

FINANCE (FI)

FI 100 Finance Preparation Module (0 credits)

FI 299 Experimental Course in Finance (3 credits)

Experimental courses explore curriculum development, with specific content intended for evolution into a permanent course. A topic may be offered twice before it becomes a permanent course. Students may repeat experimental courses with a different topic for credit.

FI 305 Principles of Accounting and Finance (3 credits)

Pre-Req: GB 212, (MA 123, MA 123L, or MA 131), and (Pre- or Co-Req: GB 213 and EC 112)

This course serves as the gateway to the Finance, Economics and Finance and Corporate Finance and Accounting majors. An overview of financial statements and approaches to financial statement analysis are covered first, followed by the basics of valuation and the management of working capital. Specific topic areas include time value of money, valuation of financial securities, risk and return, estimating the cost of capital, working capital management, and financial planning and forecasting.

FI 306 Financial Markets and Investment (3 credits)

Pre-Req: FI 305

Introduces students to important topics in bond, equity and options markets. To this end, the course focuses on issues surrounding the nature and functioning of these markets and the key models used in valuing securities that are traded on them. Students will enhance their understanding of how these markets operate to establish asset values by engaging in exercises in the Trading Room.

FI 307 Advanced Managerial Finance (3 credits)

Pre-Req: FI 305

This course builds on materials covered in FI 305. Topics covered include capital budgeting under uncertainty, capital structure and payout policy, investment banking and public offerings of securities, lease financing and hybrid securities, mergers, acquisitions and other forms of corporate restructuring, bankruptcy and liquidations, and an introduction to derivative securities and corporate risk management. Course pedagogy includes the use of cases to bridge the gap between finance theory and real-world applications.

FI 312 Quantitative Portfolio Management (3 credits)

Pre-Req: FI 306 and at least 81 completed and in progress credits

This advanced course will extend the understanding of security selection and portfolio construction you developed in an Investments course. Our focus will be on the active management of equity portfolios. We will begin with fundamental analysis to develop an understanding of investment styles and style benchmarks. We will then turn to studying quantitative models for stock selection, portfolio construction, and risk management. This course inherently requires the study of some mathematical topics, but the focus will always be on developing a deep conceptual understanding of the steps involved in security selection and portfolio management.

FI 314 Fundamentals of Anti-Money Laundering Risk Management & Compliance (3 credits)

Pre-Req: FI 306 or FI 623

Anti-money laundering (AML) responsibilities apply to ALL staff within financial institutions—even non-compliance staff—and the purpose of this course is to familiarize students with the U.S. AML regulatory framework, explain how financial institutions build AML risk management and compliance programs, and prepare students for a career in AML risk management and compliance. This course will consist of lectures, team analyses, and mid-term and final exams. The course will heavily involve real-world, current case studies and students will be expected to conduct their own open source research to complement in-class content. Class participation is critical and each student is expected to prepare before class to enable him/herself to actively participate during class.

FI 315 Equity Research (3 credits)

Pre-Req: FI 306

The goal of this course is to develop students ability to use financial statement information and related disclosures to evaluate the underlying economics of a firm. Students will study the company's past and current performance, its strategy, and competitive environment by analyzing and interpreting data from the firm's 10-K, 10-Q, and earnings call transcripts. Students will then develop an integrated three-statement financial model of the firm in order to forecast the firm's future performance. These projections become the inputs to the valuation techniques that are studied, which include discounted cash flow models (DCF), residual income models, and relative valuation methods. The course emphasizes the DCF method of valuation, which is used to estimate the intrinsic value of the firm. This approach to firm valuation is referred to as bottom-up or fundamental analysis. It is associated with investors such as Benjamin Graham, Warren Buffett and Peter Lynch.

FI 316 Sustainable, Responsible, and Impact (SRI) Investing (3 credits)

Pre-Req: FI 306

SRI is an investment discipline that considers environmental, social and corporate governance (ESG) criteria to generate long-term competitive financial returns and positive societal impact. This course will focus on various ESG considerations such as climate change, air & water pollution, waste management, community & employee relations, human rights, human capital management, board composition, disclosure, accounting risk, and executive compensation. Students will learn about incorporating these ESG issues into investment decisions. In addition, students will learn about various metrics and databases (e.g., Bloomberg, CDP, Sustainalytics) that are used in SRI investing, and will utilize them to identify investment opportunities that provide competitive financial returns as well as positive impact on the society at large.

FI 317 Mutual Fund Operations and Management (3 credits)

Pre- or Co-Req: FI 306

This course will provide students with a broad understanding of the mutual fund industry as well as the organizational infrastructure necessary to offer retail investment products (mutual funds) to shareholders. Students will first develop an understanding of the history of the industry, the evolution of products offered and how mutual fund advisors are generally organized. We will then focus on fund qualification requirements and explore the differences between a variety of fund offerings (ex: taxable vs. tax exempt funds, diversified vs. non-diversified, etc.). Students will learn how investment advisors have had to adapt to recent regulatory developments, the financial crisis and various industry scandals. The role of the Valuation Committee and the complexities of the nightly fund valuation process will be a theme throughout the course.

