

# Finance 367: INVESTMENT MANAGEMENT

MCCOMBS SCHOOL OF BUSINESS, UT AUSTIN

Spring 2010

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MWF, 2:00pm – 3:00pm

UTC 4.104

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Office Hours: Monday, Wednesday, and Friday from 1:00 to 2:00pm

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## Course Description and Goals

Finance 367 is an introductory investment course which will provide a basis for making investment decisions. The course is intended for students who want to become investment professionals, knowledgeable individual investors, or both. The course will focus on the fundamental principles of risk and return, diversification, asset allocation, market efficiency, valuation of stocks, bonds and options. Students will understand market trading structures, equity and fixed income securities, investment strategies and evaluation methods. Investment and trading decision-making skills will be developed through classroom lectures, discussions, problem assignments, and online portfolio simulation exercises.

## Course Resources

Required textbook: Bodie, Kane, and Marcus, **Essentials of Investments**, 8<sup>th</sup> edition. ISBN: **0-07-338240-X**

Optional: Solutions Manual for Use with Essentials of Investments, Bodie, Kane, Marcus.

Lecture notes, readings as well as solutions to selected problems will be available on the UT Blackboard system <https://courses.utexas.edu/webapps/login>

You are required to check the blackboard before each class for course-updates.

Recommended: Wall Street Journal (<http://interactive.wsj.com>), Financial Times (<http://www.usa.ft.com>), <http://finance.yahoo.com/>, <http://cbs.marketwatch.com/> etc

## Prerequisites

Finance 367 is a Restricted Course for students who are currently enrolled in a major program in the College of Business Administration. Note that several prerequisites apply for this course and are published in the Course Schedule. Prior completion of Finance 357 or Finance 357 H (with a grade of at least a C) and its prerequisites are among these requirements.

## Examinations and Grading

### **Examinations**

There will be four exams (50 minutes) and five short (15-20 minutes) quizzes during the semester. All exams and quizzes will be held during regular class hours.

- No make-up exams or quizzes will be given but I will consider only your **three best exams and your best four quizzes** for grading.
- There will be **no final examination**.

### **Additional graded work**

In addition to the exams and quizzes there will be a team presentation, two group projects, and an individual portfolio investment report (see later for details).

### **Practice Problem Sets**

There will be four problem sets during the semester. You can work on them in teams of up to 4 students and have to turn them in the class before every midterm. While they will not count as part of the class grade you are required to work on them. The problems are designed to help you study for the midterms and good effort on them will be rewarded.

### **Grading Policy**

- Maximum Possible Score = 500.
- *Four exams*: 280 points or **54%** of your grade. I will drop your lowest exam score as long as you score 50% or above on that exam. Thus, each exam would be worth 18% of your grade.
- *Five short quizzes*: 100 points or **20%** of your grade. I will drop your worst quiz. Thus, each quiz would be worth 5% of your grade and the quizzes combined will be equivalent to a little more than one exam.
- *Team Presentation*: 20 points or **4%** of your grade.
- *Two Group Projects*: 50 points or **10%** of your grade. More details during the semester.
- *Individual Investment Report*: 60 points of **12%** of your grade.

### **Grade Distribution**

- Your overall score in the course will be determined mechanically as the weighted average of the component scores. Your overall grade will be determined by where your overall score lies in the distribution of all students' overall scores. The cut-offs in the distribution will be such that roughly 35% of students receive "A"s, 40% receive "B"s, and 25% receive grades below a "B." The exact curve cut-offs will depend on the level and shape of the score distribution. Plus/minus grades will be assigned for the final grade.
- Although grading is relative, you should get an A if you score above 90%. 80% and above should ensure a B grade.

There is no opportunity in this course to do "extra-credit" work. Your grade will be determined solely by the components listed above. If you are taking the course **pass/fail** you must complete all projects and take all exams in order to pass the course.

