

**Graduate School of Business
University of Chicago**

**Bus 35000-01/81
Investments
Winter 2005**

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**Syllabus
Winter 2005**

Course Description

This course is designed to provide a sound foundation for the main concepts in investments. Students who master the course material will acquire the analytical tools and financial theory necessary for making good investment decisions and understanding the paradigms by which financial securities are valued.

The course will prepare students for more advanced courses on the topics covered. This course is highly quantitative and relies heavily on analytical tools and economic theory developed throughout the course. Students should be comfortable with probability, statistics and regression analysis at the level of Business 41000. Use of a spreadsheet package such as Excel will be vital for the homework assignments, saving time and aiding in understanding the material. Some use of calculus and linear algebra will also be required.

Course Requirements and Grading

The course requirements are a Midterm exam, a Final exam, five graded homework assignments, and two case write-ups. Class participation will also affect your grade (positively or negatively!). You will have the option to drop the midterm in favor of more weight on the Final exam. Weightings on the various components of the class will be as follows:

<u>Method A</u>		<u>Method B</u>	
Problem Sets	15%	Problem Sets	15%
Case Write-ups	10%	Case Write-ups	10%
Midterm	25%		
Class Participation	5%	Class Participation	5%
Final	45%	Final	70%

In other words, the final, homework assignments, and case write-ups are mandatory. The midterm is “optional” in that it can only help your grade.

Homework and Case Assignments

Five homework assignments will be given, which consist of problems and several applications to real data. The latter are designed to apply techniques learned in the course to real data in a manner similar to what might be applied in practice. Keep in mind that exam questions will be similar to the assigned homework problems. In determining your final grade for the homeworks, I will only count *your best four problem sets*. Note that the case write-ups are separate from the homework assignments.

There will be two case write-up in this course. Details of these assignments will be provided later.

You may do the homework problems and cases in groups that are not to exceed four people. (Groups with more than four people will not receive credit.) The case write-ups are not to exceed five typed pages.

Office Hours, TA, Review Sessions, Exams

Please consult the information available on Chalk:

<http://chalk.uchicago.edu/>

Honor Code

Students in this course are required to adhere to the standards of conduct in the Honor Code and Standards of Scholarship. Each student shall sign the following pledge on each exam: "I pledge my honor that I have not violated the Honor Code during this examination."

You will be allowed to work on the problem sets and cases in groups of up to four people. You should discuss the problems and cases *only with members of your group*. You should not discuss the problems and cases with other members of this or any other class, or with former BUS35000 (BUS332) students. In the future, you should not discuss the problems and cases with students then taking BUS35000.

If you are in doubt about whether something is acceptable under the honor code, you should not hesitate to ask me.

Readings for the Course

- **Texts**

Required text:

Bodie, Zvi, Alex Kane, and Alan Marcus, *Investments*, Irwin, 6th Edition, 2005.

Recommended text:

Malkiel, Burton, *A Random Walk Down Wall Street*, Norton, 8th Edition, 2004.

The recommended text will not be explicitly employed in the course, but may provide additional insight into some of the topics covered.

- **Course Packet**

The course packet contains some of the leading articles from practitioner and academic journals discussing the topics covered in class. Some of the articles are challenging and are geared toward a slightly more advanced level. I will assign certain portions of these articles that I feel are relevant to the topics discussed in class, and will not hold you responsible for the most difficult and advanced material. In addition, I have included some optional readings, which you are not formally responsible for, but will interest the advanced student pursuing a career in finance.

- **Lecture Slides and Handouts**

Lecture slides will be posted in advance on the class web page. The lectures slides provide an **outline of the course discussion** and some detail on the topics covered. They are not a substitute for attending class since the class discussion will add value to the notes and texts.

Practice exams will also be posted on the class web page prior to the exams. I may also periodically hand out current newspaper and magazines articles relevant to the course topic.

Course Outline: Investments 35000 – Rosu

This an *approximate* schedule of topics that will be covered. You should read the corresponding material in the text prior to the lecture. “BKM” refers to the book by Bodie, Kane and Marcus. Unless otherwise stated, the listed articles are included in the course packet.

Week Zero – Introduction

- Course Outline and Introduction; Overview of Financial Markets

Required Reading

- * BKM, chapters 1-3.
- * Rosu, *First Class Reading (Lecture 0): Introduction to Capital Markets*.
- * Greenleaf, Foster, and Prinsky, *Understanding the Financial Data in the Wall Street Journal*.
- * The Economist Staff, *Finance: Trick or Treat?*

Week One – Risk and Return; Asset Pricing and Present Value

**Problem Set #0 Due ** (beginning of class)

- Class 1: Risk and Return

Required Reading

- * BKM, chapter 5.
Suggested Problems: 4, 11-15, 17.
- * Dimson, Marsh, and Staunton, *Risk and Return in the 20th and 21st Centuries*.

