FIN

Finance

FIN 523: High-Frequency Finance
This course will give students an overview of theories and models useful in understanding and processing automated trading. The fundamental theories and models of market microstructure such as the Glosten-Milgrom model, Roll model and Kyle models are covered. Then the implementation of automated trading strategies such as adverse selection models and detection of informed trading are introduced. The nature of high frequency data in various markets is discussed, and mathematical and statistical techniques commonly used in modeling such data (such as ARIMA models, logit regression, Kalman filter and cointegration) are covered.
3 credits, Letter graded (A, A-, B+, etc.)

FIN 524: Asset Pricing
This course will give students an overview of theories and models useful in understanding and processing automated trading. The fundamental theories and models of market microstructure such as the Glosten-Milgrom model, Roll model and Kyle models are covered. Then the implementation of automated trading strategies such as adverse selection models and detection of informed trading are introduced. The nature of high frequency data in various markets is discussed, and mathematical and statistical techniques commonly used in modeling such data (such as ARIMA models, logit regression, Kalman filter and cointegration) are covered.
3 credits, Letter graded (A, A-, B+, etc.)

FIN 525: Portfolio Management
This course will give students an overview of the basics of investing, portfolio management, and risk management, from the perspective of efficient markets theory. Topics covered will include the institutions of the modern financial system and the types of assets available for investment; models of risk, the risk-return tradeoff and utility; optimal portfolio choice; the Capital Asset Pricing Model; multifactor models of return; portfolio evaluation metrics; basic dynamic portfolio management strategies; the efficient markets hypothesis, and possible departures from market efficiency.
3 credits, Letter graded (A, A-, B+, etc.)

FIN 536: Financial Management
How managers should interface with accounting and finance departments and how firms meet their financial objectives. Financial tools and techniques, which can be used to help firms maximize value by improving decisions relating to capital budgeting, capital structure, and working capital management are explained. Related topics include multinational financial management, risk management, and mergers and acquisitions.
3 credits, Letter graded (A, A-, B+, etc.)

FIN 539: Investment Analysis
Modern investment and traditional approaches to investment valuation, selection and management. Modern investment theory, including asset pricing models and efficient market hypotheses are explained. Traditional approaches to stock and bond selection, including fundamental analysis and technical analysis, will be explained in detail. Investment management strategies for both individual and institutional investors will be developed and discussed.
3 credits, Letter graded (A, A-, B+, etc.)

FIN 540: Probability and Statistics for Finance
A survey of probability theory and statistical techniques with applications to finance situations. Topics covered include regression; binomial, Poisson, normal, exponential, and chi square random variables; tests of hypotheses; confidence intervals; tests; and analysis of risk, variance, regression, and contingency tables. Offered in Fall.
3 credits, Letter graded (A, A-, B+, etc.)
May be repeated 1 times FOR credit.

FIN 541: Bank Management
The goal of the course is to introduce students to the banking industry, and develop skills necessary to effectively manage a financial institution. We will start with an overview of the banking industry and its regulatory environment. Then we will learn how to analyze bank performance, how to measure and manage various risks associated with financial intermediation, and how to maximize bank market value.
3 credits, Letter graded (A, A-, B+, etc.)

FIN 545: Capital Markets and Financial Institutions
Financial institutions and capital markets form the basis of the financial system in our global economy. Capital markets are the conduits in which capital flows through financial institutions to a network of organized and over the counter markets. Students will learn how many of these markets work in tandem to propel our economy forward. Topics include money markets, foreign exchange markets, derivative markets, the banking industry and the business of banking. The role of money in the capital markets and a variety of financial products offered by financial institutions will be explained.
3 credits, Letter graded (A, A-, B+, etc.)

FIN 551: Cases in Finance
Application of finance concepts to cases involving financial decisions in a corporate or institutional setting. Students will be asked to perform the work of a manager or analyst in a professional capacity, direct their attention to specific questions raised and report back with analysis and recommendations from the perspectives of the CFO, the Lending Officer, and other managerial positions. Prerequisite: MBA 502 and MBA 504
3 credits, Letter graded (A, A-, B+, etc.)

FIN 552: Mergers and Acquisitions
The focus of this course is on buying a controlling stakes in firms. The main topics to be covered are: Growth through acquisitions, Critical Steps in the M&A Process, financial valuation of mergers and friendly acquisitions, hostile takeovers and buyouts. The course should be of interest to students interested in pursuing careers as private equity investors, advisors in investment banking and corporate managers.

**Prerequisite:** MBA 502, MBA 504

**Fall, 3 credits, Letter graded (A, A-, B+, etc.)**

**FIN 559: Computational Finance**


3 credits, Letter graded (A, A-, B+, etc.)

**FIN 562: Data Analysis for Finance**

Recent innovation of information technology along with the fast growth of applications on the Internet have resulted in an explosion of financial data, new ways of data collection and storage, as well as additional opportunities for business and research based on the data. This course enables students to analyze financial data based on traditional financial models. The major topics include asset pricing, capital budgeting, risk management, pension fund management, portfolio analysis, and stock hedging. Students will learn (review) the models with a focus on their implementation using Microsoft Excel, Matlab, or other programming languages. In addition, the basic statistical models, such as regression, time series models and probability models will be used. **Big Data** technology will be introduced with a focus on financial data analysis. The main topics include classification, clustering, association analysis and anomaly detection. The key objectives of this course are: (1) to review the classical financial models and statistical models; (2) to teach the concepts of data mining with a focus on financial applications; (3) to provide students extensive hands-on experience in applying the concepts in financial data applications.

3 credits, Letter graded (A, A-, B+, etc.)

**FIN 576: Real Estate Finance**

This course provides a broad introduction to real estate with a focus on financing issues. Basic project evaluation, financing strategies, and capital markets issues related to real estate are covered. No prior knowledge of the industry is required, but students are expected to rapidly acquire a working knowledge of real estate markets. A discussion of major instruments of real estate financing, the mortgage market, and key financial institutions, governmental involvement in mortgage markets, credit analysis, the methodologies for appraising residential properties, and other relevant topics. The course will emphasize the use of creative financing tools and their payment patterns by analyzing detailed examples.

**Offered**

Fall, 3 credits, Letter graded (A, A-, B+, etc.)

**FIN 578: Behavioral Finance**

Behavioral Finance examines how individuals' attitudes and behavior affect their financial decisions. This course reviews recent research on possible mispricing in financial markets due to the nature of psychological biases. Moreover the course deals with behavioral finance models explaining investor-behavior or market anomalies when rational models provide no sufficient explanations. Topics will include among others overconfidence, prospect-theory, heuristic-driven biases and frame dependence.

3 credits, Letter graded (A, A-, B+, etc.)

**FIN 579: Advanced Investments**

This course will focus on advanced topic in investment theory and valuation. The analyses of fixed-income securities, equity securities, and derivative securities will be studied. The theories, principles, and techniques of portfolio management will also be presented. The topics include the portfolio investment process, asset allocation, portfolio construction, and portfolio performance evaluation.

3 credits, Letter graded (A, A-, B+, etc.)