

**REAL\*2820**  
**REAL ESTATE FINANCE**  
**Winter 2012**

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**Instructor:** Jian Zhou  
Room: 213E, MINS, Ext 56634  
Email: jian@uoguelph.ca  
Office Hours: Mon & Wed 12-1 or by appointment

**Class Times and Location:**

Monday/Wednesday 08:30AM - 09:50AM, MACS Room 121 (Section 1)  
10:00AM - 11:20PM, MACS Room 121 (Section 2)

**Course Description and Objectives:**

This course examines the financing of both residential and commercial investment real estate. A mathematical approach is used to examine the impact of various lender and borrower decisions about loan terms (amortization periods, pre-payment options, etc.). The evolution of the Canadian housing finance system is contrasted with that in the United States. New methods of financing real estate other than traditional mortgages are discussed. The course has the following objectives:

- a) To introduce the concepts of real estate financial analysis at the level of the individual decision unit.
- b) To review the nature, form, and development of financing instruments.
- c) To relate housing financial analysis and instruments to the real estate development process.
- d) To understand the role of government regulation in affecting the financing of real estate.
- e) To contrast the financing of commercial development with that of housing.

**Course Materials and Resources:**

1. Auld, J.W. and J. Londerville, Real Estate Finance (REF), available online through Courselink.
2. In order to do the calculations for this course you need a financial calculator; I use the Texas Instruments TI-BA-II Plus. Any calculator with PV, FV, i%, PMT type keys will do. **YOU SHOULD LEARN TO USE THE CALCULATOR EARLY ON IN THE COURSE. I DO NOT RECOMMEND BUYING A MORE COMPLICATED CALCULATOR.**

**On-Line Communication:**

- This course has a website (see <http://courselink.uoguelph.ca/>). Some important announcements will be posted there. So check this site often.
- The primary way to communicate with the instructor is through email (jian@uoguelph.ca). You can reasonably expect a response within 24 hours (weekends/holidays may take longer).

## Course Philosophy and Approach:

This course is of mathematical nature. We will be using mathematical techniques to evaluate various types of mortgage borrowing and lending decisions. The math involved is primarily simple algebra. If you have concerns about your math skills please see me early.

This is a course for which a standard textbook is not available. Class attendance is important. Our primary method of instruction is lectures, which will be delivered through PowerPoint slides. The night before each class (usually by 9pm), a condensed version of lecture notes will be posted on the course web. You are expected to read it prior to the class and make it a full-version the next day by taking appropriate notes in class. The full-version notes will be the information base you should rely on to prepare for assignments and exams.

## METHOD OF EVALUATION:

	<u>Weight</u>
Assignments (3)	25% (first one-10%; second-8%; third-7%)
Midterm Exam	30%
Final Exam	45%

### Assignments

**THESE ARE TO BE DONE INDIVIDUALLY. GROUP WORK ON ASSIGNMENTS IS CONSIDERED ACADEMIC MISCONDUCT AND WILL BE TREATED AS SUCH. THE PENALTIES FOR THIS CAN BE SEVERE.** Assignments are due at the **beginning** of class on the dates indicated in the course outline. Since assignments are handed out more than a week before the due date, late assignments will NOT BE ACCEPTED. **DO NOT SKIP CLASS TO FINISH THE ASSIGNMENT. Assignments should be submitted stapled in the top left corner, without a folder.**

### Midterm Exam

The midterm exam will cover all material in the course up to and including the class before the test and the format will be discussed prior to the test.

### Final Exam

This exam will cover the entire course, including material from the assignments, all reading material and issues discussed during the lectures. The format will be described in the review class.

## PRELIMINARY READING LIST - SUBJECT TO REVISION

(*REF* refers to Real Estate Finance by Auld and Londerville. It's available online through Courselink)

<b><u>Date:</u></b>	<b><u>Topic and readings</u></b>
Week 1	Introduction to Housing Finance Mortgage mathematics: Discounted cash flow analysis
Week 2	Mortgage mathematics: Effective interest rates, payment calculations, outstanding balances; <i>REF</i> A:4 & A:5 Evaluating other mortgage features: Term, Amortization Period, prepayment options, etc; <i>REF</i> A:11
Week 3	The Lending Decision: Homeowners; <i>REF</i> A:2 & A:3 <b>Assignment 1 handout Monday (Jan. 23)</b> The Lending Decision: Commercial Real Estate; <i>REF</i> A:3
Week 4	The Refinancing Decision; Take up Assignment 1 <b>Assignment 1 due &amp; Assignment 2 handout Wednesday (Feb. 1)</b>
Week 5	Insurance; <i>REF</i> A:9; Taxes (including the new HST); <i>REF</i> A:8
Week 6	<b>Assignment 2 due Monday (Feb. 13)</b> Take up Assignment 2; Review for Midterm exam <b>Midterm Exam Wednesday (Feb. 15)</b>
Week 7	READING WEEK NO CLASSES
Week 8	Take up Midterm exam (tentative) Guest Speaker – Marie Illerbrun, mortgage broker from Dominion Lending Centres
Week 9	Mortgage innovations: GPM, PLAM, & ILM, etc
Week 10	Financial and Tenure Options of Housing for Older Canadians: Reverse Annuity Mortgages, Shared Equity, Life Tenancies, & Sale Plans, etc. <b>Assignment 3 handout Wednesday (Mar. 14)</b>
Week 11	<b>Assignment 3 due Wednesday (Mar. 21)</b> Take up Assignment 3; Development Financing
Week 12	Mortgage-backed securities Subprime mortgage
Week 13	RRSPs and housing Review for final exam