

Finance

PLEASE NOTE: Before scheduling classes, check with the Finance Department to determine the availability of the courses you have selected for the upcoming semester or visit the Finance Department website at: <<http://finance.wharton.upenn.edu/>>.

The Finance major provides students with the analytic and theoretical tools required to master practical issues in Finance, with applications to financial management in business firms, financial institutions, government, and not-for-profit entities. While some attention is given to the descriptive, institutional, and historical aspects of the field, primary emphasis is placed on the analytical foundations of the discipline, emphasizing theory and methods of analysis and making extensive use of relevant techniques of economic analysis, mathematics, and statistics.

Graduates have begun their professional careers with positions in financial departments of non-financial firms, investment banks, broker-dealers, and management consulting firms, as well as various departments of commercial banks and other financial institutions, not-for-profit entities, central banks, and international financial institutions.

Requirements for the Major

The Finance major requires FNCE 611 and FNCE 613 plus four credit units of elective upper-level Finance courses. FNCE 612, an accelerated version of FNCE 611, earning .5 cu course units, may be substituted for FNCE 611, so that if you take FNCE 612 and FNCE 613, the major still requires only four credit units of upper-level coursework in Finance. If you waive one or both of FNCE 611 and FNCE 613, you will be required to take an additional upper-level Finance course for a total of five upper-level Finance credit units.

Please note that if you decide to take one of the half-semester introductory courses (FNCE 614 or 615), you will be foregoing the option of becoming a Finance major, unless you later take the full-semester version of the course.

These half-semester courses do not count in any way toward meeting the requirements for a Finance major.

Please note that:

- a) No more than one credit unit may be a specially-arranged Advanced Study Project (ASP), FNCE 890, an Independent Study Project (ISP), FNCE 899, **OR** a Finance Department-approved Global Modular Course. You may combine .5 credit units from any two of these three kinds of courses, but the maximum from this group that can be counted toward the major requirement must not exceed one credit unit. Please note that ASPs or ISPs in Finance are intended to give students the opportunity to study a particular topic in Finance in greater depth than is covered in the curriculum. The application for an ASP or ISP should outline a plan of study that requires at least as much work as a typical course in the Finance Department that meets twice a

week, requires substantial reading, and may include exams, case studies, problem sets, and/or short papers. Applications for FNCE 899 courses for 1 cu will not be accepted after the end of the third week of the semester.

- b) Courses offered in other departments cannot be counted towards the Finance major unless they have been cross-listed with the Finance Department and have been assigned a Finance Department course number. You may not count any Finance course taken in a study abroad program toward your requirements for the Finance major.
- c) When you choose to take a Finance course pass/fail, it cannot be counted toward the requirements for a Finance major.
- d) The Finance Department believes that in the dynamic environment in which you will be working, you will be best served by broad exposure to a wide range of courses in Finance. For this reason, the Finance Department will not offer tracks in Finance; we will reject proposals for Individualized Majors that suggest you have specialized in some particular field in Finance. This would rule out titles that include such terms such as “finance,” “financing,” “investment,” “investing,” “funding,” “buy-outs,” “mergers & acquisitions,” or “private equity,” etc. The Department does not want the official transcript to imply that we offer specializations in Finance. If you wish to signal to prospective employers the depth or intensity of your interest in some subject within Finance, we suggest that you highlight on your resumé the key courses you have taken or, better still, provide a brief narrative to show how the courses you have selected give you special expertise.

We regret that the Finance Department is not able to offer every course listed below in every semester. Thus please check the Finance Department website to verify each semester’s course offerings as well as the professors who will teach those courses.

MBA Advisor: Richard Herring (telephone: 215.898.5613; email: herring@wharton.upenn.edu).

COURSE DESCRIPTIONS

FNCE 611

Corporate Finance

Description: This course serves as an introduction to business finance (corporate financial management and investments) for both non-majors and majors preparing for upper-level course work. The primary objective is to provide a framework, concepts, and tools for analyzing financial decisions based on fundamental principles of modern financial theory. The approach is rigorous and analytical. Topics covered include discounted cash flow techniques, corporate capital budgeting and valuation, investment decisions under uncertainty, capital asset pricing, options, and market efficiency. The course will also analyze corporate financial policy, including capital structure, cost of

capital, dividend policy, and related issues. Additional topics will differ, according to individual instructors.

Format: Primarily lecture, one or two midterm exams and final. Additional assignments at discretion of instructor; they may include cases and homework problems.

