Syllabus - Finance 460 - Investments

1 Administrative

- Contact Information

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2 Course Overview

2.1 Goal:

This course aims at developing key concepts in investment theory from the perspective of a portfolio manager rather than an individual investor. The goal of this class is to provide you with a *structure* for thinking about investment theory and show you how to address investment problems in a systematic manner. We will examine current academic work and its application for portfolio choice.

We do not cover the fine art of stock picking or provide you with foolproof ways to make money in the stock market. The detailed analysis of individual companies and their balance sheets lies outside the scope of this course. Even though I have attempted to fit as much material as is possible in a ten week course, a number of important topics such as financial derivatives, taxes and financial statement analysis will be covered only in passing.

2.2 What I expect:

- I expect you to be very familiar with the material covered in Finance I and Finance II and the Statistics class. I may chose to review some of these concepts in class, but I will assume that you are comfortable with the material.
- I expect you to do the required readings before each class in order to be able to follow the lecture. I will include a number of optional readings for those interested in going beyond what is covered in class.
- I will not distribute copies of lecture notes or assignments in class. You are responsible for printing them and bringing them to class.
- If you miss class you are *required* to find out what was covered from the other students in class.

2.3 What you need:

- Bodie, Kane and Marcus: "Investments", McGraw-Hill
- Blackboard access

McGraw-Hill tends to 'update' their textbooks every year. In my view, this is largely unnecessary. Any one of the last five editions will be sufficient.

3 Grading

The course grade is based on the formula:

$$X_H + X_C + \max[\ 0.3 \cdot X_M + 0.4 \cdot X_F\ , 0.7 \cdot X_F]$$

where

$$
\begin{aligned}
X_H &= \text{Homework (20 pts)} \\
X_C &= \text{Class Participation (10 pts)} \\
X_M &= \text{Midterm (100 pts)} \\
X_F &= \text{Final (100 pts)}
\end{aligned}
$$

There are two exams; the midterm is worth 30% of your grade and the final is worth 40% of your grade. The final exam will cover material from the entire course. The midterm is a free option – if it doesn't help your grade, 70% of the grade will be based on the final. Requests for reconsideration of grading must be submitted in writing within a week of when the material is returned. If a regrade is requested, the entire material will be re-evaluated.

The Kellogg Honor Code strictly applies. Exams must be completed independently and within the allotted time. Only the specifically allowed materials may be used and nothing else. On the homework you can consult with any other class members and refer to class materials, except that answers to previous years problems are off limits.

3.1 Homework Assignments

There will be a homework due almost every week. Homework should be completed in groups of 1-4 students with the names of the students clearly visible at the front page. I very much prefer hard copies but if you must submit an electronic copy, **only PDF files will be accepted**. Also, I prefer typed homework to handwritten and please do not hand in reams of computer output! Finally, **under no circumstances will I accept late homework**.

3.2 Case Studies

There will be a total of three to four cases discussed in class, depending on how fast we cover the material. The tentative dates are

Case	Date
Harvard Management	week 4
Extraordinary Value Partners	week 7
Dimensional Fund Advisors	week 8
Strategic Capital Management	week 10

We will be discussing these cases in class. I expect you to have read the case in advance and be able to fully participate in the classroom discussion. I expect you to hand in a short (1-3) page case report on the day that we discuss the case in class.

3.3 Exams

All exams will be closed book. Laptops running Microsoft Excel or a similar spreadsheet program are permitted. You will only be permitted in using a blank worksheet, no previously written worksheets/macros/code will be allowed. You will be allowed to bring one $8.5'' \times 11''$ two-sided sheet of notes into each examination. In this sheet, you are allowed to write any formulas from the class notes or the book that you feel that you may need, along with short notes explaining the use of these formulas. You are not allowed to copy material directly from the lecture notes.

If you need to take either exam early, please contact me 2-3 weeks before exam week. **Under no circumstances you will be allowed to take the final exam late**.

Exam	Date	Time	Location
Midterm Exam	Week 5	in class	
Final Exam	Exam Week	TBA	TBA

4 Course Outline

Articles not in the course packet will be distributed in class and will be posted on the course website. We will cover between one and two topics every week.

