewpoints can be reconciled.
ENTREPRENEURSHIP COURSE.

Finance Mini-Courses

Each mini-course carries 1.5 credits.

Mini-courses cover special topics and recent developments that do not require a full three-credit course. They are offered periodically on a half-term (seven-week) basis.

FN 8400 Issues in Finance

This category covers a variety of special topics courses that reflect the changing financial environment. The specific topics and prerequisites are announced when the course is offered. Note: Some of the 8400 Issues in Finance courses are designated as Entrepreneurship courses. Below is a partial listing of courses that have recently been offered.

FN 8405 Deleveraged Finance

This course discusses the use of debt in leveraged buyouts, recapitalization, restructuring and refinancing, including Debtor-in-Possession (DIP) financing. Students develop practical insights by utilizing case studies from several public highly leveraged firms; practical insights are critically reviewed.
ENTREPRENEURSHIP COURSE.

FN 8406 Financial Strategy

This course examines a variety of corporate financial strategies, such as divestures, spin-offs and equity carve-outs, as well as the valuation techniques employed to develop and structure those transactions. Case studies are used to reinforce the concepts, and current market deals are analyzed to enhance the learning experience.
ENTREPRENEURSHIP COURSE.

FN 8414 Modern Financial Analysis and Valuation Techniques

This course teaches how the financial services industry applies valuation techniques in actual deals. Students learn to appreciate the context of the transaction and the current market conditions, as well as the "art" and "science" of valuation analytics.
PREREQUISITE: FN 7421.
ENTREPRENEURSHIP COURSE.

FN 8415 Financial Markets (Concepts, Methods and Trading in Action)

This course provides a real-life, hands-on experience of financial market activity and its impact on the broader economy. Throughout the course, students participate in a trading game to assess and manage real-world factors, such as counterparty risk, liquidity, leverage, etc. They also learn the impact of various policy issues on the markets and thus the economy (e.g., the impact of limiting foreclosures), some of the mathematics behind the markets, and the broad spillover effects of various investor/issuer decisions.

Business Economics Courses

Each course carries three (3) credits unless otherwise indicated.

BE 6220 Managerial Economics (MBA PROGRAM PREREQUISITE)
Examines the microeconomic theory and concepts that strive to explain economic decisions of businesses in the marketplace. The dominant issues addressed in this course are the factors of supply and demand and the relationship of production costs, output and market structures to pricing. Designed to provide the economic foundation for management decisions.
PREREQUISITE: DG 6810.

BE 7230 Macroeconomics
Studies the forces and interactions that shape the national economic environment. These include levels of consumption and savings, tax policy, government fiscal policy, monetary policy and interest rates, capital investment and the business cycle. Also addresses the impact of international factors on the national economy. The course establishes the essential role of macroeconomics in corporate and investment planning.
PREREQUISITE: BE 6220.

BE 7240 Money, Credit and Interest Rates
Studies the role of money, credit and interest rates in the efficient and ethical functioning of domestic and global financial markets. This building-block course assumes a background in macroeconomics and finance, and it establishes a foundation for further study in all areas of finance. Topics include: flow of funds and interdependency within the financial system; the Federal Reserve System and its role in money creation; interest rates; the links between interest rates and the growth of money; and the effects of inflation and term structure.
PREREQUISITES: BE 7230, FN 6411. ALSO OFFERED AS FN 7441.
ENTREPRENEURSHIP COURSE.

BE 7243 Contemporary Issues in Global Finance
Explores current issues relevant to the global financial system, including international commercial and investment banking and international investments. Emphasizes the underlying conditions and fundamental trends in various sectors of international finance.
PREREQUISITE: FN 6411.
INTERNATIONAL BUSINESS COURSE.
ALSO OFFERED AS FN 7458.

BE 7244 Global Finance
Surveys the structure of the international financial environment. Topics studied are world trade and the balance of payments, foreign exchange markets, the long- and short-term determinants of exchange rates and the major international financial institutions. Explores how the international community adjusts to financial shocks and the role of the Eurocurrency markets. A background in macroeconomics is recommended.
PREREQUISITE: FN 6411.
INTERNATIONAL BUSINESS COURSE.
ALSO OFFERED AS FN 7455.