All exams are in-class, closed-book. They cover material from the lectures, assigned readings and team project presentations. Exams will strive to test comprehension and not merely memorization skills.

You are responsible for showing up at the proper time and location for all the exams! If you have a schedule conflict with any of the tests, contact me as soon as possible, and no later than 24 hours before the exam, to get pre-approval. If you fail to show up for an exam without my pre-approval, then you must present a doctor's note stating that you were too sick to take the test. If you miss an exam without a valid reason, then you will receive a zero on the missed test.

### Team Presentation

Students should form teams of 2 persons at the beginning of the semester. The presentation topics and time are listed at the end of this syllabus. Each group should submit 3 choices, with your preferences (1 for your first choice) as soon as possible. The group that chooses a topic first gets it. The presentation should be limited to 2-3 minutes per person, and 5-6 minutes per presentation. Members of each group receive the same score on the presentation, except in rare circumstance.

### Stock-game and Individual Report

Each student will manage a simulated portfolio with initial cash balance \$1,000,000 over the semester. The simulation is professionally-managed by Stock-Trak® Portfolio Simulations based in Atlanta, GA ([www.stocktrak.com](http://www.stocktrak.com)). The investment period extends from February 3 to April 28, 2010. You can make up to 200 trades and invest in any NYSE, NASDAQ-AMEX stock, a series of government and corporate bonds, a selection of over 2,000 mutual funds and certain stocks trading on stock exchanges around the world, including London, Paris, Frankfurt, Mexico City and Tokyo. To manage your risk exposures, you can also invest in various options and futures contracts. Trades can be submitted via their web page, or by phone (1-800-786-TRAK), by fax (678-475-0645), email [stocktrak@stocktrak.com](mailto:stocktrak@stocktrak.com). More details on how to set up the accounts will be given at the beginning of the semester.

The writing requirements related to the portfolio management exercise are:

1. At the end of the semester, students need to prepare a final performance report that (1) tracks the weekly performance of their portfolio, (2) analyzes the macroeconomic, financial market and stock-specific news events that may have affected the risk and return performance of their portfolios, and (3) evaluates statistically their relative and absolute performance using various tools and techniques. Note that your grade is determined by the quality of the report, and is not related to the investment performance (so you can experiment different strategies and see which one “works”). The report should be about 5 pages long (double-spaced, single-sided, 12-point font), not including various exhibits, figures and graphs to support the analysis.

**The reports are due in class at 2pm on Wednesday May 5, 2009. Late reports will receive no credit.**

### Class Participation

Class participation is required. Be prepared to answer questions. At the instructor’s discretion, students who participate actively in class will get a higher grade if she/he is at a cut-off point along the grade curve (e.g., if the cutoff for A is 90, then anyone scoring between 89 and 90 will get bumped up to A if she/he participate actively in class).

### Calculators:

Recommended for this course is a financial calculator capable of calculating present values, solving for yields, and performing other basic time value calculations. It is your responsibility to learn how to operate the calculator proficiently. Programmable calculators must be cleared before each test; and there is no sharing of calculators during the test. Present Value/future value tables will not be provided with the examinations. It should be emphasized that the calculator cannot replace an understanding of the problem solving process.

## Students with Disabilities

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641 TTY.

## Other IMPORTANT Course Policies:

1. Academic dishonesty will not be tolerated. **Any** individual suspected of cheating, including stealing or using stolen examinations, will be disciplined to the maximum extent possible.
2. The lectures will sometimes cover extra material (e.g., exercises, discussions) not contained in the lecture notes. You are responsible for everything covered or assigned in class. If you miss a class, it is entirely **your** responsibility to determine what you have missed including any administrative announcements I may have made.
3. Should you have to leave class early, please have the courtesy of letting me know before the beginning of the period and leave quietly so as not to disturb the other members of the class.
4. **Laptop Policy.** Please do not use your computer during the lectures without my prior approval.
5. **Continuous Feedback.** I encourage you to give me feedback about course material, my teaching style and anything else that would help you learn the course material better. You should come and talk to me in person if you have concerns and/or suggestions. However, if that makes you uncomfortable, you can send me an anonymous email from a class email account that I have created at [www.hotmail.com](http://www.hotmail.com). Login: fin367ut@live.com, Password: "riutort367".
6. All grades are assigned after a careful examination of the work submitted. Appeals to grading of exams can be made **after 24 hours and up to one week** from the time when the grades are posted. The appeals should be made in writing. In making your request, please keep in mind that the whole exam is subject to re-grading.

