ECON*2560
Theory of Finance F15

0.50 credit weight

General Course Information

Instructor: Nikola Gradojevic

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Office Location MacKinnon 734
Office Hours Tuesdays, 10:00-11:30.
Department/School Department of Economics and Finance

TA's TBA

Email TBA
Office Location TBA
Office Hours TBA

Class Schedule:

- Mon, Wed, Fri: 11:30-12:20 (Section 3) in THRN, Room 1307
- Tues, Thur: 08:30-09:50 (Section 1) in MCKN, Room 031

Pre-requisites: ECON*1100, (1 of ECON*2310, MATH*1000, MATH*1030, MATH*1080, MATH*1200), (1 of ECON*2740, PSYC*1010, PSYC*2010, STAT*2040, STAT*2050, STAT*2060, STAT*2080, STAT*2090, STAT*2100, STAT*2120)

Course Description

This course looks at capital budgeting and long-term finance and investment decisions by firms and individuals. It introduces capital asset pricing under uncertainty and the concept of efficient markets. A major emphasis is on corporate finance.

Indicative Content

In this theory of finance course we will study a set of financial decisions involving risk from two distinct points of view: (i) of an individual investor, and (ii) of a corporation. The first point of view is central to asset pricing, whereas the second point of view is central to corporate finance. Here is a sample of the questions we will address in this course:

From an investor's point of view:

• How do we value stocks and bonds?

• How do we measure risk and return and how is risk related to return?

• How can we build optimal portfolios and diversify risk?

• Can we consistently time the market to make excess returns?

From a corporation's point of view:

• What projects should the firm invest in?

• How should the firm raise funds to finance its investments?

• What fraction of its profits should the firm pay out to its shareholders?

Finance is a quantitative subject. We will not be able to study finance without using some mathematics. However, we will do our best to keep the level of mathematical complexity to a minimum, and explain new concepts from first principles. We will need to use concepts such as:

• Basic calculus (simple computations, fractions, percentages, functions in one variable)

• Basic statistics (mean, variance, covariance, correlation and regression analysis)

LECTURE TIMETABLE

INTRODUCTION

- Course Outline

TOPIC 1

- Financial Calculus
  - Compounding and future value
  - Discounting and present value
  - Annuities and perpetuities

- Valuing Bonds
  - Computing bond prices
  - The effect of the yield, coupon rate and time to maturity
  - Credit risk

- Valuing Stocks
  - Computing stock prices
  - The dividend discount model
  - The cost of equity
  - The present value of growth opportunities

TOPIC 2

- Portfolio Choice and Diversification
  - Measuring risk vs. return
  - Expected return, variance, standard deviation, covariance, correlation
  - Systematic and idiosyncratic risk

- The Capital Asset Pricing Model (CAPM)

- Market Efficiency
  - The efficient market hypothesis and the random walk model
  - Types of market efficiency: weak, strong and semi-strong
  - Empirical evidence and examples on market efficiency

TOPIC 3

- Capital Budgeting
- Net present value (NPV)
  - Internal rate of return (IRR)
  - Other project evaluation methods (e.g., payback method)
- NPV in action: a detailed example

TOPIC 4

- Financing and Capital Structure

TOPIC 5

- Debt and Payout Policy

TOPIC 6

- International Financial Management
- Options
- Risk Management

FINAL REVIEW

- Review and Integration of Concepts

Course Assessment

			Associated Learning Outcomes	Due Date/ location
Assessment 1:	30%	Midterm Exam	Numerical and analytical problem solving. *(Note: Will cover Topics 1 and 2)*	***Sat Oct 24, 9:30-11:00am***
Assessment 2:	30%	Two Excel Assignments	Group work, computer skills, problem solving in a real world context. *(Note: To be distributed later; from Holden)*	***Friday Oct 30 Friday Nov 27***
Assessment 3:	40%	Final Exam	Numerical and analytical problem solving, understanding principles and concepts. *(Note: Will cover all topics)*	***12/7/2015 19:00-21:00***
Total	**100%**			

Excel Assignments -- Notes:

There will be two Excel assignments over the semester. The assignments will be adapted from Spreadsheet Modeling in Investments by Craig W. Holden.

