

**UNIVERSIDADE DE LISBOA
ISEG**

**SPRING 2015
FUNDAMENTALS OF FINANCE THEORY
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COURSE DESCRIPTION

This course introduces students to a wide range of basic theoretical models used to explain how people allocate scarce resources over time, under uncertain conditions. Topics covered include asset valuation, consumption-savings choice under uncertainty, portfolio theory, capital structure, and market efficiency.

COURSE OBJECTIVES

Students will learn the intuition behind many of the basic finance models. Emphasis is placed on visualizing and illustrating the basic financial issues so that students are prepared to comprehend the more complex models explored in recent journal articles. Students will enhance their technical skills, required to solve problems based upon the models, and their presentation skills, required to present results to the class.

CLASS MATERIALS

TEXT: *Financial Theory and Corporate Policy* by Copeland, Weston, and Shastri (4th edition, Addison Wesley, 2005). This text covers a wide range of finance models and provides a good summary of past theory and empirical work. Written to instill intuition rather than precision, it gives one a good perspective on basic finance theory. We will rely most heavily on this text.

STEPS TO PREPARE FOR EACH CLASS

1. Complete the homework problems assigned for the material covered in the previous week's lecture - perhaps meet in groups to work together. Be prepared to present your homework answers to the class if called upon, and hand in your answers at the beginning of class. Although you are encouraged to work on homework in groups, and may assign specific problems to group members, be sure that you complete all the problems on your own since relying too heavily on others will probably result in poor test performance.
2. If it is not your turn to present the academic article, prepare the basic article review form (see last page of syllabus) to be handed in at the end of class. If it is your turn, prepare for your presentation of the assigned journal article associated with the previous week's lecture topic. To do this, read the article and prepare the article review form including part 6. If you have questions about the paper, meet with me to go over

what you plan to say in your presentation.

3. To prepare for the current week's lecture, read my class notes and make sure you understand each question or problem presented in the notes. The notes are not detailed; for detailed explanations, read the corresponding text and article assignments. Record any questions or observations you have on the material, and offer them in class.

GRADING

1. CLASS PARTICIPATION AND ARTICLE PRESENTATIONS	20%
2. MIDTERM	30% - 1 hr
3. FINAL EXAM	30% - 1 hr
4. HOMEWORK ASSIGNMENTS AND ARTICLE REVIEWS	20%

1. CLASS PARTICIPATION AND ARTICLE PRESENTATIONS- includes your responses to, and questions about, material from the notes, homework and readings.
2. TESTS - Some exam problems will resemble the homework problems. Others will look somewhat different but still require the same solution methods of the problems covered in class or for homework. These problems test whether you have learned the concepts well enough to identify when to use them in a slightly different situation. This approach tests your knowledge of the finance models (i.e., solution rules) as well as your ability to discern when to use them. The exam dates depends upon how fast we cover the material in each half of the class.
3. HOMEWORK PROBLEMS AND ARTICLE REVIEWS- graded on a scale from 0 (not handed in or very poorly done) to 3 (follows guidelines and makes interesting points). You are allowed one late assignment, otherwise, late work is not accepted.
4. STATEMENT OF ACADEMIC INTEGRITY – Cheating of any sort will not be tolerated and will result in a failure of the exam or assignment, deduction in the class participation grading component, and potential failure of the course.

STRUCTURE OF A TYPICAL CLASS

BEFORE CLASS - students see the material for the first time and can think about the material without being inhibited by other students or the professor. Students are encouraged to propose innovative solutions to questions and problems posed in the readings and notes, which may differ from traditional approaches.

BEGINNING - students are asked to present their answers to homework problems for the previous week's topic. A student then presents a detailed review of a finance article on the previous week's topic. This tests whether the student can apply the concepts covered in lecture to help understand a related article. This is the third time students see the material, which reinforces their pre-class reading and in-class lecture coverage.

MIDDLE TO END - lecture covers the issues and techniques that students commonly find

confusing for the particular new topic. Students are prodded to show whether they clearly understand by answering questions and solving problems from the notes that they have had time to think about before class.