## NOTE

I reserve the right to make modification to this syllabus. The modifications (if any) will be announced in class. You are responsible for all announcements made in class.

## Study Guide

1. You need to **understand** what you are studying, whether it is conceptual or analytical. Relying on your calculator as a means to simply plug in numbers for an answer will get you into trouble. When you study, ask yourself such question as:
  - i) What is the purpose of this concept or formula?
  - ii) Why is it important?

- iii) How does the author demonstrate its importance?
  - iv) How does it “fit” with what you have studied so far? –either in this class or in an earlier class.
2. I expect you to have required readings completed **before** they are discussed in class. This will include relevant sections from the BKM book, lecture notes, and any other article. To reinforce, I recommend that you then read them again **after** the topic is covered in class. Reading the material beforehand will greatly assist in having meaningful class discussions. If you are having trouble with a concept or problem, contact me as soon as possible.
  3. Suggested problems from the text will be assigned. **While not graded, the problem sets associated with each chapter have to be handed in.** Working these problems is a necessary step in preparing for the exams. The examination problems will appear simpler for those who work the problem sets. Reviewing the examples in the book, the concept check questions (whose answers are provided at the end of the chapter) as well as the key terms at the end of the chapter will also be useful in mastering the material and preparing for the exams.
  4. In order to successfully complete this course, the concepts must be studied **continuously** throughout the semester. For most students, the information cannot be mastered by waiting until exam time. Do not cram right before an exam which usually results in confusion, anxiety, and missing the big picture.
  5. **Difficult Topics.** If you find certain sections of the course difficult, do not panic! I encourage you to discuss those topics with me and/or your friends. I have marked topics that students usually find difficult – one asterisk mark (\*) for moderate difficult topics and two asterisks (\*\*) for more difficult topics. Try to be more attentive when I am covering these sections in class.

### **Class Schedule**

This is only a tentative list of topics that I plan to cover during the semester. I may add or delete topics from this list as the semester progresses. You are responsible for any changes I announce in the class.

1. **Basic Investment Concepts:** 6 lectures and 1 exam  
*Readings:* BKM, Chapters 1-4
  - Introduction and Investments Background: 2 lectures
  - Types of Securities and Securities Trading: 2 lectures
  - Securities Markets, IPOs, Mutual Funds: 2 lectures
  - *Quiz 1: February 3*
  - **Exam 1: February 8**
2. **Portfolio Theory and Asset Pricing:** 12 lectures and 1 exam
  - Modeling Uncertainty (\*\*): 3 lectures;  
*Readings:* None. Focus on class notes
  - Portfolio Theory (\*\*): 5-6 lectures;

*Readings:* BKM, Chapters 5-6, 19

- Asset Pricing: CAPM and APT (\*): 2-3 lectures;  
*Readings:* BKM, Chapter 7
- *Quiz 2: February 17; Quiz 3: March 3*
- **Exam 2: March 10**

\*\*\*\*\**SPRING BREAK*\*\*\*\*\*

3. **Security Valuation, Market efficiency, and Behavioral Finance:** 11 lectures and 1 exam

