

**THE UNIVERSITY OF WISCONSIN**  
**Department of Real Estate and Urban Land Economics**  
**Fall session - 2014**  
**RE710, Real Estate Finance and Investment**

**Instructor**

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**Course Objective**

This goal's course is to give you the tools you will need to perform well in the advanced real estate classes you will take over the next year and a half of your training. These tools include the terminology of real estate finance, the fundamentals of finance as they apply to real estate analysis, the fundamentals of real estate security analysis, and a primer on simulation techniques.

**Resources**

The main sources of material for this course are my power point slides and my notes, which I make available on my website.

I am also recommending that you avail yourself of the following textbook (hereafter referred to as GM): "Commercial Real Estate Analysis and Investments," D.M. Geltner, N.G. Miller, J. Clayton, P. Eichholtz, Cengage Learning, 2007. The list of topics below tells you which chapters you should read as the course moves along. While doing so is not necessary to do well in my class, you will learn much more if you do the reading than if you don't, and you will see the topics we study in class tackled from a very different perspective from mine.

## Grading

Homework (30%), midterm (30%), comprehensive final (40%).

I encourage you to collaborate with other students on assignments, but each student must turn in his or her own set of answers. In particular, everyone should write their own Excel applications. Assignments are due at the start of lecture on the due date. No late assignment will be accepted, barring a documented emergency or an exception within the University's guidelines.

Students also have the option to turn their lowest homework grade into a 100 by becoming Bloomberg certified. To qualify for this, you will need to produce a certificate of completion of Bloomberg Essentials either in Fixed Income or Equity. Becoming Bloomberg certified takes 5 hours and will pay off handsomely in the rest of your education here and, more importantly, for the rest of your career.

## List of topics and GM readings

1. Preliminaries
  - (a) The question (asset pricing) (GM 8, 9)
  - (b) Real estate assets (GM 7, 20, 23)
  - (c) Example: FRM yield vs. return (GM 16, 17)
  - (d) Theory vs. practice
2. Asset pricing fundamentals
  - (a) Notions of probability (GM 21)
  - (b) Financial economies
  - (c) Classical portfolio theory (GM 21)
  - (d) CAPM (GM 22)
  - (e) Option pricing (GM 27)
  - (f) Modigliani-Miller (GM 13) ...
  - (g) ...and beyond
  - (h) WACC at work
3. Real estate investment analysis

- (a) Cash flow proformas (GM 6, 11)
- (b) Discounted Cash Flow (DCF) approach (GM 10)
- (c) Ratio approach
- (d) Debt and Taxes (GM 13, 14, 15)

#### 4. Mortgages

- (a) Legal framework (GM 16)
- (b) Basic mortgage algebra (GM 17)
- (c) Default and Prepayment risk
- (d) Refinancing
- (e) The underwriting process (GM 18)
- (f) Securitization (GM 20)
- (g) The foreclosure crisis

#### 5. Advanced topics

- (a) Fixed Income methods
- (b) Pricing Credit Default Swaps
- (c) REIT valuation