The materials overlap somewhat by design, although for most, the materials are complementary. The combination of lectures, homework problems, articles, class discussion and websites is meant to accommodate an array of learning styles. Ultimately, you will have to decide which materials work best for you and perhaps focus more closely on some and less on others. This learning approach is reflected in the grading, which is distributed over assignments, class participation and exams. Exams are more highly weighted because they measure your performance under more controlled circumstances (fixed time and individual effort) and thus may be a more accurate gauge of your learning.

Note that for many students, it is important to participate in a group for homework problems and article reviews. As in many tasks, a group economizes each individual's time by splitting up the work and then working to combine the results into a better final product than any one individual is likely to produce. Each individual learns how to complete the full task but is not involved in every part of the task. To perform well, I expect that the typical student will work five hours each week outside of class. Without group participation, the time required is likely to be considerably longer.

HINTS

1. The crucial rule to good performance in this class is to understand the material covered in class. My lectures and the homework problems show you which concepts I feel are most important. Try to think and ask questions during the lecture. If you miss writing something down during the lecture you can go back to my notes.
2. If you are struggling on the homework problems, article reviews, or understanding the lectures, then seek help either by phone, email or after class.

COURSE OUTLINE

The first reading for each week is the notes for the relevant topic. The notes are on the class webpage and follow the order of the outline below. I have also placed the academic articles on the webpage. The outline gives the section name and the problem numbers for each homework assignment. If you would like to do additional reading and problems, check at the end of the text chapters. Where only part of a chapter will be covered, pages are in parentheses after chapter numbers. Homework problem numbers appear in parentheses after chapter numbers as well. **CWS** denotes the Copeland, Weston, and Shastri text.

WEEK#

TOPIC

- 1 **Basic Cash-Flow Valuation** - review syllabus, explain article reviews and homework, discuss library information sources, and review valuation formulas.
- Text Readings -> **CWS** – Ch. 14(497-505), Appendix A
 - Homework Problems -> None
 - Article – None
- 2 **Utility Theory, Risk Aversion and Stochastic Dominance** – the consumption savings decision under certainty and uncertainty.
- Text Readings -> **CWS** – Ch. 1, 2 (17-19), 3.
 - Homework Problems -> use the one-stage and two-stage growth models to price one stock of your choice.
 - Article – The Stock Market Valuation of Research and Development - Chan.
- 3 **State Preference Theory** – Arrow-Debreu securities and market completeness.
- Text Readings -> **CWS** – Ch. 4, 4A
 - Homework Problems -> **CWS** – Ch. 3(3, 5, 9, 14, 16) (typo in problem #5, part a should read “ $a > 0$ ”)
 - Article – Risk Aversion - Rabin and Thaler.
- 4 **Portfolio Theory** – Mean-variance uncertainty.
- Text Readings -> **CWS** – Ch. 5
 - Homework Problems -> **CWS** – Ch. 4(3, 5, 6)
 - Article - Options and Efficiency, Ross.
- 5 **FIRST EXAM - up to and including, Portfolio Theory**

6 **Capital Asset Pricing** – CAPM and APT.

- Text Readings -> **CWS** – Ch. 6
- Homework Problems -> **CWS** – Ch. 5(4, 6, 8, 9, 14) (typo in problem 14b, it should include the correlation between US Tbonds and Tbond futures, $r_{US,TB} = 0.9$)
- Article – Efficient Use of Conditioning Information ..., Ferson.

7 **Efficient Markets** – Market rationality, technical analysis and arbitrage.

- Text Readings -> **CWS** – Ch. 10
- Homework Problems -> Handout Chapter 24(5, 7, 13)
- Article – Conditioning Manager Alphas ..., Christopherson, Ferson and Glassman.

8 **Information Asymmetry and Agency**

- Text Readings -> **CWS** – Ch. 12
- Article – (to be named)

9 **SECOND EXAM - covers everything covered in class.**

THIS WILL BE UPDATED TO ADJUST FOR CLASS PROGRESS