- Performance Evaluation and Market Timing (\*): 3 lectures;  
*Readings:* BKM, Chapter 18
- Security Valuation: 2 lectures;  
*Readings:* BKM, Chapter 13
- Bond Pricing: 4 lectures;  
*Readings:* BKM, Chapters 10-11
- Efficient Market Hypothesis (\*): 1-2 lectures;  
*Readings:* BKM, Chapter 8
- Behavioral Finance: 1-2 lectures;  
*Readings:* BKM, Chapter 9
- *Quiz 4: April 5*
- **Exam 3: April 19**

4. **Options and Futures:** 7 lectures and 1 exam

*Readings:* BKM, Chapters 15-17

- Basic Concepts: 3 lectures;
- Binomial Model (\*\*): 3 lectures;
- Black-Scholes Model (\*): 1 lectures;
- *Quiz 5: April 30*
- **Exam 4: May 7**

**Course Readings** (corresponds to Bodie, Kane, and Marcus 8e)

Chapter 1: All

Chapter 2:

- Section 2.1: focus on Treasury Bills, CD, Commercial Paper, Federal Funds
- Section 2.2: focus on Treasury Notes and Bonds, Inflation-Protected bonds, Municipal Bonds, Corporate Bonds, Mortgage-Backed Securities
- Sections 2.3 and 2.4

Chapter 3:

- Section 3.2: read about different types of orders (p57-58)
- Section 3.3: focus on NYSE and NASDAQ
- Section 3.5

- Sections 3.6 and 3.7: pay close attention to the examples in section 3.6 and 3.7, as well as the concept check questions

#### Chapter 4:

- Section 4.1: net asset value
- Section 4.2: focus on “Managed Investment Companies (p85-86), Real estate investment trusts and hedged funds (p87)
- Section 4.3
- Section 4.4: especially on “fees and mutual fund returns” (p92-93)
- Section 4.5 and 4.6
- Section 4.7

#### Chapter 5

- Section 5.1: read only Holding period return, Arithmetic average and Geometric average (p110-111)
- Section 5.2: understand the notion of expected return, standard deviation, VaR, Sharpe ratio, mean variance analysis
- Section 5.3: especially Table 5.2, Figures 5.3, 5.4, and Example 5.5 (p125-126)
- Section 5.4: equation 5.17 (page 128)
- Section 5.5: especially the Capital Allocation Line, Figure 5.6, and Example 5.7 (page 135)

#### Chapter 6:

- Section 6.1: Fig 6.1 and 6.2
- Section 6.2: especially formulas (6.1), (6.2) and (6.3), rules (6.4), (6.5) and (6.6) on page 157; Example 6.2, Figure 6.3 and 6.4
- Section 6.3: Fig 6.6 (page159)
- Section 6.4
- Section 6.5: focus on systematic risk and firm-specific risk (equation 6.12 on page 168)

#### Chapter 7:

- Section 7.1, especially the security market line (Figure 7.2) and the notion of “alpha” (Example 7.4 on p196)
- Section 7.2: especially the CAPM equation (7.4), and understand how the CAPM index model is estimated using linear regression (Page 198-204)
- Section 7.3
- Section 7.4: read Pages 207-212, know about the Fama-French three factor model (but this section will not be on the test)

#### Chapter 8:

- Section 8.1: especially the three forms of efficient market hypothesis (p231-232)
- Section 8.2
- Section 8.3: focus on Pages 248-246, examples of stock market “anomalies” and how to interpret the evidence
- Section 8.4: focus on “mutual fund managers”(pages 247-251)

#### Chapter 9:

- Section 9.1: focus on overconfidence, regret avoidance, prospect theory. Understand limits to arbitrage. Read Page 266 “Why it is so tough to fix your portfolio”
- Section 9.2: read for fun (there is a group presentation on technical analysis, but it is not going to be on the test)

Chapter 10:

- Section 10.2: especially formulas (10.1), (10.2), figure 10.3
- Section 10.3: just read about Yield to Maturity (Page 298). Skip the other parts
- Section 10.4: skip “after tax return”
- Section 10.5
- Section 10.6

