

# **Overview Of MBA Courses Offered By The Finance Department**

(March 2011; Consult the Online Course Listing for Definitive Offerings)

## **500: Introduction to Managerial Finance (Spring, Fall; Adams, Binder, Logue (online))**

This course covers the foundations of finance with applications in corporate finance and investment management. It discusses many of the major financial decisions made by corporate managers and investors. Essential in many of these decisions is the process of valuation, which will be an important emphasis of the course. Topics include financial statement analysis, fundamental valuation principles for stock and bond valuation, criteria for making investment and financing decisions, valuation of financial assets and liabilities, relationships between risk and return, and market efficiency.

## **510: Investments (Fall; Rosenthal)**

This course introduces capital markets, asset pricing, risk models, portfolio theory, derivatives, and investment management. After this course, students should understand valuation and risk models for stocks and bonds; how to analyze a portfolio of securities; basic workings of derivative contracts; and, the investment management industry.

## **512: Portfolio Analysis (Fall; Chen)**

This course develops the concept of investing from the perspective of a portfolio manager rather than an individual investor. Both portfolio theory and investment practice will be the focuses of this course. The course involves detailed quantitative analysis that is essential for a successful career in this area. We will focus on investment strategies for large portfolios, particularly in risk management issues. Students will have abundant opportunities to learn investment methodology by hands-on practice with financial data. Additionally, current developments in financial markets will be reviewed and introduced to help explain the dynamics of the markets. Overall, the course is designed to expose students to what it is really like to run money professionally. Students are required to work in a team and present their quantitative asset management project. Prerequisite: FIN 510.

**520: Managerial Finance (Spring, Fall; Sinha, Guo, Binder)**

The primary purpose of this course is to enhance students' understanding of managerial decision making as it relates to a number of key corporate financial policies. Such important policies include a firm's capital budgeting decision (which investments to make), and its capital structure decision (how to raise capital). For capital structure decision, we first examine firm's decision on capital structure in an idealized and frictionless economy in which capital structure is irrelevant for firm valuation. We then analyze the effect of frictions, such as taxes, bankruptcy costs, or self-interested managers, on the firm's financial decisions and how these decisions can affect a firm's value.

**530: Money & Banking (Fall; Chirinko, Mathias)**

Why is the business press so focused on financial markets and central bankers? Why do Ben Bernanke, Mervyn King, and Jean-Claude Trichet have such substantial influence on their economies? The purpose of this course is to allow students to understand the answers to these questions, the role of financial markets, the factors determining monetary policy, and its effects on the aggregate economy. Recent dramatic problems in credit markets highlight the importance of monetary policy in promoting financial and economic stability. During the recent financial crisis, why did the FED cut interest rates, the Bank of England allow interest rates to rise, and the ECB held interest rates constant? What does it mean for the FED to "print money"? Why is there concern that the FED may have printed too much money in the face of the recent crisis?

To address these and other questions, we build models (analytic frameworks) of the aggregate (macro) economy that allow us to understand the impact of monetary policy and the role of financial markets. The models and applications should help you to critically appreciate macroeconomic events and monetary policy debates discussed in the media and to get a flavor of ongoing controversies. Current policy issues and data are emphasized throughout. Readings from the business press will be circulated and discussed in class.

### **573: Introduction to Risk Management (Spring; Lee)**

Business managers today must operate in a complex, global environment with many risks. These risks can threaten not only operational goals such as profitability and growth, but also the organization's very survival. These risks are often associated with legal liability, property losses, political risks, currency exchange and interest rate fluctuations, workplace injury, and employee benefits. *Risk Management* is a systematic approach to dealing with business risks.

The purpose of this course is to provide a solid understanding of the basic principles of risk management and insurance. The course enables the students to develop a framework for making risk management decisions. The course should be valuable in both your professional and personal lives. The course begins by acquainting the students with the basic knowledge and vocabulary of insurance. We will discuss what risk is, how it can be measured and transferred, why individuals care about risk, and why corporations care about risk. This process, known as the risk management process, is becoming an increasingly important tool in the management of business and personal financial health. An effective risk management program will reduce losses, and improve financial performance and employee morale. By the end of the semester the student should have a good conceptual framework for analyzing risk and making decisions in a corporate setting as well as personal lives.

### **594: The Chicago Exchanges (Spring, Bassett)**

The course features presentations by the leaders of financial exchanges discussing the past and future role of financial exchanges in the global economy. Previous speakers have included William Barclay, former Vice President for Strategy, **Chicago Stock Exchange**; Rick Redding; Managing Director, **Chicago Mercantile Exchange Group**; Ed Joyce, Exec Chairman, **Chicago Board Options Exchange**; Jeffrey Sprecher, Chairman and CEO, **ICE: The Intercontinental Exchange**; James McNulty: Board of Directors, **NYSE**; and Satish Nandapurker, Chairman, **Chicago Climate Exchange**. Readings are drawn from *Against the Gods: The Remarkable Story of Risk* (by Peter Bernstein), *Trading and Exchanges* (by Larry Harris) and *A History of the Global Stock Market* (by B. Mark Smith).