- Class 2: Asset Pricing and the Present Value Formula

Week Two – Fixed Income

****Problem Set #1 Due**** (beginning of class).

- Class 3: The Term Structure of Interest Rates

Required Reading

* BKM, chapters 14, 15.

Suggested Problems: 12, 15, 21 (chapter 14).

6, 16, 20 (chapter 15).

- Class 4: Duration Matching and Immunization

Required Reading

* BKM, chapter 16.

Suggested Problems: 1, 2, 5, 11, 16, 17, 23.

* Kopprasch, *Understanding Duration and Volatility*, Salomon Brothers, Bond Portfolio Analysis, 1985.

Week Three – Allocating Investment Capital

****Problem Set #2 Due **** (beginning of class)

- Class 5: Allocating Investment Capital

Required Reading

* BKM, chapters 6, 7.

Suggested Problems: 13 (chapter 7).

- Class 6: Portfolio Theory and Mean-Variance Analysis

Required Reading

* BKM, chapter 8.

Suggested Problems: 2-7, 9-14, 18.

Week Four – CAPM; Practical Issues in Asset Allocation

****Problem Set #3 Due**** (beginning of class).

- Class 7: The Capital Asset Pricing Model (CAPM)

Required Reading

* BKM, chapter 9.

Suggested Problems: 1-2, 4-14, 17, 22, 25-28.

- Class 8: Practical Asset Allocation

Required Reading

* Harvard Management Company (Harvard case study).

* The Economist Staff, *In Praise of Common Sense*.

Week Five – Applications of CAPM; Multifactor Models and APT

****Problem Set #4 Due**** (beginning of class).

- Class 9: Applications of CAPM
- Class 10: Multifactor Models and the Arbitrage Pricing Theory (APT)
Required Reading
 - * BKM, chapters 10, 11.
 - * Bower, Bower, and Logue, *A Primer on Arbitrage Pricing Theory*.

Week Six – Midterm; The Money Management Industry

- Class 11: ****Midterm Exam****
- Class 12: The Money Management Industry and Performance Evaluation
Required Reading
 - * BKM, chapters 4, 24.
 - * Sorensen, Miller, and Samak, *Allocating Between Active and Passive Management*.
Optional Reading
 - * Lakonishok, Shleifer, and Vishny, *The Structure and Performance of the Money Management Industry*.
 - * Barber and Leftwich, *The Elusive Butterfly of Superior Returns*.

Week Seven – Market Efficiency and Anomalies

****Write-up for Strategic Capital Management Case due**** (beginning of class)

- Class 13: Case – SCM; Market Efficiency
Required Reading
 - * BKM, chapter 12.
 - * SCM Case (Harvard case study).
 - * Malkiel, *Efficient Market Hypothesis*.
- Class 14: Anomalies
Required Reading
 - * Ritter, *Behavioral Finance*.
 - * Schwert, *Anomalies and Market Efficiency* (extracted from Constantinides, Harris and Stulz, *Handbook of the Economics of Finance*, chapter 15).
 - * Fox, *Is the Market Rational?*

Week Eight – DFA Case; Forwards and Futures

****Case Write-up for DFA due**** (end of class)

- Class 15: Case – Dimensional Fund Advisors

Required Reading

- * DFA Case (Harvard case study).
- * Lubove, *Analyze This*.
- * Lappen, *Ivory-tower Investing*.

- Class 16: Forwards and Futures

Required Reading

- * BKM, chapters 20, 22, 23.
Suggested Problems: 1-4, 6-7, 9, 14-18, 20-23 (chapter 20).
3-6, 9, 11-12, 16-17 (chapter 22). 1 (chapter 23).

Week Nine – Derivative Security Valuation

- Classes 17 and 18: Options Markets and Derivative Security Valuation

Required Reading

- * BKM, chapter 21.
Suggested Problems: 1, 3, 5-6, 25, 27-29, 31.
- * Black, *How We Came Up with the Option Formula*.
- * The Economist Staff, *Future Perfect*.
- * Schwartz, *Options and Portfolio Insurance*.

Week Ten – Securitization and Innovation; Hedge Funds

****Problem Set #5 Due**** (beginning of class)

- Class 19: Structured Finance: CDOs, MBS, and other Asset Backed Securities

Required Reading

- * The Economist Staff, *The Future of Finance*.
- * Singer, *Securitization Basics* (extracted from Fabozzi, *Accessing Capital Markets Through Securitization*, chapter 2).
- * Mellenec, *Asset Backed Securities: A Practical Guide for Investors*.

- Class 20: Hedge Funds

Required Reading

- * The Economist Staff, *A Hitchhiker's Guide to Hedge Funds*.
- * Lewis, *How the Eggheads Cracked*.
- * Gladwell, *Blowing Up*.
- * Peltz, *From Harvard to Hedge Funds*.

Optional Reading

- * Cochrane, *New Facts in Finance*.

Week Eleven – FINAL

****FINAL EXAM****