BE 7251 International Trade and Development
The first half of the course focuses on the theories and practices of world trade. Topics include comparative advantage, the changing trade competitiveness of nations and protectionism. During the second half, the focus shifts to developing countries: the process of economic development, including the contribution of foreign investment and technology as well as investment and trade opportunities, policies and regulations.
PREREQUISITE: BE 6220.
INTERNATIONAL BUSINESS COURSE.
GLOBAL SUSTAINABILITY COURSE.

BE 729X Special Topics in Business Economics
These courses are offered periodically to permit faculty and students to explore a business economics topic of particular interest. The specific topic and prerequisites are announced when the course is offered.

MS IN QUANTITATIVE FINANCE

The MS in Quantitative Finance (MSQF) is a full-time program that can be completed in one year (fall term beginning in September; spring and summer terms ending in early August). Accounting, economics and finance refresher classes are offered during the summer term before the regular program begins for those students who need them. Some students will also take classes in their second fall and spring terms to satisfy additional prerequisite classes (such as the Introduction to C++ course), to add breadth to their program or to receive an additional certificate (such as the Certificate in Computational Finance). The Certificate in Computational Finance is a joint certificate with the Computer Science Department. It requires two additional classes: (1) Data Mining and (2) Algorithms and Data Analysis. These classes are offered by the Computer Science Department.

Students most likely to benefit from the program will have an undergraduate degree in mathematics, physics or an engineering field, or will otherwise be able to demonstrate proficiency in mathematics (Multivariate Calculus, Differential Equations and Linear Algebra knowledge is desirable). Prior training in economics, accounting, finance and computer programming are also desirable.

MSQF TRADING FLOOR

Students registered in the MSQF Program have access to a state-of –the-art, 28-seat trading floor that simulates the real-world professional's working environment in an educational setting. With a Bloomberg terminal, live data feeds and price quotations from global equities, fixed income, and FX markets and wireless internet access, it is the optimal environment for students to learn the application of sophisticated quantitative models in finance.

PROFESSIONAL OPPORTUNITIES AFTER GRADUATION

Graduates of the MSQF Program will possess skills that reflect deep knowledge in the following areas:

- Asset valuation
- Derivative instruments
- Econometric modeling
- Global capital markets
- Large-scale data management
- Portfolio management
- Risk management
- Simulation
- Stochastic modeling

Graduates will also be able to model and value complex securities, design and implement creative portfolio management strategies, use the most up-to-date risk management strategies, and perform a broad range of financial engineering tasks. Prospective employers include the major investment banks, commercial banks, money managers, hedge funds and other companies with a need for professionals with strong quantitative skills and a deep knowledge of finance.

For more information, including biographies of our faculty members, visit **www.fordham.edu/msqf**, email **msqf@fordham.edu**, or write Dean A. Leistikow, PhD, Director, MSQF Program, Fordham Graduate School of Business Administration, 113 W. 60th St., New York, NY 10023.

PROGRAM PREREQUISITES

QF 8901 Accounting I
QF 8902 Basics of Economics
QF 8903 Basics of Finance
QF 8904 Mathematics for Quantitative Finance

REQUIRED COURSES

QF 8911 Financial Modeling (VBA)
QF 8912 Applied Microeconomics
QF 8913 Global Financial Markets
QF 8914 Basics of Derivatives
QF 8915 Introduction to Stochastic Calculus
QF 8921 Financial Statement Analysis
QF 8922 Finance Theory I
QF 8923 Financial Econometrics I
QF 8924 Equity-Style Derivatives
QF 8925 Simulation Applications
QF 8931 Fixed Income Securities
QF 8933 Financial Econometrics II
QF 8934 Interest Rate Derivatives
QF 8935 Risk Management
QF 8943 Large-Scale Data Modeling
QF 8944 Credit Risk Management
QF 8952 Verbal and Written Communication
QF 8953 Research Seminar I
QF 8954 Research Seminar 2
QF 8946 C++ for Finance

ELECTIVE COURSES *(Choose 3)*

QF 8932 Equity Portfolio Management
QF 8941 Fixed-Income Portfolio Management
QF 8940 Advanced Derivative Pricing
QF 8942 Finance Theory II
QF 8945 Applied Global Macroeconomics

Quantitative Finance Courses for MSQF

Each course carries two (2) credits unless otherwise indicated.

QF 8901 Accounting I *(three credits)*
Provides a basic understanding of the preparation and analysis of corporate financial statements. Introduces Generally Accepted Accounting Principles (GAAP) and the standard-setting process. Discusses current issues in the reporting process, such as the benefits and problems of the Sarbanes-Oxley Act.

