

Course Descriptions: Department of Finance (FIN)

(March 2011)

Elective Courses

494: Corporate Value Creation (Fall, Guo)

3 hours. 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: Venture Capital and the Private Equity Market (Fall, Brown)

3 hours. This course provides insight into the dual nature of the venture capital and private equity markets: entrepreneurs who seek alternative funding and the investors who provide the funds. The historical and economic importance of venture capital cannot be overemphasized. The great explorers, Columbus and Marco Polo, were privately financed by entities who shared in the profits and risks of exploration. The technological revolution of the past 30 years could not have taken place without private financing. Approximately 2 million new businesses are formed each year, but only a small percentage will attract the attention of private investors. Successful entrepreneurs and venture capitalists indicate that much of their success is due to an understanding of the mechanics of the venture capital and private equity markets, recognition of mutual goals, and negotiating a symbiotic partnership that will prove financially beneficial for all. The course will focus on the development of financing strategies that achieve this success. Topics include: the sources of entrepreneurial finance, how to attract the right venture capital resources or choose the right firm for investment, working out a term sheet (agreement between the firm and the venture capitalists) that will reward investors for their risk, but not hamper the entrepreneur, and valuing a firm with the intent to design securities for private placement. Course methodology will include lectures, case studies, guest lecturers as available, and a term project. **Prerequisite: FIN 300.**

Elective Courses (continued)

494: Applied Investment Management (Fall + Spring, Two Semester Course; Wightkin)
3 hours. This course will put financial theory to practice by giving students hands-on experience in managing an equity investment process, from stock selection to trading. Students will experience firsthand the decisions that investment professionals make and the tools they use to improve their decision making.

The first semester of this two semester course will cover three different stock selection techniques – fundamental, technical and quantitative analysis, with an emphasis on the quantitative techniques. This focus will include individual factor analysis & selection and building & testing a stock selection model. This semester will culminate in a team presentation of their multi-factor model to a review board comprise of industry professionals. Throughout the semester, students will have a chance to apply all three techniques to real life investment problems and case studies using the latest investment technology.

The second semester will shift to the implementation of the techniques learned in the first semester. In a team setting, we will get hands-on experience in managing an equity portfolio strategy in real time using portfolio simulation software. Students will learn firsthand how to select stocks using techniques learned from the first semester, experience how to construct and manage a portfolio of stocks, understand the importance of risk management, learn about the different ways to trade stocks and analyze their portfolio performance. Aiding this effort will be access to the current investment technology used by industry professionals. At the end of the semester, each team will present and defend their portfolio strategy and analysis of their portfolio's performance to a review board of industry professionals. Throughout both semesters, current developments in the financial markets will be reviewed and academic and practitioner articles will be discussed to help reinforce the topics being presented in class.

Overall, this class is designed to give students a hands-on understanding of how to run an equity investment management process. **Prerequisite: FIN 310.**

Elective Courses (continued)

571: Empirical Issues in Finance (Fall, Zhang)

3 hours. 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.**