

FINANCE (FI)

FI 590 Internship in Finance (1 credit)

A one-credit field-based educational experience for Bentley students with the opportunity to (1) observe finance practices, (2) apply and test hands-on the organizational concepts and methods learned in classes, (3) develop leadership skills, (4) test aptitude and personal preferences for various career directions, and (5) establish a basis for future professional employment. This Internship option is available to Bentley MSF students. Students must work a minimum of 200 hours at an organization suitable for the individual student's field learning experience, and complete specific requirements during their internship in order to receive academic credit. A student is limited to doing one such one-credit internship before degree completion.

Typically Offered: Once a year

FI 623 Investments (3 credits)

This course provides fundamental knowledge in key areas of investments. In particular, the course will focus on portfolio theory, asset pricing, equity valuation, fixed income valuation and risk, and option pricing and strategies.

Typically Offered: Fall and Spring

FI 625 Corporate Finance: Theory, Tools and Concepts (3 credits)

Pre-Req: GR 524, GR 524D, or GR 524P. Not open to students who have completed GR 525, GR 525D, or GR 525P

The course extends the basic understanding of financial concepts and tools by emphasizing the modern fundamentals of the theory of finance. It develops the ability to apply financial analysis, planning and valuation techniques to solving financial problems. The course covers issues related to how managers manage the assets in place, identify and evaluate future investment opportunities, and analyze sources and costs of capital necessary to fund these projects. Topics are presented in an environment that includes strategic, global and technological issues where appropriate and relevant.

FI 627 Corporate Finance: Applications and Advanced Topics (3 credits)

Pre-Req: GR 525, GR 525D, GR 525P, or FI 625. MSF students must take FI 625

This course hones analytical skills by exploring applications of concepts and tools introduced in GR 525 and FI 625. It is a case-based course where students examine a wide range of topics in corporate finance in a real-world setting. Issues examined can include, but are not limited to, building financial forecasts, estimating a cost of capital, making corporate investment decisions, private equity financing, the decision to go public, long-term financing choices, management buyouts, the economics of mergers, acquisitions and divestitures, and corporate risk management.

Typically Offered: Fall and Spring

FI 631 Financial Modeling (3 credits)

Pre-Req: FI 625, GR 525, GR 525D, or GR 525P

Financial Modeling is focused on applying sophisticated Excel techniques to common modeling problems in finance. Working with text, dates, numbers and formulas, students build a skill set including conditional and Boolean calculations, formatting, cell protection, random figure generation, and data cleansing techniques. That skill set is expanded to include advanced features of Excel including pivot tables, simulation and solver. Subsequently the course will cover macro recording and function construction in the Visual Basic for Applications (VBA) development environment. All techniques learned are applied to common financial modeling problems including forecasting revenue, building detailed internal company budgets, and projecting GAAP financial statements, including the cost of capital and the intrinsic stock valuation.

Typically Offered: Fall and Spring

FI 635 Fixed Income Valuation and Strategies (3 credits)

Pre- or Co-Req: FI 623

Covers the pricing of fixed income securities, examining topics such as bond mathematics, term structure of interest rates, repurchase agreement market, pricing of default risk in the context of high yield corporate bonds, foreign exchange risk in the context of foreign currency denominated bonds, and pricing pre-payment risk in mortgage-backed securities. More advanced topics include the tools and their application under realistic assumptions in the real world, application of duration and convexity under realistic yield curve assumptions, risk and return in the high yield bond market and related structured products, option-adjusted spread modeling in mortgage backed securities pricing, the mortgage derivatives markets, and foreign currency denominated bond investment. Requires econometric analyses that involve using the resources of the Trading Room. Assigned readings include journal articles from applied academic finance journals and research reports from Wall Street firms.

Typically Offered: Fall and Spring

FI 640 Equity Valuation (3 credits)

Pre-Req: FI 623

This course teaches students to value equity securities, starting with the top-down approach and industry analysis/forecasting. It examines valuation theory, models and applications. Students analyze the IPO process to gain a detailed understanding of equity market operation, issues that affect these markets and where they are headed. More advanced topics include the implications of financial statements on cash flow and risk, the exploration of valuing distressed or bankrupt companies, closely held firms, and venture capital situations. The course requires extensive use of applied academic journals, the financial media, and resources available in the Trading Room.