- Prerequisites:
  - BKM 1-5

  - BKM Appendix A

- Topic 1: Asset Allocation I
  - Lecture Notes
  - BKM 6-8

- Topic 2: Risk and return in Equilibrium
  - Lecture Notes
  - BKM 9,10.1-10.3

- Topic 3: CAPM in practice
  - Lecture Notes
  - BKM 9,10.1-10.3
  - Goldman Sachs: "The Intuition Behind Black-Litterman Model Portfolios"
  - Goldman Sachs: "Using the Black-Litterman Global Asset Allocation Model: Three Years of Practical Experience"

- Topic 4: CAPM and empirical evidence
  - Lecture Notes
  - BKM 12-13
  - Fama and French: "CAPM: Theory and Evidence"

- Topic 5: Asset allocation II
  - Lecture Notes
  - Jorion "Portfolio Optimization in Practice"

- Topic 6: Arbitrage Pricing Theory
  - Lecture Notes
  - BKM 10.4, 11
  - Roll and Ross: "The APT approach to strategic portfolio planning"

- Midterm Week
- Topic 7: Multifactor models
  - Lecture Notes
  - BARRA risk model
  - Fama and French: "Common risk factors in the returns on stocks and bonds" (optional)
- Topic 8: Performance evaluation
  - Lecture Notes
  - BKM 24, 27.4-27.6
  - Sharpe: "Asset Allocation: Management style and performance measurement"
  - Marcus: "The Magellan Fund and Market Efficiency"
- Topic 9: Transaction costs and Liquidity
  - Lecture Notes
- Topic 10: Event Studies and risk arbitrage
  - Lecture Notes
- Topic 11: Market efficiency revisited
  - Lecture Notes
- Topic 12: Behavioral Finance and Limits to Arbitrage
  - Lecture Notes
  - Kahneman and Riepe: "Aspects of Investor Psychology".
  - Mitchell, Pedersen and Pulvino "Slow Moving Capital".
  - Lamont "Can the market add and subtract?".

5 Recommended Reading

The following recommended books are mostly pretty easy reads that are entertaining, interesting and provide some good insights. In all cases, the recommendation of these books is not an endorsement of the material in them: much of what is said in these is plain wrong (as is probably true for most books on investment). Nevertheless, they offer food for thought.

As far as I know, all of these books are in print, and are available from www.amazon.com, and perhaps even from the campus bookstore.

5.1 Light Reading

1. Peter Bernstein: "Against the Gods: The Remarkable Story of Risk" - Reviews the development of probability theory and its application to risk management. Interesting and easy to read.

2. Peter Bernstein: "Capital Ideas" - Bernstein's earlier book dealing with the development of modern finance theory and how this has affected Wall Street practice.

3. Burton, Malkiel: "A Random Walk down Wall Street" - A very thoughtful exploration of modern finance theory.

4. Jorion 1995, "Big Bets Gone Bad: Derivatives and Bankruptcy in Orange County." - An exploration of the Orange County derivatives debacle.

5. Graham and Dodd: "Security Analysis" - If any book can be called the investment classic of all times, this is it. Warren Buffett said something like this is the only book you ever need to read. It has been continuously in print since it was originally issued in 1934, and has been through five editions. It was recently re-issued in the original 1934 edition (written at the bottom of the great depression).

6. Burrough and Helyar: "Barbarians at the Gate" - The story of the RJR - Nabisco leveraged buyout and Kohlberg Kravis Roberts & Co. Some good insights into the M&A industry. Reads like a novel.

7. Lewis: "Liar's Poker" - A bond salesman's irreverent look Salomon Bros. Great anecdotes and a good history of some of the developments of modern finance (*e.g.*, mortgage backed securities). Also reads like a novel.

8. Victor Niederhoffer: "The Education of a Speculator" - The very entertaining and insightful autobiography of a modern, eccentric, and successful trader. Niederhoffer grew up poor, went to Harvard and then to Chicago for his Ph.D. in finance, and was a professor at Berkeley for a short stint.

9. Edwin Lefvre: "Reminiscences of a Stock Operator" - Originally written in 1923, and recently re-issued. This is the story of Jesse Livermore, supposedly one of the greatest stock speculators of all time. Many modern traders cite this as the book that they found most helpful in learning how to trade. Be aware that Livermore killed himself after losing everything in the great depression.

10. Schwager "Market Wizards" - a set of interviews with some of the most successful traders of the modern era.

11. Burrough and Helyar: "Barbarians at the Gate" - The story of the RJR -Nabisco leveraged buyout and Kohlberg Kravis Roberts & Co. Some good insights into the M&A industry. Reads like a novel.

12. Engel and Hecht: "How to Buy Stocks." - This book provides a great discussion of the institutional features of the stock market. Also, there are few sections on investing are less interesting and less valuable.

13. Lowenstein: "When Genius Failed: The Rise and Fall of Long-Term Capital Management" the story of superstar hedge-fund LTCM. Reads like a novel.

14. Dunmar: "Inventing Money" - another perspective on LTCM.

5.2 Not so Light Reading

1. Lo and Mackinlay: "A Non-Random Walk down Wall street."

2. Dixit and Pindyck: "Investment under Uncertainty" - This is a *very* mathematical exploration of real-options (irreversible investment) theory and its application to corporate financing decisions.