QF 8902 Basics of Economics *(three credits)*
Covers both microeconomics and macroeconomics. Microeconomics topics include theory of demand and the nature of profit and utility-maximizing market equilibrium that constitute the economic basis of finance theory and applications. The macroeconomics segment defines the major components of the economy, outlines a simple model of long-run, real economic behavior with competitive, market-clearing prices, then establishes a companion model of short-run adjustments without flexible prices.

QF 8903 Basics of Finance *(three credits)*
Provides a conceptual framework for decision-making processes in many diverse areas of finance. Concepts including time value of money, stock and bond valuation, project and firm valuations, risk and return measures, portfolio management, basic CAPM and APT, diversification and hedging are reviewed. Basic theoretical aspects of corporate finance, such as dividend policy and capital structure, are also introduced.

QF 8904 Mathematics for Quantitative Finance
Reviews the basics of calculus, linear algebra, and statistical analysis in preparation for advanced courses in the MS program. Topics include Special functions, Multivariate calculus, Optimization, Integration, Differential equations ODE, PDE, Linear algebra, Probability theory, Special distributions like binomial, poisson, normal, lognormal, gamma, beta, and fat-tailed distributions.

QF 8911 Financial Modeling (VBA)
Provides the foundation for developing skills in the quantitative analysis of financial decisions, primarily using VBA. Topics include business planning, forecasting, sensitivity and scenario analyses, risk and return measures, portfolio analysis, binominal option pricing and Value-at-Risk (VAR) analysis. Emphasizes practical skills to produce computer models that are useful for a variety of decision-making purposes.

QF 8912 Applied Microeconomics
Introduces financial theory with a particular emphasis on portfolio choice and the fundamentals of asset pricing. Focuses on both the partial equilibrium theory (CAPM), and the general equilibrium theory (Arrow-Debrew Pricing Theory) with brief introductions on the arbitrage-based theories. Introduces the basics of asymmetric information and how the problems it imposes can be mitigated via security design.

QF 8913 Global Financial Markets
Examines the institutional details of different financial instruments in diverse global market settings. Explores domestic and international equity markets, including ADRs, international debt markets (short-term, long-term and Euro-markets). Also describes forward markets (FX rate), futures markets (commodity and financial instruments), options markets (Equity and FX rate) and swap markets (interest rate and currency swaps).

QF 8914 Basics of Derivatives
Introduces deferred delivery (i.e., exchange-traded futures and OTC-traded forward) markets and option markets. The course covers the following: (1) briefly examines the institutional features of these markets; (2) discusses hedger, arbitrageur and speculator strategies; (3) provides an analytical foundation for the pricing of these contracts; (4) reviews some of the available empirical evidence concerning these markets; (5) accesses data regarding these markets; and (6) uses the data to perform small-scale suggestive tests of the theories and strategies.

QF 8915 Introduction to Stochastic Calculus
Focuses on the practical applications of stochastic differential equations subject to appropriate boundary conditions, solving valuation problems, and using measure-transformations as required in advanced financial engineering practice to value assets within a risk-neutral framework. Builds a theoretical foundation for continuous-time models that are essential for the pricing and hedging of financial derivatives.

QF 8921 Financial Statement Analysis
Introduces the tools and framework necessary to effectively integrate information in financial statements into a comprehensive assessment of the firm. Develops financial modeling skills, improves communication of financial analysis and identifies data issues in the analysis of financial statements, along with possible solutions. Provides an understanding of the impact of alternative accounting methods on the analysis of financial statements and relates this concept to the issue of "accounting quality."

QF 8922 Finance Theory I
Building upon Applied Microeconomics (QF 8912), this course emphasizes an understanding of the theories of Discrete-Time Asset Pricing; studies the applications of the theory of stock options to real options and complex corporate liabilities; and explores the basic foundation of the GMM tests of asset-pricing theories.

QF 8923 Financial Econometrics I
Covers estimation of parametric and non-parametric techniques commonly used in finance, applying high-frequency financial databases. Discusses properties of financial data, linear time-series data analysis, basic theory of statistical inference with linear models, general linear models, conditional Heteroskedasticity models, nonlinear models and Bayesian inference and estimation.