Typically Offered: Fall and Spring

FI 645 Derivatives (3 credits)*Pre- or Co-Req: FI 623*

This course provides materials and projects that will allow students to develop a detailed understanding of the design, mechanics and pricing of derivative securities in risk management. The concept of the law of one price will be stressed and includes the application of the tools and inputs (quantitative techniques as developed in ST 625) necessary to value derivative securities. The mathematical requirements of the course are primarily algebraic, but the student will also need to rely on statistical methods and some calculus. Please note that this is not a survey course. It is an intensive introduction to derivative securities pricing and market mechanics.

*Typically Offered: Fall and Spring***FI 650 Quantitative Investment Management (3 credits)***Pre-Req: FI 623*

This advanced applied course will extend the understanding of security selection and portfolio construction you developed in an Investments course and use a lot of concept you learned in a Statistics class. Our focus will be on the active quantitative management of equity portfolios. The course requires the extensive use of FactSet quantitative tools (Alpha Testing, Screening and Portfolio Analysis). We start with developing an understanding of the importance of investment styles and style benchmarks. We will then turn to studying quantitative factor models (Economic and Fundamental) for stock selection, portfolio construction, and risk management. We will end with the analysis of portfolio performance. This course is a hand-on applied course with a semester long quantitative portfolio manager project that will bring to life the concepts we are learning during the semester.

*Typically Offered: Once a year***FI 660 Applying ESG for Sustainable Equity and Fixed Income Investing (3 credits)***Pre or Co-Req: FI 623*

Sustainable investing is an investment discipline encompassing a range of strategies and approaches that incorporate environmental, social and corporate governance (ESG) information to generate long-term competitive financial returns and generate positive long-term societal outcomes. This course will provide hands on knowledge of ESG practices implemented in investing today along with a perspective on this rapidly growing and evolving investment discipline.

FI 685 Financial Strategy (3 credits)*Pre-Req: FI 625, GR 525, GR 525D, or GR 525P*

This course has three broad objectives. The first is to examine a framework for formulating value-enhancing corporate strategies, both short term and long term. The second is to study a variety of financial policies, and develop an understanding of how financial policy is an integral part of any value-maximizing corporate strategy. The third objective is to apply the value-maximization framework and tools to conduct an in-depth evaluation of corporate strategy for a selected firm. Various strategic decisions to create stakeholder wealth will be discussed through case discussions and analysis of actual companies. Analysis of financial decisions in a framework that views a business strategy as a series of options rather than a series of static cash flows will be discussed.

*Typically Offered: Once a year***FI 700 Dir Study in Finance (3 credits)**

A Directed Study is designed for highly qualified students who, under the direction of a member of the sponsoring academic department, engage in an agreed-upon in-depth independent examination, investigation or analysis of a specialized topic.

*Typically Offered: Once a year***FI 701 Internship in Finance (3 credits)**

To enroll in an internship, the student must contact the Graduate Student and Academic Services Office to begin the appropriate paperwork. Once completed, the student will be manually registered.

Affords students the opportunity to enhance self-realization and direction by integrating classroom study with experience in professional financial environments. Requires development in cooperation with the potential employer of a proposal defining the internship experience. Consistent with the student's professional goals, the proposal should detail either a specific project or a structured development program. Includes regular meetings in which students discuss issues and business problems related to their work experience, and defend proposed solutions before fellow students and the internship coordinator.

*Typically Offered: Once a year***FI 730 Management of Financial Institutions (3 credits)***Pre-Req: GR 525, GR 525D, GR 525P, or FI 625. MSF students must take FI 625, previously or concurrently*

This course analyzes the environment, structure and operation of depository financial institutions while concentrating most heavily on commercial banks. It reviews the complex role of depository institutions within a changing industry and examines criteria used to measure performance. The course presents the analytical methods used to evaluate the efficiency of operations, the market position, and the development of the institutions. Factors leading to growth and profitability, both internal and external to the firm, are evaluated. Issues specific to the international operations of U.S. banks as well as the domestic operations of foreign banks are explored. The course examines the exposure to risk of various kinds and methods used to minimize those risks. Both cases and current issues are used.

