ECONOMICS 2503F
FINANCIAL ECONOMICS I
(Asset Pricing & Portfolio Theory)
Fall Term 2010
R 11-1 in WW 126

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Course Description

The course provides an introduction to the economic theory of asset pricing under uncertainty. Topics to be covered include modern portfolio theory, the major theories of asset pricing (CAPM, CCAPM, APT, A-D Pricing), contingent claim securities, Martingale Methods, and option pricing theory.

Marking

A student's final mark for the course will be determined from a combination of take-home assignments, in-class quizzes, and a final examination. Details are as follows.

Analytic Problem Set due Oct. 14	15% of final mark
In-Class Term Test Nov.04	35% of final mark
Final Examination (TBA during Dec. Examination Period)	50% of final mark.

The Analytical Problem Set is posted on the course web site. Students should feel free to collaborate with one another in solving the problems. However, each student should submit the solutions individually on Oct. 14. An assignment handed in late will be subject to a penalty of 5 percentage points for each day beyond the specified deadline.

Textbooks

Readings will be assigned from a combination of on-line documents and three different textbooks. The main textbook is Copeland, Weston and Shastri, *Financial theory and Corporate Policy*, 4th edition, 2005, Pearson Addison Wesley (ISBN 0-321-12721-9) – hereafter referred to as CWS. (For many years during the late 1970's and 1980's earlier editions of CWS were the primary textbooks used in MBA courses in Finance.)

A second textbook is Jean-Pierre Danthine and John B. Donaldson, *Intermediate Financial Theory*, 2nd edition, 2005, Elsevier (ISBN 0-12-369380-2) – hereafter to be referred to as DD. In spite of the word "Intermediate" in its title, the DD book is sometimes overly rigorous in its use of mathematics. It also sometimes introduces topics that are tangential to the main concept of interest.

A third textbook is Bodie, Kane, Marcus, Perrakis and Ryan, *Investments*, 5th Canadian edition, 2005, McGraw-Hill Ryerson (ISBN 0-07-089503-1) – hereafter referred to as Bodie. (A 6th Canadian edition of this book has recently been released but chapter and page references given in this syllabus apply to the 5th edition). Bodie is actually an undergraduate textbook but it adequately covers most of the main topics and provides a decent background for elementary concepts.

Other Books that May Be Useful

John Cochrane, *Asset Pricing*, 2001, Princeton University Press.
Campbell, Lo and MacKinley, *The Econometrics of Financial Markets*, 1998, Princeton University Press.
Both of these books focus on empirics and set up theoretical concepts so that they may be tested empirically. They should be useful resources for the Empirical Assignment.

Course Outline

1. Introduction; Asset Pricing under Certainty; Fixed Income Securities

   CWS Chs. 1, 2.
   DD Chs. 1, 2.
   The web based document "Asset Pricing Under Complete Certainty"

2. Utility Theory under Uncertainty; Risk & Risk Aversion; Stochastic Dominance

   CWS Ch. 3.
   DD Chs. 3, 4.

3. Modern Portfolio Theory

   CWS Ch. 5
   DD Chs. 5,6, including Appendices 6.1, 6.2.
   Bodie Ch. 6

4. CAPM

   CWS Ch. 6, excluding Sections L, M
   DD Ch. 7, excluding Sections 7.4-7.6 but including Appendix 7.1.
   Bodie Ch 7.

5. Factor Models and APT; Empirical Tests of CAPM

CWS Ch. 6, Sections L, M
Bodie Ch. 8 and Ch. 10, Sections 10.1-10.3 only.
DD Ch. 13.

6. Contingent Claims; A-D Securities; Arbitrage Pricing Methods

CWS Ch 4, Sections A-F.
DD Ch. 8 and Ch. 10, Sections 10-1-10.4 only.

7. CCAPM

DD Ch. 9.
The web-based document "The Lognormal Distribution".

8. Introduction to Martingale Pricing, the Binomial Model of Option Pricing

CWS CH 7.
DD Ch. 11 and Ch. 12, Sections 12.4 – end, including the Appendix.
The web-based document "Introduction to Continuous Time Processes".

9. Firm Valuation in Incomplete Security Markets.

DD Ch. 15