QF 8924 Equity-Style Derivatives
Designed to complement and extend the topics discussed in Basics of Derivatives (QF 8914), this course includes all types of derivatives where a commodity, equity or currency is the underlying asset. Hull's software and a Bloomberg/Reuters terminal are used for pricing options and gathering data. The data to perform small-scale suggestive tests of the theories and strategies is used.

QF 8925 Simulation Applications
Introduces state-of-the-art computational techniques essential for implementing financial models, pricing derivatives, obtaining numerical solutions to estimation problems and simulating stochastic systems in risk management. Provides conceptual framework for gaining experience on simulation design and implementation using MATLAB. This course builds a skill set that combines financial modeling, data analysis and computation.

QF 8931 Fixed-Income Securities

Introduces fixed-income securities, basic fixed-income concepts, the different sectors of the fixed-income market and basic bond mathematics. Studies quantitative fixed-income analysis and its use in valuing bonds and quantifying risk-return characteristics. Involves extensive training in the mathematical formulation of bond valuation problems and in the use of the existing models and software to solve these problems.

QF 8932 Equity Portfolio Management

Introduce the basic concepts of equity portfolio management, including constructing optimal portfolios, evaluating portfolio performance, passive and active performance strategies and portfolio risk management. Involves extensive training in portfolio optimization software.

QF 8933 Financial Econometrics II

Introduces modern financial econometric techniques with a special focus on applications to finance. Both the theoretical framework for making statistical inference and exemplary applications using real data in modern finance are emphasized. The course involves extensive use of commercial software packages as well as implementing new financial econometric techniques using high-level programming language, such as MATLAB.

QF 8934 Interest Rate Derivatives

Studies continuous time no-arbitrage models of yield curves and pricing of fixed-income securities and derivatives. In particular, treasury bonds as well as more complicated instruments, such as options on bonds, interest rate swaps, option on interest rate swaps, caps, floors and Mortgage Backed Securities are priced and analyzed.

QF 8935 Risk Management

Builds strong understanding of the risks of individual products and methods of hedging and/or replicating those products. Also examines firm-wide risk issues from a financial perspective which requires aggregation of multiple positions and consideration of interrelationships among asset price fluctuations. Regulatory and other non-market risk issues are considered and simulation techniques for modeling risk are practiced.

QF 8940 Advanced Derivative Pricing

This course is a prerequisite to the Finance Theory II course. It covers advanced option pricing.

QF 8941 Fixed-Income Portfolio Management

Introduces basic concepts and techniques of fixed-income portfolio management, including designing portfolio strategies, measuring portfolio performance, indexing, portfolio immunization techniques and hedging risks. Emphasizes the practical application of modern techniques to optimize portfolio performance. Involves extensive training in the use of fixed-income portfolio management software.

QF 8942 Finance Theory II

This course builds upon Financial Theory I (QF 8922) and examines cross-sectional and time-series properties of asset returns. Offers an in-depth statistical review of several theoretical models of inter-temporal asset pricing. Microstructure effects on short-term asset returns as well as test of returns predictability are covered.

QF 8943 Large-Scale Data Modeling

Explores financial modeling topics using large data sets and various econometric techniques applied in a variety of financial problems. Topics include modeling the yield curve in the U.S. and other countries, application of pattern recognition techniques in developing stock-rating systems, factor models in portfolio construction and portfolio performance evaluation. Emphasis on project analysis using SAS to process large data sets and develop appropriate models for solving real problems in equity and fixed-income research.

QF 8944 Credit Risk Management

Introduces modern credit risk models with particular focus on credit derivative instruments. Focuses on derivative markets methods, rather than accounting analyses of business risks. Exposes students to institutional practices and commonly used data. Students will be expected to thoroughly understand professional software output, along with the risks and rewards of credit product strategies.

QF 8945 Applied Global Macroeconomics

Focuses on both the theory and the applications of macroeconomics particularly to financial markets in a global context. Familiarizes the student with macroeconomic data and develops models that can be used to interpret these data. Illustrates different models via analyses of both historical economic data and the ongoing stream of current data. Provides practical econometric training in the analysis of macroeconomic data. Open-economy macroeconomics and finance and the analysis of how the Federal Reserve and other central banks conduct monetary policy are areas of special emphasis.

QF 8946 C++ for Finance *(3 credits)*

This course uses C++ to solve Finance problems. Two types of students will take this course. One is the student with a strong computer programming background (perhaps an engineering undergraduate), who has not taken C++ or applied it to finance problems. The other may have been a finance undergraduate student who has little computer programming experience before entering the MSQF Program. This student must take the spring Introduction to C++ course offered by the Computer Science Department as a prerequisite to taking this course in their second fall term.