*Typically Offered: Once a year***FI 735 Mergers and Acquisitions (3 credits)***Pre-Req: GR 525, GR 525D, GR 525P, or FI 625. MSF students must take FI 625*

This course studies mergers and acquisitions, both as a growth strategy and as a means of increasing the market value of the firm. Students develop the skills to scan the environment for potentially attractive targets, and thereafter, to determine the terms of a merger. Through the case analysis method, students test pre-merger conditions against post-merger facts to form judgments about the soundness of a given merger. Accounting treatment of mergers, as well as the role of tax and antitrust laws, is studied.

Typically Offered: Fall and Spring

FI 751 International Financial Management (3 credits)

Pre-Req: GR 525, GR 525D, GR 525P, or FI 625. MSF students must take FI 625, previously or concurrently

This course deals with the international aspects of corporate finance and investing. Areas covered include foreign exchange with emphasis on exchange rate determination, exchange risk, hedging and interest arbitrage, international money and capital markets and international financing, multinational capital budgeting, cost of capital and international portfolio management.

Typically Offered: Fall and Spring

FI 760 Financial Planning Fundamentals (3 credits)

Pre or Co-Req: FI 623

This course provides an overview of the personal financial planning process, including the establishment of goals and objectives, forecasting of lifetime income and expenditures, related tax planning issues, money management and key financial life decisions, investing to meet milestones, and retirement. The course covers the concepts, theories and analytical methods used in professional financial planning.

Students analyze the effects of inflation, changing interest rates and taxation on meeting financial goals. The course is designed to give an in-depth exposure to financial planning issues to students with a professional interest in the field, as well as an understanding of the different elements making up one's financial life to those pursuing other career paths.

The purpose of this course is to help students document and refine their financial planning skills through cases and the completion of written financial plans.

Typically Offered: Once a year

FI 767 Investment Practice and Ethics (3 credits)

Pre-Req: FI 623

This is a graduate Finance elective course that will provide an understanding of compliance standards and practices, with a particular focus on investment management. Students will construct both active and passive investment portfolios using advanced quantitative tools and then explore through a series of case studies the compliance, regulatory, and reporting requirements of the investment process. There is a particular focus on the CFA Standards of Practice.

Typically Offered: Every two or more years

FI 774 Computational Finance (3 credits)

Pre-Req: GR 526 and FI 623

The course covers the application of advanced mathematical methods to solve complex problems in Finance. Mathematical topics will include computational methods, simulation methods, numerical methods and stochastic processes. The course requires an understanding of Calculus 1,2,3 and presumes an advanced understanding of financial markets and instruments, including fixed income and derivatives, for a series of application projects.

Typically Offered: Fall and Spring

FI 787 Large Investments and International Project Finance (3 credits)

Pre-Req: GR 525, GR 525D, GR 525P, or FI 625. MSF students must take FI 625

This course provides an overview of project finance employing the latest techniques for structuring transactions, including risk mitigation by financial intermediaries. Students will be introduced to substantial research data and informational resources. Decision-making and prioritization of tasks, policy formulation, the selection of world-class partners and on-the-ground operational skills necessary to ensure timely completion of construction, budget adherence and efficient start-up are stressed. Large investment projects across a variety of geographic regions, industrial sectors and stages of project execution are examined. The important differences in risk between domestic and export sector projects will be contrasted, including management of foreign exchange issues and the role of host governments. Case studies and an international development valuation project will add depth to the text material. Comfort with Excel spreadsheets and the analytical tools is recommended.

Typically Offered: Once a year

FI 799 Experimental Course in FI (3 credits)

Pre-Req: Varies by topic

This is a graduate Finance elective course that will provide an understanding of compliance standards and practices, with a particular focus on investment management. Students will construct both active and passive investment portfolios using advanced quantitative tools and then explore through a series of case studies the compliance, regulatory, and reporting requirements of the investment process.

Typically Offered: Fall and Spring