Chapter 11:

- Section 11.1: read everything in this section carefully
- Section 11.2: focus on Example 11.2 (Page 342)
- Section 11.3: Fig 11.6 and Fig 11.7

Chapter 13:

- Section 13.1
- Section 13.2
- Section 13.3
- Section 13.4: especially equation (13.8)
- Section 13.5: focus on Pages 418-421

Chapter 15:

- Section 15.1
- Section 15.2

Chapter 16:

- Section 16.1
- Section 16.3: especially equation (16.1)

Chapter 17:

- Section 17.1
- Section 17.4: especially equation (17.1)

Chapter 18:

- Section 18.1: especially Sharpe ratio, Treynor measure, and Jensen’s measure (Alpha)
- Section 18.6

Chapter 19:

- Section 19.1
- Section 19.2
- Section 19.3

Additional Readings will be posted on UT Blackboard system

## Presentation Topics (Time)

- Topic 1: Tell us about Mortgage-Backed Securities (see page 34) and the market crisis caused by the subprime meltdown (Jan. 25)
- Topic 2: Tell us about the IPO process, and what is special about the auction process of Google's IPO. (See pages 54-56, and Google's original S-1 registration statement at [http://www.sec.gov/Archives/edgar/data/1288776/000119312504073639/ds1.htm#toc16167\\_6](http://www.sec.gov/Archives/edgar/data/1288776/000119312504073639/ds1.htm#toc16167_6)) (Jan. 27)
- Topic 3: Discuss short sales constraints, and the 2008 ban on short selling by the SEC (See pages 70-73 and <http://www.sec.gov/news/press/2008/2008-211.htm>) (Feb. 29)
- Topic 4: Exchange traded mutual fund (Page 95) what are the differences between ETF and index funds? (Feb. 1)
- Topic 5: Tell us about the historical equity risk premium and what you expect the equity premium to be in the future (see Page 137 "Triumph of the Optimists", and also pages 7 to 22 of [www.fpanet.org/journal/articles/2002\\_Issues/jfp0402-art7.cfm](http://www.fpanet.org/journal/articles/2002_Issues/jfp0402-art7.cfm)) (Feb. 19)
- Topic 6: Tell us about Nobel prize winner Harry Markowitz his work (Feb. 24)
- Topic 7: Tell us about Nobel prize winner Bill Sharpe and his work (Feb. 24)
- Topic 8: What are real estate investment trusts (REITs)? What are the historical correlations between REITs and stock market index? Do you think investors should get into them now? (for industry information you can check [www.reit.com](http://www.reit.com)) (March 1)
- Topic 9: Are stock returns less risky in the long run? What do you think about time diversification? (See pages 175-177) (March 3)
- Topic 10: Tell us about the Fama-French three factor model (See pages 209-212) (March 5)
- Topic 11: Stock valuation based on P/E and other price/fundamental ratios (See chap 13.1 and 13.4) (March 29)
- Topic 12: Bond credit ratings and yields (See chap 10.5 especially pages 309-310) (April 2)
- Topic 13: Credit Default Swaps (See pages 313-315 and "Credit Default Swaps, Systemic Risk, and the Default Crisis of 2008") (April 5)
- Topic 14: Tell us about the stock market crash of 1987. What are some of the possible causes? (see <http://www.federalreserve.gov/Pubs/Feds/2007/200713/200713pap.pdf>, especially pages 11-17) (April 9)
- Topic 15: What do we know about investors' trading behavior? What psychological biases do they have? (April 12)
- Topic 16: Charting and technical analysis (See chapter 9.2) (April 14)
- Topic 17: Discuss some interesting examples of options (e.g., lookback options on page 498, and employee stock options) (April 23)
- Topic 18: Hedging, portfolio insurance and hedge ratio (See chap 16.4 and page 532 about "J.P.Morgan rolls dice on Microsoft options" (April 28)