

FINANCE (FNCE)

FNCE 2101 Introduction to Finance 3 Credits

Fee: \$145 DSB Financial Technology Fee

Prerequisites: ACCT 1011, ECON 1011, ECON 1012, MATH 1016 or higher, sophomore standing.

This course provides the building blocks for understanding the role of finance in the domestic and international environments. Specifically, in a qualitative and quantitative manner, this course addresses the three interrelated fields of finance, namely: financial markets, investments, and business finance.

FNCE 2190 Personal Finance 3 Credits

This course for non-majors covers financial decision-making from a personal standpoint. The course examines investments including stocks, bonds, housing purchases, and mutual funds with an emphasis on the elementary financial principles of risk and return. Other topics include life, health, and other insurance needs, and pension and estate planning.

FNCE 2980 Internship 1 Credit

Prerequisite: Sophomore standing.

Students may take up to two semesters of a department-approved internship. Students must be matriculated in the Dolan School of Business and have a GPA of 2.5 or higher.

FNCE 3200 Global Capital Markets 3 Credits

Attributes: IBEL International Business Elective, INEL International Studies Elective

Prerequisites: FNCE 2101, junior standing.

This course surveys a variety of financial instruments, institutions, and markets from a global perspective and covers the relationship between financial intermediaries and central banks. Students review the use of traditional and new financial instruments in the context of the specific markets they serve.

FNCE 3210 Principles of Investment 3 Credits

Prerequisites: FNCE 2101, junior standing.

This course offers a general view of the operation of security markets and the factors that influence security prices. Further, it includes basic analysis and valuation of stocks, bonds, options, and futures. The course also provides an introduction to the tools and techniques that can be used to measure performance, manage risk, and construct efficient portfolios.

FNCE 3215 Financial Management 3 Credits

Prerequisites: FNCE 2101, junior standing.

This course examines the role of financial managers in the context of the firm. The course covers the theory and operationalization of the major financial decisions faced by financial managers. Major topics include optimal financial decision-making, capital budgeting, financing, and cash distribution decisions within the framework of firm value maximization.

FNCE 3235 Financial Technology 3 Credits

Prerequisites: FNCE 3210 or FNCE 3215.

Financial Technology commonly known as FinTech in the marketplace refers to technological innovation in the financial industry. FinTech entrepreneurs are attempting to change how the financial services are delivered to the users. The class will cover overview of FinTech industry and examine FinTech application in wealth management and payments as well as cryptocurrency including Bitcoin. It will cover FinTech background, ecosystem, evolutions, FinTech and financial institution and collaboration with Fintech entrepreneurs. The course will also cover how FinTech reshaped asset management and financial planning, cryptocurrency and blockchain and its regulation.

FNCE 3340 Sustainable Investing 3 Credits

Attributes: EVME Environmental Studies Major Elective, EVPE Environmental Studies Elective, EVSS Environmental Studies: Social Science

Prerequisite: Select one course from: ECON 1011; ECON 1012; FNCE 2101.

This course provides students with a broad understanding of sustainable investing, including three generalized categories of sustainable investing, namely ESG Investing, Socially Responsible Investing, and Impact Investing. Students will explore how and why investors and fund managers might employ/offer each of these three categories of sustainable investing. This exploration includes the financial and impact considerations for each category of sustainable investing. Students will also learn how incorporating environmental, social, and governance criteria can improve returns and/or reduce risk. Additional topics covered include shareholder activism, religious values investing, and stakeholder value. Students will learn about sustainable investing through both top down (investor lens) and bottom up (company lens) approaches. This course provides students with hands on experience researching, analyzing, and developing investment recommendations, which will serve to improve their business writing, analytical skills, and technical competency in sustainable investing.

FNCE 3980 Internship 3 Credits

Prerequisite: Junior standing.

Students may take up to two semesters of a department-approved internship. Students must be matriculated in the Dolan School of Business and have a GPA of 2.5 or higher.

FNCE 4240 International Financial Management 3 Credits

Attributes: IBEL International Business Elective, INEL International Studies Elective

Prerequisite: FNCE 3215.

This course deals with the international aspects of corporate finance. Topics include foreign exchange with emphasis on exchange rate determination, exchange rate risk management, international money and capital markets, international capital budgeting, cost of capital, and international trade financing.

FNCE 4300 Seminar in Fixed Income 3 Credits

Prerequisite: FNCE 3210 or FNCE 3215.

This course provides an in depth analysis of fixed income securities and markets. The primary focus of the course is the analysis and valuation of fixed income securities. The course also provides an overview of fixed income markets and an introduction to fixed income portfolio management. Topics to be discussed include interest rate exposure (duration and convexity), credit risk analysis, hedging with swaps and futures, and the term and credit structure of interest rates.

FNCE 4305 Financial Trading and Strategic Simulations 3 Credits

Attributes: BUEL Business Elective, FIEL Finance Elective

Prerequisites: FNCE 3210, FNCE 3215.

In this course, students will be introduced to the forces at work that create a market for various types of financial securities. The emphasis of the course will be to understand the microstructure of financial markets and to investigate the risks and returns of various trading strategies. Students who complete the course satisfactorily will be able to design and execute trading strategies with a firm understanding of their potential outcomes.