Prerequisites: ACCT 611/612, MGEC 611/612 and STAT 613 prerequisite or concurrent.

FNCE 612 (.5 cu)

Accelerated Corporate Finance

Description: This course is intended for people with prior knowledge of financial analysis or with strong analytical backgrounds. It assumes that students are completely familiar with the material covered in the pre-term placement preparation course, FNCE 604. As a result, it is only available to those students who successfully passed the FNCE 612 placement exam at the end of Pre-Term. The course forms the foundation for subsequent courses in corporate finance, security analysis, investments, and speculative markets. Its purpose is to develop a framework for analyzing a firm’s investment and financing decisions and will provide an introduction to capital budgeting techniques under uncertainty, asset valuation, the operation and efficiency of capital markets, and the optimal capital structure of the firm. Furthermore, the course will exploit the students’ prior knowledge and/or quantitative backgrounds (as demonstrated in the FNCE 612 placement exam), and will cover all the topics of a typical semester-long finance introduction class in six weeks.

Format: Lecture, midterm, final exam and regular homework assignments.

Prerequisites: FNCE 604 and successful completion of FNCE 612 placement exam. Since the emphasis is on the fundamental concepts underlying modern finance, the approach will be analytical and rigorous, and requires some familiarity with accounting, mathematical and statistical tools.

FNCE 613

Macroeconomics and the Global Economic Environment

Description: This course is required of all students except those who pass the waiver examination or choose to take the half-semester course, FNCE 615. The purpose of FNCE 613 is to train the students to think systematically about the current state of the economy and macroeconomic policy, and to be able to evaluate the economic environment within which business and financial decisions are made. The course emphasizes the use of economic theory to understand the workings of financial markets and the operation and impact of government policies. Specifically, the course studies the determinants of the level of national income, employment, investment, interest rates, the supply of money, inflation, exchange rates, and the formulation and operation of stabilization policies.

Format: Classroom lectures and discussion – one or two midterm exams and a final exam. Additional assignments at discretion of instructor.

Prerequisites: Introductory knowledge of economics is strongly recommended, either through a college-level economics course or private reading. The course materials, while starting at a basic level, rapidly progress so that the bulk of the analysis is conducted at an intermediate to advanced level; the range of topics covered is also quite extensive. Suggested texts for private study: (1) Parkin, *Economics*, Addison Wesley, (2) Samuelson and Nordhaus, *Economics*, McGraw-Hill, (3) Mankiw, *Principles of Macroeconomics*, Dryden. You should emphasize the macroeconomic parts of these books, but the rudimentary parts of microeconomic concepts of supply and demand, price determination, and market clearing, etc. should also be covered.

FNCE 614 (.5 cu)

Corporate Finance

Description: This course serves as an introduction to corporate investments for non-majors. The primary objective is to provide a framework, concepts, and tools for analyzing financial decisions based on fundamental principles of modern financial theory. The approach is rigorous and analytical. Topics covered include discounted cash flow techniques, corporate capital budgeting and valuation, investment decisions under uncertainty, and capital asset pricing. This course will not cover the following topics included in FNCE 611, the full-semester Corporate Finance course: market efficiency, corporate financial policy (including capital structure, cost of capital, dividend policy, and related issues), and options.

Format: Primarily lecture. Grading based on problem sets, one or two cases, and a final exam. Prerequisites: ACCT 611 or ACCT 612, MGEC 611/612 and STAT 613 prerequisite or concurrent

FNCE 615 (.5 cu)

Macroeconomics and the Global Economic Environment

Description: FNCE 615 is a half-semester overview of macroeconomics. It is intended strictly for non-Finance majors. Any student who contemplates majoring in Finance should be aware that this course does not count in any way toward the Finance major. This course is new to the curriculum and is still under design. It will likely begin with the national income and products, which are the basic source of data on important macroeconomic data such as GDP, consumption, investment, exports and imports as well as prices. The course will also discuss other major sources of macroeconomic data, such as the monthly employment report and the consumer price index. These data descriptions will provide students with a basic level of macroeconomic literacy and will serve as the basis for analyzing specific topics and issues in macroeconomics. At of this writing, the set of topics and issues is still to be determined, but students should be aware that the half-semester format of the course will limit the breadth and depth of topics.