FI 318 Real Estate Investment Decisions (3 credits)*Pre or Co-Req: (FI 380 or FI 307) or (FI 320 or FI 306)*

Acquaints students with the basic concepts and principles of real estate and urban economics that affect real estate investments. Equips students with essential tools needed for comprehensive real estate investment analysis. Emphasizes the financial aspects of real estate, e.g., appraisal, feasibility analysis, and primary and secondary markets of real estate.

FI 322 Advanced Topics and Career Perspectives in Investment Management (3 credits)*Pre-Req: FI 306 or FI 307. Equity Research (FI 315) preferred but not required.*

This class is intended largely for undergraduate finance majors as an upper level elective course that will allow students interested in possible careers in investment management to explore the industry and career opportunities. The course will enable students to integrate their academic understanding of the investment management industry and career opportunities with real-world perspectives and insights as guided and shared by the instructors.

FI 323 Introduction to FinTech (3 credits)*Pre-Req: FI 306*

This course aims to provide students with an introduction and broad overview of the FinTech universe rather than focusing on a particular technology or solution such as Blockchain. The course specifically covers the role of technological innovations in shaping the financial services industry, and also covers techniques relevant for the valuation of FinTech firms.

FI 325 Operations of Financial Institutions (3 credits)*Pre- or Co-Req: FI 307 or FI 306*

Examines the structure and operation of financial institutions, including commercial banks, thrifts and financial services companies. Covers the techniques used to analyze profitability, liquidity, structure, short-run versus long-run decisions, and the particular difference between small, large, domestic and international banks.

FI 331 Fixed Income Securities (3 credits)*Pre-Req: FI 306 or FI 307*

Covers the valuation of fixed income securities, examining topics such as bond mathematics, term structure of interest rates, repurchase agreement market, high yield corporate bonds with and without embedded options, munis, Treasuries, foreign currency-denominated bonds, and mortgages. Particular emphasis is placed on duration and convexity for bond interest rate risk management, the pricing default risk of corporate bonds using yield spread analysis, and options-adjusted spread. The course also looks at the valuation of mortgages, securitization of mortgage-backed securities, and the effects of prepayment options on the valuation of mortgage-backed securities. The course requires the use of the analytical tools available on Bloomberg.

FI 333 Seminar in Micro-Lending (3 credits)*Pre-Req: GB 212. FI 305 is strongly recommended*

This course is a labor- and communications-intensive reading seminar designed for students who have an interest in micro-lending or -enterprises. Much of the article and case presentation and management of the class discussion will be lead by the students in the class. As a seminar group, students will work on a course project that furthers the efforts and mission of the Bentley Microfinance Initiative.

FI 335 Derivatives (3 credits)*Pre-Req: FI 306 or FI 307*

This course is an intensive introduction to derivatives. The course will enable students to achieve a detailed understanding of the pricing of forwards, futures, swaps and options, and an appreciation of their many uses in the real world. The mathematical requirements of the course include very basic statistical methods and a little calculus. The course will stress intuition and practical applications such as trading, capital preservation and risk management strategies. Students will use the trading room extensively. Students who do well in the course will be well on your way toward understanding the material in the derivatives sections of the three CFA exams.

FI 345 Applied Corporate Finance (3 credits)*Pre-Req: FI 307*

This course provides an advanced analysis of the major issues affecting the financial policy of a modern corporation using a set of case studies. The major issues to be covered are financial statement analysis, the assessment of financing needs, capital budgeting, short-term and long-term financial policy, project evaluation, cost of capital, capital structure, and mergers and acquisitions. The learning method will be intensive case analysis. Student involvement in case discussion is an integral part of the learning process.

FI 347 Financial Modeling (3 credits)*Pre-Req: FI 306 or FI 307*

Financial Modeling is an advanced elective focused on applying sophisticated Excel techniques to the most common modeling problems in finance. First, the skill set is expanded to include advanced features of Excel, including TVM and statistical functions, array manipulation, text and date usage, regression, conditionals, Boolean operators, data tables and random number generation. Subsequently the course will cover macro recording as well as custom subroutine and function construction in the Visual Basic for Applications (VBA) development environment. All techniques learned will be applied to the most common financial modeling problems of the day, including present value, cost of capital, financial statement forecasting, valuation, portfolio theory and options. Lectures will not only discuss the Excel application and relevant financial theory, they will also cover topics such as linear algebra, programming style, enhanced readability, reuse and large-scale deployable model development.

