

The Wharton School, University of Pennsylvania

**Real Estate Finance: Investment and Analysis
Spring 2008, Room F70 JMHH
Professor Fernando Ferreira
Email: fferreir@wharton.upenn.edu**

Office Hours:

Mondays and Wednesdays 4:30pm to 5:00pm, and by appointment, at 1461 SH-DH

Textbook:

Peter Linneman's "Real Estate Finance & Investments: Risks and Opportunities" second edition is the main reference material. The book is a great introduction to the Real Estate topics that we will address in class. Linneman's practical approach and wide coverage make the book an extremely useful resource. The book is available at the Penn Bookstore, and it is on reserve at the Lippincott Library. For the interested student, two additional textbooks are "Commercial Real Estate Analysis and Investments" by Geltner and Miller and "Real Estate Finance and Investments" by Brueggman and Fisher (be aware that both textbooks do not cover a number of topics discussed in this course).

Readings:

A bulk pack is available from Wharton Reprographics. The supplemental readings give you a better understanding of the major issues and trends in the Real Estate industry.

Web Café:

I encourage you to become familiar with the course web page on Wharton's Web Café. All class notes, case materials and case groups will be posted on the page, as well as the latest class announcements.

Non-Wharton students will need to apply for a Wharton account in order to get access to the Web Café. Check out: https://accounts.wharton.upenn.edu/account_user/.

Grading:

The dates and times for all assignments are final, and must be strictly adhered to. Failure to complete any exam or hand in any case on time will result in zero points for that exercise. The course grade ranges from 0 to 100 points and will be based on two midterm exams and three cases. There is no final exam in this course. While I will not explicitly record your attendance in the class, I reserve the right to use superb or sub-par class participation to help decide grades. Sub-par participation includes arriving late to or missing classes. This may contribute up to 10 percent of the final grade.

Exams:

Two midterm exams count for 65 points of the course grade (30 points for the first midterm and 35 points for the second midterm). The second midterm will not be inclusive of the materials in the first midterm, but you are expected to be familiar with the basic concepts. All exams are closed book, closed notes. Exams must be taken at the assigned time. **Make-ups are not given unless you have a Wharton Dean's Office-approved excuse.** For a medical excuse, you must have been admitted to student health

or the hospital, and/or have a doctor's note explaining that you were incapacitated. Finally, written re-grade requests are only accepted if submitted within seven days of my having returned the graded exams in class.

Cases:

The three cases constitute 35 points of your grade (10 points for cases I and II, and 15 points for case III). Cases are group projects and require a variety of skills, from financial savvy to management. Groups will be randomly assigned for the first two cases in an effort to simulate the dynamics of the workplace, in addition to giving you an opportunity to collaborate with a variety of classmates. For the third case you will get to form your own group.

You are responsible to make the team work. If you think a teammate is not working with good faith, or has neglected to finish her/his share of work, you must try hard to work it out within the group. If you still feel aggrieved after the case is done, send me an email with your name, the case, the offending group member and the nature of the problem. If two or more serious complaints are registered against you, 20% will be deducted from your grade.

Cases are due on "case discussion day" at the beginning of class. Bring a hardcopy of the case solution to class - no electronic copies will be accepted.

Each case will also have a strict page limit. Any pages that exceed the page limit will be removed and returned, unread. Collaboration between groups is not allowed. Late cases will not be accepted nor will extensions be given without approval from Wharton Division's Office. On case day attendance is "mandatory". If you choose to miss a case discussion day, 10% will be deducted from your grade.

Guest Lectures: We will have three guest lectures during the semester, all of them at 6pm – see course outline below for exact dates and location. The materials covered by our guests can be used in the exams.

Financial Calculator:

You must have a financial or programmable calculator that can compute annuities, present values and IRR. You are responsible for knowing how to use these functions. If you do not know how to use these tools, it is your responsibility to obtain these skills. You will need the calculator to take the exams.

TAs:

There will be TAs who will grade the cases and hold office hours before the cases are due.

Course Outline

- January 16: Introduction:
Linneman, chapter 1
Zell, “Real Estate: Past Present and Future”
“Emerging Trends in Real Estate 2007”
- January 23: Real Estate Market Fundamentals:
Linneman, chapter 2
- January 28: Leases:
Linneman, chapter 3
Rybczynski “The Changing Design of Shopping Places”
Linneman and Moy “The Evolution of Retailing in the United States”
Gould, Pashigian, and Prendergast “Contracts, Externalities, and Incentives in Shopping Malls”
- January 30: Pro Forma Tools:
Linneman, chapter 4 and pre-requisites I and II
Vernon Martin III “Nine Abuses in Pro Forma Cash Flow Projections”
- February 4: Cap Rates and Risk:
Linneman, chapters 5 and 7
- February 6: Introduction to Debt and Mortgages:
Linneman, chapters 11, 12 and pre-requisite III
- February 11: Mortgages II.
- February 13: Taxes and Real Estate:
Linneman, chapter 4
- February 18: Case #1 discussion - TBA.
- February 20: Cycles:
Linneman, chapter 20
- February 25: No Class.
- February 26 (**Tuesday, 6pm**): *Guest Lecture: Prof. Peter Linneman, The Wharton School, University of Pennsylvania*
- February 27: Housing Bubbles and Price Dynamics:
Mayer and Sinai “Bubble Trouble? Not Likely”
- March 3: First midterm exam.
- March 5: No Class.
- March 10 and 12: Spring Break.

- March 17: Development and Case # 2 initial discussion:
Linneman, chapters 8 and 9
Terwilliger “Developer: Villain or Hero”
Gyourko and Rybczynski “Financing New Urbanism”
- March 19: Lenders and Debt Structures:
Linneman, chapter 13
- March 24: Case #2 final discussion - TBA
- March: 26: Introduction to CMBS:
Linneman, chapter 14
Riddough “Determinants of Commercial Mortgage Choice”
- March 31: CMBS Risks:
Linneman, supplemental II
Poindexter “Defaults in Securitized Real Estate Loans”
- April 1: (**Tuesday, 6pm**) *Guest Lecture: Ivan Kaufman, CEO and President, Arbor Realty Trust*
- April 2: No Class.
- April 7: REITs:
Linneman, chapters 10, 16 and 18.
REITs: Nuts and Bolts – Primer #1, Merrill Lynch
Zell “Liquid Real Estate”
Crocker “Inside the Revolution”
Gyourko and Sinai “REITs and Taxes”
Linneman “The Forces Changing Real Estate Forever: Five Years Later”
Winograd “The Five Overlooked Features of the Real Estate Capital Markets”
Rosen “REITs as an Alternative Investment in Volatile Financial Markets”
- April 9: Corporate Ownership:
Linneman, chapters 19 and 15
Deng and Gyourko “Real Estate Ownership by Non-Real Estate Firms”
- April 14: Case III presentations (double duty day!).
- April 14: (**Monday, 6pm**) *Guest Lecture: Edward Glickman, President and CEO, PREIT*
- April 16: Case III presentations.
- April 21: No Class.
- April 23: Housing Markets and the Rent/Own Decision.
- April 28: Second midterm exam.