

**UNIVERSITY OF SOUTHERN CALIFORNIA  
MARSHALL SCHOOL OF BUSINESS  
SPRING 2015**

**FBE 441: Investments**

Class 15360R, 2:00-3:50pm MW JKP112  
Class 15362R, 4:00-5:50pm MW JKP112

**1. Contact Information:**

- Instructor: David Solomon
- Office: HOH 702 (7th floor of Hoffman Hall)
- E-mail: [dhsolomo@marshall.usc.edu](mailto:dhsolomo@marshall.usc.edu)
- Course Website: on <http://blackboard.usc.edu>
- Office Hours: Wednesday 10:30am-11:30am. (or by appointment)

**2. Policy on Unenrolled Students Attending Class**

Unfortunately both sections of the class are currently fully enrolled, and thus there will not be any seating capacity for students not enrolled in the class to attend.

**3. Course Objectives:**

The objective of the course is to study the theory and empirical evidence relevant for investing. The major topics include:

- . Overview of capital markets
- . Optimal portfolio selection
- . The relation between risk and return
- . Delegated portfolio management and performance evaluation
- . Fixed income securities
- . Derivative markets (time permitting)

The course material is biased toward equity markets since there are separate Marshall courses that cover fixed income and derivative markets.

**4. Prerequisites and Expectations:**

- Students are expected to have completed core courses in basic finance and statistics. The study of investments is inherently quantitative, although I intend the course to be accessible to those of all mathematical backgrounds. Knowledge of basic statistics (means, covariances, regression, etc.) is most important, as these tools will be used repeatedly throughout the semester. In addition, you should be comfortable with basic algebra and calculus. Most projects and problem sets will be spreadsheet-based, so you will need to know how to use spreadsheets to perform some basic analysis. Students are also expected to bring a calculator to every class section and to all examinations.

## 5. Grading Criteria, Exams and Course Policy:

Grades will be assigned based on the following weights according to 2 schemes. Your overall course score will be calculated using the scheme that is most favorable to you.

	<u>Scheme 1</u>	<u>Scheme 2</u>
Mid-Term Exam	30%	10%
Final Exam	40%	60%
Homework Assignments (4)	20%	20%
Class Participation	10%	10%

Exam Dates:

Mid-Term Exam:	March 11 <sup>th</sup> , (Wednesday), in class
Final Exam:	Class 15360R (2pm section) – Monday May 11th, 2-4pm Class 15362R (4pm section)– Wednesday May 6th, 4:30-6:30pm

- **Exam dates are in line with the university schedule. You need to reconfirm these dates closer to examinations** ([http://www.usc.edu/academics/classes/term\\_20151/finals.html](http://www.usc.edu/academics/classes/term_20151/finals.html)). Rooms are to be determined.

- Homework Assignments: I will assign a total of **4 homework problems**.

**These will be a combination of numerical problems, concept questions and data exercises. These will be graded on a pass/fail basis and worth 20% of the course marks.** I am more interested in your analysis and the process you follow to get your answer, not necessarily the correct answer. On the day they are due, **assignments must be turned in at the beginning of the class**. Electronic submissions are *not* acceptable. The policy of not accepting late submissions will be strictly enforced. Everyone is expected to be able to discuss each problem set in class.

- Tests: **Tests are closed book**. You may bring one piece of paper with handwritten notes (double-sided, 8.5"x11"). You will need a calculator that can raise numbers to arbitrary powers. Laptop computers and calculators with word processing features are not permitted. **There will be no make-up tests**. By enrolling in the course you are committing to take the tests on the scheduled dates.

- Regrades: Regrades must be requested within one week of the day the item was returned to the class. The student must submit a written and precise explanation of why he/she thinks the grade should be modified. The entire assignment will be regraded and the final mark may go up or down.

- Returned paperwork, unclaimed by a student, will be discarded after 4 weeks and hence, will not be available should a grade appeal be pursued by a student following receipt of his/her course grade.

## 6. Textbook and Readings:

- Required Readings

- . **Bodie, Kane and Marcus, *Investments*, 9<sup>th</sup> Edition, Mc-Graw-Hill/Irwin**  
(referred to as **BKM** hereafter)
- . Lecture Notes

The 8<sup>th</sup> edition (or even the 7<sup>th</sup> edition) is generally an acceptable substitute, although it is up to students to ensure that the materials are covered in both (and if necessary, supplement with occasional relevant 9<sup>th</sup> edition reading)

- Suggested: Regular reading of Wall Street Journal (or the Financial Times) and of The Economist

Lecture Notes, articles and problem sets will *not* be handed out in class. They will be available on Blackboard as Word or Pdf documents (<http://blackboard.usc.edu>). You are responsible for timely downloads of the materials.