QF 8951 Internship Project *(six credits)*

A professional project report and presentation are the final outputs of this course. Students complete these projects under the supervision of a faculty member. Both individual and group projects are possible. The internship projects are available on a competitive basis. In lieu of a internship project, the student can take an extra six elective credits.

QF 8952 Verbal and Written Communication *(three credits)*

Covers the basics of professional speaking and writing. Develops oral and written presentation skills essential for successful careers. Coordinated with summer term internship to give students the opportunity to apply their new communication skills in a business setting.

QF 8953 Research Seminar I *(1 credit)*

This fall course features a series of lecturers from the finance industry who discuss research projects that their companies are working on.

QF 8954 Research Seminar 2 *(1 credit)*

This spring course features a series of lecturers from the finance industry who discuss research projects that their companies are working on.

MS IN GLOBAL FINANCE

The MSGF is a 30-credit program. It is offered in two different streams: part-time and full-time. The part-time stream is in collaboration with reputable foreign universities and the faculty is drawn from Fordham and its collaborating partner institutions. Part-time MSGF students spend three weeks in New York, and get an opportunity to visit institutions such as Nasdaq, New York Fed, NYSE and Bloomberg. Senior executives from leading New York banks and financial institutions participate in the program as guest speakers. The full-time MSGF stream is a one-year cohort program starting in the Fall semester every year. Students in the full-time program will finish eight required courses in the Fall and Spring semesters, then join the part-time students in the Summer term. For more information, contact Ren Raw Chen, PhD, Director, MS in Global Finance Program.

REQUIRED COURSES

The following four courses leverage upon MBA or MSQF courses:

GF 6002 Business Statistics
GF 6001 Principles of Modern Finance
GF 6003 Managerial Economics
GF 6004 Financial Statement Analysis

The remaining six courses are either MBA, MSQF or MSGF courses.

GF 7001 Global Financial Markets
This course provides a comprehensive overview to the workings of the global financial markets, the functions and goals of the key financial institutions, and the role played by central banks and regulatory agencies. It will cover international money markets, international equity markets, the foreign exchange market, forward markets for commodities and financial instruments, bond markets and derivative markets.
PREREQUISITE: GB 6001, GB 6003.

GF 7002 Contemporary Issues in Global Finance
This course explores current issues relevant to the global financial system, including international commercial and investment banking and international investments. Emphasizes the underlying conditions and fundamental trends in various sectors of international finance. An important part of the course focuses on the 2007-09 global financial crisis, as well as the changes in the global financial markets as a result of the crisis.
PREREQUISITE: GB 6001, GB 6004.

GF 7006 Raising Capital and Investing in Global Financial Markets
The course discusses the strategies in the going public decision and the relevant IPO process. Discusses the strategies and process of corporate restructuring and investing decisions such as mergers and acquisitions, corporate diversification, spin-offs, carve-outs, asset sell-offs, tracking stock, exchange offers and debt restructuring. Finally, it will also provide international comparisons on both the IPO market and corporate restructuring choices.
PREREQUISITE: GB 6001, GB 6004.

GF 7004 Global Equity Portfolio Management
The course provides a comprehensive overview of equity portfolio management in theory and practice. Examines portfolio objectives and links them to appropriate investment strategies. Covers pricing of equities, the asset-allocation decision, return enhancement/risk control techniques, performance evaluation, as well as the recent changes in international fund management. Analyzes international investment strategy and the relative merits of various approaches.
PREREQUISITE: GB 6001, GB 6002.

GF 7005 Global Corporate Governance
This course examines how modern publicly traded corporations are governed in the global markets. Discusses the roles of the board of directors, corporate management, institutional investors, and the other shareholders. Discusses the effects of the recent legislation and the financial market development on corporate governance. Provides international comparisons of corporate governance structures and the issues arising in contests for corporate control.
PREREQUISITE: GB 6001, GB 6004.

GF 7006 Global Risk Management
This course covers market risk and volatility, calculation of VaR (Value at Risk), Monte Carlo Simulation, credit risk and use of credit derivatives, operational risk, counterparty risk, and other topics. Discusses risk regulations, including Basel II, recent developments in Basel III, and recent regulations on the banking industry in the U.S..
PREREQUISITE: GB 6001, GB 6002.