

**UNIVERSITY OF SOUTHERN CALIFORNIA  
MARSHALL SCHOOL OF BUSINESS  
SPRING 2016**

**FBE 555: Investment Analysis and Portfolio Management**

Class 15429R, 6:30pm-9:30pm Monday OHE 136  
Class 15431D, 6:30pm-9:30pm Monday OHE 136

**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: Monday 11am-12pm. (or by appointment)

**2. Course Objectives:**

The objective of the course is to provide students with knowledge of the major issues involved in investing. The tools used in this course are designed to have applicability to individuals investing their own money (retirement and savings questions), as well as providing a grounding for the issues that arise in the money management industry. As much as possible, the class focuses on the practical applications of investing in real-world settings, including using Excel to analyze financial data and improve financial decision-making.

To this end, the course examines the major questions in asset pricing, covering the important theories that help understand risk and return, as well as the empirical evidence for and against each one.

The major topics include:

- . Understanding capital markets
- . Theories of portfolio optimization and asset allocation
- . Models of risk and return.
- . Empirical evidence about models and market efficiency
- . Behavioral finance and mispricing
- . Delegated portfolio management (mutual funds, hedge funds etc.) and performance evaluation
- . Bonds and other fixed income securities
- . Options (time permitting)

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

**3. 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.

#### 4. 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 (5)	25%	25%
Class Participation	5%	5%

Exam Dates:

Mid-Term Exam:	March 7th, (Monday), in class
Final Exam:	Wednesday May 4th, 7-9 p.m

- **Exam dates are in line with the university schedule. You need to reconfirm these dates closer to examinations** (<http://classes.usc.edu/term-20161/finals/>). Rooms are to be determined.

- Homework Assignments: I will assign a total of **5 homework problems, which will be graded on a pass/fail basis**. 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.

#### 5. Textbook and Readings:

The main readings for the course will be the lecture notes, which are provided.

In addition, there will be a textbook from which I will assign supplemental reading material. The textbook is :

. **Bodie, Kane and Marcus, *Investments*, 10<sup>th</sup> Edition, Mc-Graw-Hill/Irwin**  
(referred to as **BKM** hereafter)

**The materials in the text book go into some of the same topics in additional detail, and thus are helpful, but not strictly necessary.** Since the material doesn't change very much year to year, and since academic textbooks are mostly a giant ripoff, a good option is to get an earlier second hand edition of the

book. The current edition is the 10<sup>th</sup>, but any of the 9<sup>th</sup>, 8<sup>th</sup> or even 7<sup>th</sup> editions will probably be similarly useful.

I've given BKM sections from the 9<sup>th</sup> edition, I'll update these with the 10<sup>th</sup> edition shortly.

- 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.

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

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

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

- course introduction and syllabus
- capital markets and securities trading
- short selling and its policy implications
- 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 and Statistical Review**

- returns and portfolios
- realized returns versus expected returns
- evidence on the relationship between price changes, dividends and expected returns
- statistics - means, standard deviations, and covariances
- 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: Trading Off Risk and Return – The Single Risky Asset Case**

- utility maximization theory
- optimal investment with one risky and one riskless asset
- risk and return
- effects of individual differences on portfolio choice

#### *Reading*

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

#### **Topic 4: Portfolio Optimization and Diversification**

- benefits and limits of diversification
- systematic and idiosyncratic risk

- the efficient frontier of risky assets
- portfolio constraints
- estimation risk
- calculating optimal portfolios in practice.

*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
- momentum
- macroeconomic models

*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 – MODELS OF ASSET PRICES IN PRACTICE**

**Topic 6: Empirical Evidence on Asset Pricing Models**

- tests of asset pricing models
- empirical evidence on CAPM and FF
- size and book-to-market – risk or mispricing?
- 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
- momentum, technical and fundamental analysis
- event studies
- the joint hypothesis problem: is market efficiency testable?
- implications for investing

*Reading*

- BKM chapter 11

**Topic 8: Behavioral Finance and Mispricing**

- anomalies
- absence of arbitrage, the law of one price
- different ways to exploit mispricing in markets
- 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: Mutual Funds, Portfolio Management and Performance Evaluation**

- measures of abnormal performance

- historical performance of managed funds
- style benchmarks
- survivorship bias

*Reading*

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

## PART IV – OTHER TOPICS

### Topic 10: Bonds and Fixed Income Investments

- discounted cash flows and bond prices
- 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 and Other Financial Derivatives [\*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)

## 7. 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.