It is always beneficial to do the required reading before class. Also, lecture notes are not a complete record of what I say in class, so attending lectures, taking notes and asking questions will be required to successfully complete the course.

## **7. Course Outline (\*subject to change\*):**

### **PART I – INTRODUCTION AND REVIEW**

#### **Topic 1: Introduction**

- course introduction and syllabus
- capital markets and securities trading
- delegated portfolio management, mutual funds

#### *Reading*

- BKM chapters 2, 3 and 4 (8<sup>th</sup> and 9<sup>th</sup> Edition)

#### **Topic 2: Quantitative Review and Historical Returns Analysis**

- returns and portfolios
- means, standard deviations, and covariances
- running and interpreting regressions

#### *Reading*

- BKM chapter sections 5.4, 5.5. and 5.6 (8<sup>th</sup> Edition and 9<sup>th</sup> Edition)

### **PART II – PORTFOLIO THEORY**

#### **Topic 3: Investing in a Single Risky Asset**

- utility maximization theory
- risk and return
- optimal investment with one risky and one riskless asset

#### *Reading*

- BKM chapter sections 6.2., 6.3, 6.4, 6.6 (8<sup>th</sup> and 9<sup>th</sup> Edition )

#### **Topic 4: Diversification**

- the efficient frontier of risky assets
- portfolio constraints
- estimation risk
- factor models

#### *Reading*

- BKM chapters 7 and 8 (8<sup>th</sup> and 9<sup>th</sup> Edition)

**Topic 5: Asset Pricing and the CAPM**

- the CAPM
- the Fama-French three-factor model
- models of means vs models of covariances

*Reading*

- BKM chapter sections 9.1, 9.2., chapter 10 and chapter section 13.3 (8<sup>th</sup> and 9<sup>th</sup> Edition)

**PART III – APPLICATIONS OF PORTFOLIO THEORY**

**Topic 6: Asset Pricing in Practice**

- testing asset pricing models
- empirical evidence on CAPM and FF
- anomalies

*Reading*

- BKM chapter section 9.3. and chapter 10 (8<sup>th</sup> and 9<sup>th</sup> Edition)

**Topic 7: Market Efficiency**

- the efficient market hypothesis
- weak, semi-strong and strong form efficiency
- technical and fundamental analysis
- event studies
- The Joint Hypothesis Problem
- Implications for Investing

*Reading*

- BKM chapter 11

**Topic 8: Behavioral Finance**

- Anomalies
- Ways to Take Advantage of Mispricing
- Heuristics and Biases

*Reading*

- BKM chapter 12 (8<sup>th</sup> and 9<sup>th</sup> Edition)

**Topic 8A: The Media in Financial Markets [if time permits]**

- Media vs. News
- Dissemination
- Information Processing
- Co-ordinating Behavior

**Topic 9: Portfolio Management and Performance Evaluation**

- measures of abnormal performance
- style benchmarks
- survivorship bias

*Reading*

- BKM chapter 24 (8<sup>th</sup> and 9<sup>th</sup> Edition)

**PART IV – OTHER TOPICS**

**Topic 10: Fixed Income Investments**

- pricing
- the relationship between prices, interest rates and yields

- the expectations hypothesis and liquidity premium hypothesis
- duration and immunization
- making bets with bond portfolios

*Reading*

- BKM chapters 14, 15 and 16 (8<sup>th</sup> and 9<sup>th</sup> Edition)

**Topic 11: Options [\*if time permits\*]**

- binomial trees and risk-neutral valuation
- Black-Scholes
- portfolio insurance

*Reading*

- BKM chapters 20 and 21 (8<sup>th</sup> and 9<sup>th</sup> Edition)

**8. Other Policies:**

- Academic Integrity: I will strictly enforce the university rules on academic integrity “... *The use of unauthorized material, communication with fellow students during an exam, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. It is often difficult to distinguish between a culpable act and inadvertent behavior resulting from the nervous tensions accompanying examinations. Where a clear violation occurs, however, the instructor may disqualify the student’s work as unacceptable and assign a failing mark on the paper.*”

- Students With Disabilities: Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. – 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.