# UNIVERSITY OF TORONTO DEPARTMENT OF ECONOMICS St. GEORGE CAMPUS

# ECO358 – Financial Economics I (Asset Pricing) Course Outline –Summer 2013

Instructor: Dr. Ata Mazaheri

Office Hours: Room 344, 150 St. George St. Tuesday 3-4PM

**Telephone:** 416-946-5794

E-mail Address: <u>mazaheri@chass.utoronto.ca</u>
Web Page: <u>http: portal.utoronto.ca</u>

# **Course Description:**

This course provides you with the analytical tools needed to understand the issue of security valuation and hence to make the appropriate investment decisions. It is an introductory course in the portfolio theory and asset pricing which form the foundation of investment. The main topics covered in this course include valuation in the world with certainty, individual, risk and return, arbitrage, and market equilibrium. More specifically, we cover the basics of valuation applied to bonds and stocks, the mean-variance analysis, the Capital Asset Pricing Model (CAPM), factor portfolios and Arbitrage Pricing Theory (APT), as well as Arrow-Debreu state prices followed by market efficiency as well as option pricing.

The course challenges you on both theoretical as well as the empirical fronts. While on the theoretical front the course goes rather deep in the valuation methods, at the same time the empirical component of the course require you to apply the methods learned to real world security analysis.

# **Course Objectives:**

By the end of this course you are expected to learn:

- The role of the most fundamental markets and institutions
- Tools commonly used in investment analysis
- Pricing default-free fixed-income securities as well as the term structure of interest rate.
- Theories of risk-factor pricing, such as the Capital Asset Pricing Model (CAPM)
- The alternatives to CAPM such as State Prices and the Arbitrage Pricing Theory (APT)
- Basics of derivatives markets, as well as the pricing of derivative instruments and their use as hedging tools.
- How to apply the valuation methods to virtual portfolio

#### **Textbook:**

There is no required textbook. However, the following is recommended.

Bodie, Kane, Marcus, Perrakis, Ryan, 2008, *Investments*, 6<sup>th</sup> Edition, McGraw-Hill. ISBN: 0070965455 [BKM]

I will be posting my notes incrementally. Part of my notes is based on BKM but most of it is not. You are recommended to purchase the book more so at the start of the course where you have to familiarize with the institutional issues and when my notes and the book overlap. I will assign parts of the book for your reading as well. I will leave a copy with the short- term desk for you to borrow in case you do not want to purchase the book.

#### **Evaluation:**

|             | Weight | Time | Location |
|-------------|--------|------|----------|
| Term Test-1 | 20%    | TBA  | TBA      |
| Term Test-2 | 20%    | TBA  | TBA      |
| Final Exam  | 60%    | TBA  | TBA      |
| Total       | 100%   |      |          |

#### **Notes:**

- Test-1: Material covered till the end of Lecture-4.
- Test-2: Material covered from Lecture-5 till the end of Lecture-8.
- **Final Exam:** Inclusive of all the material learned in the lecture.

If you are unable to write a term test at its scheduled time because of illness or other compelling circumstances, you need to present documentation supporting your reasons for missing the examination, no later than a week after the assessment. There will be no makeup test. If you miss a term test with a legitimate reason, the final exam will be re-adjusted for the total of 80%. If you miss both term tests, **the second miss will be automatically zero**.

#### **Aids Allowed in Tests and Final Exam**

• Both term tests as well as the final exam are closed book. However, you are permitted to bring a non-programmable calculator and a **hand-written** "crib sheet" to each of the assessments. For the term tests, you may use **one side** of one 8½" × 11" page with notes and/or formulae. For the final exam, you may use **two sides** of an 8½" × 11" page.

#### **Procedures and Rules**

**Re-marking:** Great care will be taken in the marking of term tests, and the final exam. In the unlikely event that you feel a question has been mis-marked, or the marks have been added up incorrectly, you can submit your test back to the instructor with a note explaining what you believe requires further examination. This must be done within **one week** of the test being returned to the class.

**Academic Misconduct:** Students should note that copying, plagiarizing, or other forms of academic misconduct will not be tolerated. Any student caught engaging in such activities will be subject to academic discipline ranging from a mark of zero on the test or examination to dismissal from the university. Any student abetting or otherwise assisting in such misconduct may also be subject to academic penalties.

# Logging in to your Blackboard Course Website

ECO358 uses Blackboard for its course website. To access the ECO358 website, or any other Blackboard-based course website, go to the UofT portal login page at <a href="http://portal.utoronto.ca">http://portal.utoronto.ca</a> and log in using your UTORid and password. Once you have logged in to the portal using your UTORid and password, look for the **My Courses** module, where you'll find the link to the ECO358 course website along with the link to all your other Blackboard-based courses.