## **Other Courses Of Interest** **(Consult Your Liautaud Advisor For Permission)**

### **418: Commodities, Energy, and Related Markets (Spring, Rosenthal)**

Chicago is the world center of commodity trading. However, interest in commodities is growing beyond Chicago: many investment funds are now diversifying their portfolios to include commodities and the government of China has recently focused policies on their strategic interests in commodities markets. This course covers commodities fundamentals from agricultural products (including biodiesel and ethanol) and “tropicals,” metals, and petroleum to the newer markets of electricity, natural gas, emissions, and shipping. We will discuss models for spreads (such as oil vs. gasoline and heating oil or electricity vs. coal and emissions), their economic meaning for running a business, and how that meaning affects risk management. We will also cover ways to value commodity businesses, how regulation differs from other markets, and scandals such as Enron's manipulative electricity trading. At the end of the course, we will have a contract design competition with presentations to CME executives and prizes for the best proposals. If we have time, we will discuss off-exchange trading and new markets such as lithium and rare earth metals. **Prerequisites: FIN 310, IDS 270; recommended: IDS 371.**

### **480: Market Microstructure and Electronic Trading (Fall, Rosenthal)**

Automated, electronic, algorithmic, and high-frequency trading are all related and an increasing presence in the financial markets: over 40% of stocks are now traded by machines. However, someone must tell these machines what to do. This course is about the details of how markets work and how trading happens. We will cover market characteristics, models for how markets and traders interact, ways to price limit orders, different ideas of liquidity, time and intraday effects, how trades move markets, and optimal ways to execute large trades. We will also discuss how this revolution is progressing through various markets, trading tactics, and useful tools for algorithmic trading. This includes coverage of recent issues such as dark pools, the “flash crash,” high-frequency data, and possible effects of new regulations. Because this area changes rapidly, we will cover extensive theory to help navigate coming changes; and, there will also be some intensive hands-on work. **Prerequisite: FIN 310.**

**494: Corporate Value Creation (Fall, Guo)**

Valuing a modern corporation is difficult. This course aims to provide a comprehensive analysis on corporate valuation. We will examine tools and techniques such as valuation multiples, discounted cash flows, cost of capital, economic value added valuation, as well as the adjusted present value method. Fully understanding these valuation models and how to interpret their differences is valuable. Corporate managers can better determine profitable investment decisions; and, investment professionals can find attractive investments such as mergers, acquisitions, leveraged buyouts, and private equity stakes. **Prerequisite: FIN 320.**

**494: Financial Strategies and Text Analysis: Extracting Relevant Information (Spring, Sinha)**

Financial markets are constantly responding to information. Much of this information is reported in news articles and regulatory filings. Such information may be hard to interpret. Consider a news article titled “Analysts are skeptical of Ford’s better than earnings forecast.” The title contains two important pieces of information for Ford’s stock price. It states that Ford is forecasting better than expected earnings – perhaps good news for the stock. It also states that there is some skepticism about Ford’s forecast – perhaps bad news for the stock. When this news about Ford’s earnings comes out, the stock price responds immediately. As this example shows, a lot of information about the value of Ford stock is embedded in the text of regulatory filings and news articles, but words are more difficult to interpret than numbers.

Recent developments in text analysis allow us to distill relevant information from news articles and filings. Students will learn about the developments made in analyzing textual information. Students will also learn text analysis tools to unlock some of this information and discuss the implications to trading strategies and financial regulations. For example, some of these techniques are already used in high frequency trading environments. This is a hands-on course. Passing familiarity with financial markets will be helpful but it is not a prerequisite. Some interest in programming is helpful as well. **Prerequisite: FIN 300.**

### **571: Empirical Issues in Finance (Fall, Zhang)**

This course will address several empirical issues in finance, including (1) the concepts and the techniques for statistically and econometrically based trading strategies, (2) estimation issues and latent efficient price structure high frequency financial data. Possible topics include: factor models in asset pricing including the Fama-French three factor model, style analysis, various trading strategies such as reversal strategies, momentum strategies, pairs trading and cointegration-based trading, risk quantification and management, and volatility/co-volatility estimation in the presence of market microstructure. Both methodology and data application will be covered.

If time permits, we will look into more advanced techniques in data mining, as well as strategies using the information from derivatives markets. We will demonstrate how to search for arbitrage strategies based on short-term, long-term patterns, and multi-equity relationships. The analysis of limit order books may also be discussed.

#### **OBJECTIVES:**

1. To expose the students to finance literature in trading strategies and asset pricing.
2. To introduce the idea and the methodology in the data-driven trading strategies.
3. To provide essential skills in time series analysis.
4. To expose the students to statistical computing and graphics via Splus or R package. The computing will be mostly confined to linear regression, time series analysis in financial data, and basic techniques in statistical arbitrage. **Prerequisite: Ph.D. standing or permission of the instructor.**