FNCE 4310 Portfolio Analysis**3 Credits****Prerequisite:** FNCE 3210.

This course deals with the principles and applications of modern portfolio theory from the point of view of both the institutional and the individual investor. More specifically, the course analyzes portfolio objectives, efficient portfolio construction, performance evaluation, and portfolio risk management using derivatives.

FNCE 4315 Futures and Options Markets**3 Credits****Prerequisite:** FNCE 3210.

This course deals with options and futures on financial assets, as well as commodities. The course covers the basic uses of these instruments and the various pricing methodologies based on equilibrium conditions.

FNCE 4320 Financial Modeling**3 Credits****Prerequisite:** FNCE 3210 or FNCE 3215.

In this course, students will build financial models in a spreadsheet environment. Emphasis is placed on the use of financial models to conduct quantitative analysis and aid in decision making using advanced spreadsheet analytical tools and commands including simulation. The modeling assignments cover a wide range of topics in corporate finance and investment topics. The course requires group work and a final project.

FNCE 4325 Seminar in Real Estate**3 Credits****Attributes:** FIEL Finance Elective**Prerequisite:** FNCE 3210 or FNCE 3215.

This course provides an in depth analysis of real estate debt and equity markets. Both primary and secondary markets will be studied. The course will cover the following topics: analysis of real estate markets; valuation of residential and commercial real estate; investment and financing of residential and commercial real estate property; application of financial mathematics to the calculation of payment streams, outstanding loan balances, equity returns and other basic financial measurements; secondary mortgage market securitization and the market for residential and commercial mortgage backed securities; Real Estate Investment Trusts.

FNCE 4330 Case Studies in Finance**3 Credits****Prerequisites:** FNCE 3210, FNCE 3215, senior standing.

This course examines and applies the principles developed in financial management and investments in a domestic and international context with the objective of integrating finance practice and theory using case studies.

FNCE 4390 Seminar in Finance**3 Credits****Attributes:** FIEL Finance Elective

This course involves contemporary or specialized topics in finance. Seminars are open to finance majors only; prerequisites may vary.

FNCE 4990 Independent Study**3 Credits**

This course offers students the opportunity for independent study in contemporary or specialized topics in finance. Independent studies are open to finance majors only and require senior standing and a GPA of 2.5 or higher.

FNCE 5400 Principles of Finance**3 Credits****Prerequisites:** ACCT 5400, DATA 5400.

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

FNCE 6500 Stakeholder Value**3 Credits****Prerequisite:** FNCE 5400.

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

FNCE 6530 Corporate Finance**3 Credits****Prerequisite:** FNCE 5400.

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

FNCE 6540 Investment Analysis**3 Credits****Prerequisite:** FNCE 5400.

This course examines the determinants of valuation for bonds, stocks, options, and futures, stressing the function of efficient capital markets in developing the risk-return trade-offs essential to the valuation process.

FNCE 6545 Portfolio Management**3 Credits****Prerequisite:** FNCE 6540.

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

FNCE 6555 International Financial Management**3 Credits****Prerequisite:** FNCE 6530.

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

FNCE 6560 Global Financial Markets and Institutions**3 Credits**

This course examines financial markets in the context of their function in the economic system. The material deals with the complexity of the financial markets and the variety of financial institutions that have developed, stressing the dynamic nature of the financial world, which is continually evolving.

FNCE 6565 Derivative Securities**3 Credits****Prerequisite:** FNCE 6540 (concurrency allowed).

This course offers in-depth coverage of financial derivative securities, such as options futures and swaps. The course focuses on the principles that govern the pricing of these securities as well as their uses in hedging, speculation, and arbitrage activities.

FNCE 6570 Fixed Income Securities**3 Credits****Prerequisite:** FNCE 6540.

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

FNCE 6575 Capital Budgeting**3 Credits****Prerequisite:** FNCE 6530.

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

FNCE 6580 Financial Risk Management**3 Credits****Prerequisite:** FNCE 6540.

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

FNCE 6595 Research Methods in Finance**3 Credits****Prerequisite:** FNCE 6540.

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

FNCE 6900 Contemporary Topics Seminar**3 Credits****Prerequisites:** FNCE 6530, FNCE 6540.

This course presents recent practitioner and academic literature in various areas of finance, including guest speakers where appropriate. Topics vary each semester to fit the interests of the seminar participants.

FNCE 6990 Independent Research Seminar**3 Credits****Prerequisite:** FNCE 6595.

This course, open to MS in Finance students only, provides participants with the opportunity to explore a financial topic of interest in depth, immersing students in detailed investigations requiring substantial research and analysis.

FNCE 6991 Blockchain and Digital Assets**3 Credits**

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

FNCE 6992 Decentralized Finance**3 Credits****Prerequisite:** FNCE 6991.

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

FNCE 6993 Algorithmic Trading**3 Credits**

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

FNCE 6994 Ethical Considerations in and Regulation of FinTech**3 Credits****Prerequisite:** FNCE 6992 (concurrency allowed).

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