# **Activating your UTORid and Password**

If you need information on how to activate your UTORid and set your password for the first time, please go to <a href="www.utorid.utoronto.ca">www.utorid.utoronto.ca</a>. Under the "First Time Users" area, click on "activate your UTORid" (if you are new to the university) or "create your UTORid" (if you are a returning student), then follow the instructions. New students who use the link to "activate your UTORid" will find reference to a "Secret Activation Key". If you need help visit the Scarborough campus computing help desk (B-487) to obtain help. The course instructor will not be able to help you with this.

### **Email Communication with the Course Instructor**

At times, the course Instructor may decide to send out important course information by email. To that end, all UofT students are required to have a valid UofT email address. You are responsible for ensuring that your UofT email address is set up AND properly entered in the ROSI system. You can do that by using the following instructions:

To submit the information to activate your UTORid and password (see above), you will need to click the "Validate" button. Follow the instructions on the subsequent screens to receive your utoronto.ca address. Once you have your UofT email address, go to the ROSI system (<a href="www.rosi.utoronto.ca">www.rosi.utoronto.ca</a>), log in and update the system with your new UofT email address.

# You can check your UofT email account from

- 1. The UofT home page <a href="http://www.utoronto.ca">http://www.utoronto.ca</a>: From the Quick Links menu on the top right, choose "my.utoronto.ca". Enter your UTORid and password, and when the Welcome page opens, click "WEBMAIL".
- 2. Email software installed on your computer, for example Microsoft Outlook or Mozilla Thunderbird. Visit the Help Desk at the Information Commons or call 416-978-HELP for help with the set up.

**Forwarding** your utoronto.ca email to a Hotmail, Gmail, Yahoo or other type of email account is not advisable. In some cases, messages from utoronto.ca addresses sent to Hotmail, Gmail or Yahoo accounts are filtered as junk mail, which means that emails from your course instructor may end up in your spam or junk mail folder.

You are responsible for:

- 1. Ensuring you have a valid UofT email address that is properly entered in the ROSI system
- 2. Checking your UofT email account on a regular basis.

# **E-mail Policy**

• Email should NOT be seen as an alternative to meeting with the instructor during office hours. Nor should email be used as a mechanism to receive private tutorials (especially prior to tests) or to explain material that was covered in lectures you missed. If you intend to send an Email please ensure that you have exhausted other options. I will respond to emails within 24 hours during the weekdays or on Mondays. I will also take up 'generic' questions that could be of interest to all students at the beginning of the next class.

# **Preparation**

- Lecture notes are posted several days ahead of the lecture. It is important to read them <u>before</u> attending each lecture. It is necessary to try the problem sets after each lecture before attending the next lecture. Solution to those problem sets are posted as well but it is essential that you do the question on your own before consulting the solutions!
- Practice tests will be posted on the website and will be discussed and expanded during the review sessions. Make sure you spent time on those questions before each assessment.

# **Course Timetable**

|            | Topic                                | Text Reading   |  |  |
|------------|--------------------------------------|----------------|--|--|
| Lecture-1  | Introduction –                       | BKM: 2         |  |  |
|            | Overview of Financial Markets        |                |  |  |
| Lecture-2  | Valuation: World without Uncertainty | Extended Notes |  |  |
|            | Bond Valuation-I                     | Topic-1        |  |  |
| Lecture-3  | The Term Structure of Interest Rates | Extended Notes |  |  |
|            | Stock Valuation                      | Topic-1        |  |  |
| Lecture-4  | Risk, Expected Utility Theory, Basic | Extended Notes |  |  |
|            | Tools of Modern Portfolio Analysis   | Topic-2        |  |  |
|            | Tutorial-1                           |                |  |  |
|            | <u>Test-1</u>                        |                |  |  |
| Lecture-5  | Mean Variance Analysis               | Extended Notes |  |  |
|            | Portfolio Selection                  | Topic-2        |  |  |
| Lecture-6  | Capital Asset Pricing Model          | Extended Notes |  |  |
|            |                                      | Topic-3        |  |  |
| Lecture-7  | Factor Models and Arbitrage Pricing  | Extended Notes |  |  |
|            | Theory (APT)                         | Topic-3        |  |  |
| Lecture-8  | Market Efficiency                    | Extended Notes |  |  |
|            | <u>Tutorial-2</u>                    | Topic-3        |  |  |
| Test-2     |                                      |                |  |  |
| Lecture-9  | State Prices                         | Extended Notes |  |  |
|            |                                      | Topic-4        |  |  |
| Lecture-10 | Options I                            | Extended Notes |  |  |
|            |                                      | Topic-5        |  |  |
| Lecture-11 | Options II                           | Extended Notes |  |  |
|            |                                      | Topic-5        |  |  |