Both assignments will be done in groups. The groups can have a maximum of 4 students and a minimum of 1 student (i.e., students can choose to do the assignments on their own). Students are responsible for forming their own groups. The groups do not have to be the same for the two assignments. If you wish, you can submit one assignment as part of one group and the second assignment as part of another group. More details will follow later.

Spreadsheet modeling is an important skill that will serve you well in both your academic and professional careers. These exercises have been selected with the following goals in mind:

- Develop in you an appreciation for the power and many built-in features of spreadsheet programs,
- Develop in you the ability to conceptualize and build spreadsheet models to solve financial problems,
- Enhance your understanding of key subject areas such as portfolio management, bond price behaviour, stock valuation modeling and option pricing.

Your report must:

- Be type-written using MS-Word,
- Include embedded or attached Excel models,
- Include a title page addressed to me for the purposes of this course,
- Include a table of contents using electronically determined page numbers and built using the table of contents feature using styles built into the Word program,
- Include appropriate page headers and footers,
- Each page must be numbered electronically and the page number located in the footer in the same manner as found in this document.

In each report you must of course provide your completed spreadsheet model. The structure of your report should include the following general topic areas:

1. Introduction to the purpose of the spreadsheet model
2. Challenges encountered in the modeling process
3. Practical use (application) and the limitations of the spreadsheet model
4. Modeling techniques learned in this assignment
5. Financial concepts explored and reinforced in this assignment
6. Summary and conclusions
7. Embedded or appended Excel spreadsheets and charts/graphs.

Final Exam -- Notes:

The final exam will cover all the material taught in this course. Details on the format of the exam will be provided later.

Course Resources

Recommended Texts:

1. *"Fundamentals of Corporate Finance"* by Brealey, Myers, Marcus, Maynes and Mitra.
5th Canadian Edition. McGraw-Hill Ryerson 2012.

2. *"Spreadsheet Modeling in Investments, 5th Edition"* by Holden, C., Prentice Hall 2015.

Course Policies

Grading Policies

You will need medical or compassionate reasons to miss any of the graded events.

http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-grds.shtml

University Policies

Academic Consideration

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for

Academic Consideration:

http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

https://www.uoguelph.ca/registrar/calendars/undergraduate/2015-2016/

Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Centre for Students with Disabilities as soon as possible.

For more information, contact CSD at 519-824-4120 ext. 56208 or email csd@uoguelph.ca or see the website: http://www.csd.uoguelph.ca/csd/

Course Evaluation Information
Please refer to: https://www.uoguelph.ca/economics/course-evaluation

Drop date
The last date to drop one-semester courses, without academic penalty, is November 6, 2015**.** For

regulations and procedures for Dropping Courses, see the Academic Calendar:

https://www.uoguelph.ca/registrar/calendars/undergraduate/2015-2016/

Course Learning Outcomes

The Department of Economics and Finance *Learning Outcomes* for this course are:

Skills:

1. ***Written Communication*:** The assignments will provide an opportunity for students to provide a written evaluation of a particular real-world situation that relates to a major decision taken by an investor or a company.

2. ***Numerical Problem Solving*:** Students will learn how to value stocks and bonds, how to measure risk and return, how to design optimal portfolios, and how to solve other numerical problems in asset pricing and corporate finance.

3. ***Analytical Problem Solving*:** Much of the course is about interpreting the theory of asset pricing and corporate finance and making recommendations for individual investors and companies.

4. ***Problem solving in a Real World Context*:** All finance topics taught in this course relate to how investors and companies act in the real world.

5. ***Group Work*:** The case study may be done in groups of students.

6. ***Computer Skills*:** The spreadsheet assignment will involve doing calculations using an Excel spreadsheet.

Knowledge:

1. ***Mathematical methodology*:** We will be using simple mathematical techniques to value stocks and bonds, measure risk and return and build portfolios.

2. ***Statistical and Econometric Methodology*:** We will be using simple distributions and will be computing descriptive statistics to help us understand the probability of certain future outcomes occurring. Distributions are central to assessing the risk-return tradeoff.

3. ***Understanding of Specific Markets*:** This course is devoted to understanding financial markets and in particular the markets for stocks and bonds, although other markets may be considered as well.

4. ***Historical and Global context*:** We will investigate the historical performance of global financial markets.

5. ***Financial Asset Pricing, Corporate Finance, and Risk Analysis*:** This is just a summary of what this course is about.