FI 348 Advanced Financial Modeling (3 credits)*Pre-Req: FI 347 and (FI 306 or FI 307)*

This course develops the VBA programming language skillset and applies it to the most relevant finance applications of the day. First, a review of the VBA integrated development environment (IDE) is provided and consequently expanded to provide better mastery of its features and capabilities. Then basic programming and problem solving skills are developed via studying the programming elements of the VBA programming language. Early topics include functions versus subroutines, variables, use of the most common VBA objects for Excel, good programming practices and a review of macro recording. Decision making logic and looping is then covered. The course proceeds to the design of VBA user forms for user input/output. While this is an advanced elective, it is intended for the novice Visual Basic user rather than those with previous programming experience in VBA. This is a finance course first, and knowledge of financial topics covered in FI 306 and/or FI 307 will be relied upon.

FI 351 International Finance (3 credits)*Pre-Req: FI 306 or FI 307*

Surveys systematically the theory of international finance, international investing and international business. Areas covered include foreign exchange with emphasis on exchange rate determination, exchange risk, hedging and interest rate arbitrage, international money and capital markets and international financing, multinational capital budgeting and the cost of capital.

FI 352 International Project Finance (3 credits)*Pre-Req: FI 307*

The course relies on a case-study approach to an increasingly important field that requires excellent financial management skills. We provide 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. The course stresses 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. Large investment projects across a variety of geographic regions, industrial sectors, and stages of project execution are examined, including relevant data on default and loss characteristics. We will contrast the important differences in risk between domestic and export sector projects, including management of foreign exchange issues and the role of host governments.

FI 360 Introduction to Personal Financial Planning (3 credits)*Pre-Req: FI305*

Provides an overview of the personal financial planning process, including the establishment of goals and objectives, forecasting of lifetime income and expenditures, evaluation of alternative investments, money management, taxation, and retirement and estate planning. Covers the concepts, theories and analytical methods used in professional financial planning. Investments considered include home ownership, securities, money market funds, investment partnerships, insurance, business ownership, real estate, and retirement programs. Analyzes the effects of inflation, changing interest rates and taxation on these investments. Designed to give an in-depth exposure to financial planning issues to students with a professional interest in the field.

FI 361 Comprehensive Financial Plan Development (3 credits)*Pre-Req: FI 360*

This course builds on the knowledge and techniques taught in FI360 (Introduction to Personal Financial Planning). The purpose of this course is to help students document and refine their financial planning skills through case study methodologies and the completion of written financial plans based on complex personal and household financial planning scenarios. Students are expected to exhibit advanced financial planning skills in the development and implementation of client-centered financial recommendations. Additionally, this course examines professional issues in financial planning, including ethical dilemmas, regulatory compliance, certification requirements, and normative practice standards.

FI 362 Insurance and Risk Management, Retirement Planning and Estate Planning (3 credits)*Pre- or Co-Req: FI 306 or FI 307*

This course builds on the concepts and techniques taught in FI 360 (Introduction to Personal Financial Planning). The purpose of this course is to fully introduce students to the principles of risk and insurance. The second module of the course will cover the more complex retirement planning issues and decisions that were not covered in FI 360. The third module will cover the further aspects of estate planning, not covered in FI 360 that a professional financial planner would need to know.

FI 372 Mergers and Acquisitions (3 credits)*Pre-Req: FI 306 or FI 307*

Mergers and Acquisitions is an advanced finance course that is designed to examine various aspects of corporate mergers, acquisitions, and other changes in control of a company. The course will discuss such matters as the strategy and rationale for such transactions, corporate governance, valuation, structuring, due diligence, private equity and leveraged buyouts and the seller's perspective in a transaction. Other topics will include a discussion of alternatives to mergers and acquisitions such as joint ventures and licensing, as well as a discussion of post-merger integration.

FI 398 Advanced Topics in Financial Planning (3 credits)*Pre-Req: FI 306*

This course explores the complex issues involved in planning for specialized client circumstances. As a result, the course highlights the effects of marriage, separation, divorce, childbirth, career changes, inheritance, health difficulties, and the retirement or death of household members on financial planning activities. The course work also illustrates actual uses of financial planning tools and a technology in the development of segmented and comprehensive plans to help refine students' research, communication and decision-making abilities.

FI 399 Experimental course in FI (3 credits)

Experimental courses explore curriculum development' with specific content intended for evolution into a permanent course. A topic may be offered twice before it becomes a permanent course. Students may repeat experimental courses with a different topic for credit.

FI 401 Directed Study in Finance (1 credit)

Permits selected superior students to study special topics. (Allows repetition for credit.)

FI 421 Internship in Finance (3 credits)*Pre-Req: Nine hours of finance courses, at least 81 completed and in progress credits, and internship coordinator permission*

Provides the student with an on-the-job opportunity to apply principles of the finance discipline to a work situation in the business world. Requires the student to work with the faculty advisor to develop a report relating academic course work to the work experience.