FNCE 717

Financial Derivatives

Description: The purpose of this course is to provide the student with the necessary skills to value and to employ options, futures, and related financial contracts. In order to provide a useful treatment of these topics in an environment that is changing rather rapidly, it is necessary to stress the fundamentals and to explore the topics at a technical level. The topics that will be covered include the valuation of futures contracts on stock indices, on commodities and Treasury instruments; the valuation of options, empirical evidence, strategies with respect to these assets, dynamic asset allocation strategies, or which portfolio insurance is an example, swaps, and the use (and misuse) of derivatives in the context of corporate applications. One-third of the course will be devoted to futures, a third to options, and a third to their applications. Many of the applications will be sprinkled along with the coverage of futures and options.

Prerequisites: FNCE 611 or 612; STAT 613; FNCE 613 may be taken concurrently.

FNCE 719

International Financial Markets

Description: FNCE 719 is a course on international financial markets and exchange rates. Topics include pricing in the foreign currency and Eurocurrency markets, use of forward exchange for hedging, short-term returns and market efficiency in the international money markets, foreign currency options, international capital asset pricing, pricing of foreign currency bonds, currency swaps, Eurocurrency syndicated loans, foreign currency financing and exposure management.

Prerequisites: FNCE 611 or 612; FNCE 613 may be taken concurrently.

FNCE 720

Investment Management

Description: This course is designed to acquaint the student with the concepts of portfolio analysis in the general area of institutional investment management. The course discusses principles for managing financial assets. These principles apply, for example, to managing corporate pension funds, bank-administered trusts, and other institutional funds. Students will learn how to establish appropriate investment objectives, develop optimal portfolio strategies, estimate risk-return tradeoffs, and evaluate investment performance. Many of the latest quantitative approaches are discussed.

Prerequisites: FNCE 611 or 612; FNCE 613; STAT 613.

FNCE 721/ REAL 721

Real Estate Investment: Analysis and Financing

Description: This course provides an introduction to real estate with a focus on investment and financing issues. Project evaluation, financing strategies, investment decision making and real estate capital markets are covered. No prior knowledge of the industry is required, but students are expected to rapidly

acquire a working knowledge of real estate markets. Classes are conducted in a standard lecture format with discussion required. The course contains cases that help students evaluate the impact of more complex financing and capital markets tools used in real estate. There are case studies and two mid-terms, (depending on instructor).

Format: Lecture with discussion required

Prerequisites: FNCE 611 or FNCE 612.

FNCE 725

Fixed Income Securities

Description: FNCE 725 is a rigorous study of fixed income securities, including default-free bonds, floating rate notes, and corporate bonds. Closely related financial instruments such as forwards and futures on fixed income securities, bond options, and interest rate swaps are also examined. In addition to analyzing specific types of fixed income securities, there will be an examination of the tools used in bond portfolio management.

Prerequisites: FNCE 611 or FNCE 612; FNCE 613; STAT 613.

FNCE 726

Advanced Corporate Finance

Description: The objective of this course is to study the major decision-making areas of managerial finance and some selected topics in financial theory. The course reviews the theory and empirical evidence related to the investment and financing policies of the firm and attempts to develop decision-making ability in these areas. This course serves as an extension of FNCE 611. Some areas of financial management not covered in FNCE 611 are covered in FNCE 726. These may include leasing, mergers and acquisitions, corporate reorganizations, financial planning, and working capital management, and some other selected topics. Other areas that are covered in FNCE 611 are covered more in depth and more rigorously in FNCE 726. These include investment decision making under uncertainty, cost of capital, capital structure, pricing of selected financial instruments and corporate liabilities, and dividend policy.

Prerequisites: FNCE 611 or 612; FNCE 613.

FNCE 728

Corporate Valuation

Description: The focus of this course is on the valuation of companies. Topics discussed include discounted cash flow techniques and valuation using alternative valuation techniques such as price multiples. Emphasis is on developing the required information for valuation from financial statements and other information sources.

Prerequisites: Minimum of normal first-year courses in accounting, economics, statistics, and FNCE 611 or 612; FNCE 613 (further coursework in financial accounting such as ACCT 742 is very useful).

FNCE 730/ BEPP 773/ REAL 730

Urban Fiscal Policy

Description: The purpose of this course is to examine the financing of governments in the urban economy. Topics to be covered include the causes and consequences of the urban fiscal crisis, the design of optimal tax and spending policies for local governments, funding of public infrastructures and the workings of the municipal bond market, privatization of government services, and public financial systems for emerging economies. Applications include analyses of recent fiscal crises, local services and taxes as important determinants of real estate prices, the infrastructure crisis, financing and the provision of public education, and fiscal constitutions for new democracies using South Africa as an example.

Prerequisites: MGEC 611 and 612, FNCE 611 or 612.

FNCE 731

International Corporate Finance

Description: This course analyzes financial problems corporations face that result from operating in an international environment. Major topics covered are corporate strategy and the decision to invest abroad, forecasting exchange rates, international portfolio diversification, managing exchange risk, taxation issues, cost of capital and financial structure in the multinational firm, and sources of financing.

Prerequisites: FNCE 611 or 612.

FNCE 732

International Banking

Description: This course focuses on international financial institutions and international banking activities. We will examine how current and historical events are reshaping the industry. We will focus on the basic analytics of managing a bank's exposure to liquidity, credit, market and country risk. In addition, we will consider how to evaluate and compare the risk exposures and performance of individual banks. Throughout the semester we will discuss public policy issues such as international debt crises and regulation.

Prerequisites: FNCE 611 or 612; FNCE 613. One, but not both, can be taken concurrently.

FNCE 738

Capital Markets

Description: This course examines the available corporate securities that firms can use to finance investment. The course will focus on: (1) the design of these securities (Why do bonds have embedded options? What is the role of preferred stock?); (2) the issuing process for these securities (What do investment banks do? Is the underwriting process important for the cost of capital?); (3) the pricing of these securities (How are credit risk in bonds and loans priced?) The securities covered include corporate and junk bonds, bank loans, common and preferred equity, commercial paper, securitization, as well as some recent innovations. Other topics include the role of embedded options in corporate bonds; the role of bank and loan covenants; the function of bond rating agencies; exchange offers; prepack-

aged bankruptcies; bankruptcy Chapter 11; workouts; debtor-in-possession financing; and pricing credit risk. The course is designed to be complementary to Advanced Corporate Finance and Fixed Income Securities.

Prerequisites: FNCE 611 or FNCE 612; FNCE 613.

FNCE 739

Behavioral Finance

Description: There is an abundance of evidence suggesting that the standard economic paradigm—rational agents in an efficient market—does not adequately describe behavior in financial markets. In this course, we will survey the evidence and use psychology to guide alternative theories of financial markets. Along the way, we will address the standard argument that smart, profit-seeking agents can correct any distortions caused by irrational investors. Further, we will examine more closely the preferences and trading decisions of individual investors. We will argue that their systematic biases can aggregate into observed market inefficiencies. The second half of the course extends the analysis to corporate decision making. We then explore the evidence for both views in the context of capital structure, investment, dividend, and merger decisions.

Prerequisites: FNCE 611 or 612; FNCE 613.

Recommended: FNCE 720 and FNCE 726

FNCE 750

Venture Capital and the Finance of Innovation

Description: This course covers the finance of technological innovation, with a focus on the valuation tools useful in the venture capital industry. These tools include the “venture capital method,” comparables analysis, discounted cash flow analysis, Monte Carlo simulation, contingent-claims analysis, decision trees, and real options. The primary audience for this course is finance majors interested in careers in venture capital or in R&D-intensive companies in health care or information technology.

Prerequisites: FNCE 611 or 612; FNCE 613. FNCE 613 may be taken concurrently.

FNCE 751

The Finance of Buyouts and Acquisitions

Description: The focus of this course is on buying (or acquiring controlling stakes in) firms. The main topics to be covered are mergers and friendly acquisitions, hostile takeovers and buyouts. Using case studies, the course surveys the drivers of success in the transactions. While issues regarding motive and strategy will be discussed, financial theory would be the main lens used to view these control acquiring transactions. This will allow students to (1) evaluate transactions through valuation approaches and (2) structure deals employing financial innovation as a response to legal framework and economic frictions. This course should be of interest to students interested in pursuing careers as private equity investors, advisors in investment banking and corporate managers that deal with these issues. This course will be demanding and assumes familiarity with valuation analysis.

Prerequisites: FNCE 611 or 612; FNCE 613. FNCE 726 may be taken concurrently.

FNCE 891

Advanced Study Project—Corporate Restructuring

Description: The objective of this course is to familiarize students with financial, legal and strategic issues associated with the corporate restructuring process. The main focus of the course will be on the restructuring of financially distressed firms. We'll begin by reviewing the financial instruments commonly used by risky firms (leveraged loans and high-yield bonds) and learn to interpret the contracts that govern them. We'll then survey a variety of restructuring methods (out-of-court workouts, exchange offers, prepackaged and pre-negotiated bankruptcies, Chapter 11 reorganizations, international insolvency practices) available to troubled firms and study the dynamics of the restructuring process through a number of historical and current case studies. Finally, we'll consider distressed debt as an asset class and develop techniques for investing in distressed securities. The course will provide students with tools to value distressed companies, understand the legal framework governing bankruptcy and reorganization, and navigate the key strategic issues facing managers and investors in distressed companies. It will also provide students with a specialized vocabulary and important facts about the restructuring industry, distress investing, and leveraged financial markets.

Format: The course's content will be presented using a mixture of lectures, case studies, and guest speakers. The speakers will be Wharton alumni with leadership roles in the restructuring industry as managers, advisors, and investors.

Prerequisites: FNCE 611 or 612; FNCE 613; FNCE 726 and FNCE 728 or permission of the professor.

FNCE 892

Financial Engineering

Description: This class offers an advanced analysis of complex derivative pricing models. It aims to build an integrated framework allowing students to: 1) decide what factors (e.g., stochastic volatility, jumps, stochastic interest rates, credit risk) should be incorporated in a reasonable pricing model for the given derivative; 2) formulate a consistent model incorporating the chosen factors; 3) calibrate the model using market data; and 4) price the derivative and identify a hedging strategy. To allow for sufficient flexibility, the class will not place any special emphasis on models leading to closed-form valuation formulas (such as the Black-Scholes model), relying instead on the generality afforded by the martingale approach and Monte-Carlo simulation. Students will be asked to implement the models introduced in the class using VBA and Crystal Ball (an Excel Add-In specifically designed for Monte-Carlo simulation).

Prerequisites: FNCE 717 and FNCE 725, with a grade of A- or higher in each of these two classes. Students who do not satisfy this prerequisite should obtain the instructors permission to enroll.

FNCE 893**Global Monetary and Financial Institutions: Theory and Practice**

Description: Goal: Provide the future global manager and economist the knowledge on the inter-workings of financial markets and policies set by central banks, regulators and governments. The core of the course will connect between the micro-structure of financial markets, their institutional frameworks and the macroeconomy in the US, the EU and other countries. The course will heavily use the data and events of the 2007-2010 financial crisis.

Requirements: Final and midterm examinations and a term paper that provides a description and analysis of one or more of the main topics for a certain country.

References: Use one or more textbooks as well as additional books, reports and analysis that were recently published on each of the topics

Prerequisites: FNCE 611 or 612; FNCE 613; STAT 613.

FNCE 894**Managing Fixed Income Portfolios**

Description: The goal of this course is to teach you how to manage a real portfolio of Treasury, corporate and mortgage bonds. We begin by learning how to infer market forecasts from current bond prices. We use analytical models to find the market forecasts and the prices the market is offering for bearing the different types of risks. To implement the concepts learned in class, students will form teams to manage a paper portfolio using Barclays Point (formerly Lehman Point) a state-of-the-art portfolio management system. Your team will trade a \$100 million portfolio of bonds for which your goal will be to outperform the Barclays Aggregate Index.

Prerequisites: FNCE 725

FNCE 895 (.5 cu)**Private Equity**

Description: The course will be a survey of the private equity asset class. Its objective is to provide an understanding of the concepts, agents, and institutions involved in the late stage corporate private equity market in the U.S. and around the globe. It will examine the buyout market and the activities of buyout funds from the differing perspectives of private equity investors, private equity fund sponsors, and managers of the portfolio companies. The course will be taught almost entirely with cases. Distinguished Wharton alumni in the private equity industry will be our guest speakers for many of the cases based on transactions they concluded. While this course is primarily intended for graduate students, admission may be granted to a limited number of interested undergraduate students.

Please Note: This course may be recorded for live or subsequent distribution, display, broadcast, or commercialization in any media, including video, audio, or electronic media. For additional information, see the course syllabus or contact the department.

Prerequisites: FNCE 726 and FNCE 751 or permission from the professor

FNCE 899**Independent Study Project in Finance**

Description: Independent Study Projects require extensive independent work and a considerable amount of writing. A student wishing to do an individualized project in a particular area may do so with permission of a Finance Department standing faculty member.

Applications for an ISP must include a one page prospectus about the subject to be studied, the methodology to be employed, the data that will be used and the form of the final output. The application must be signed by the member of the standing faculty who has agreed to supervise the project and then submitted to the Finance Department Academic Coordinator, 2411 SH-DH to obtain approval from the Finance Department's MBA Advisor's approval.