

**The Wharton School, University of Pennsylvania**  
**REAL/FNCE 721-405 Real Estate Finance: Investment and Analysis**  
**Spring 2014, JMHH F45, MW 3-4:30pm**  
**Professor Fernando Ferreira**  
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Introduction:

This course provides a broad introduction to real estate markets. Value of land, real estate prices, basic project evaluation, financing strategies, and capital markets issues related to real estate are covered. No prior knowledge of the industry is required, but students are expected to rapidly acquire a working knowledge of real estate markets. Classes are conducted in a standard lecture format with discussion encouraged. The course contains cases that help students evaluate the impact of more complex financing and capital markets tools used in real estate.

Office Hours:

From 4:30pm to 5pm on Mondays and Wednesdays, at 1466 SH-DH, or by appointment. The complete schedule of TA office hours will be posted on Canvas, and it will be updated periodically.

Textbook:

*“Real Estate Finance & Investments: Risks and Opportunities”*, edition 3.1, by Peter Linneman, is the main reference material and I strongly advise you to purchase a copy. 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 these textbooks do not cover a number of topics discussed in this course).

Readings:

Supplemental readings will be posted on Canvas during the semester, to give you a better understanding of the major issues and trends in the Real Estate industry. There is no bulkpack for this course.

Canvas:

I encourage you to become familiar with the course web page on Canvas. All class notes, supplemental readings, case materials, case groups, and TA office hours will be posted on the page.

**Non-Wharton students** will need to apply for a Wharton account in order to get access to the Canvas.

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 70 points of the course grade (35 points for the first midterm and 35 points for the second midterm). The second midterm will not be inclusive of the material tested on the first midterm, but you are expected to be familiar with the basic concepts. You are allowed to use a financial calculator during the exam. You are also allowed to use one 8.5 x 11" note sheet (double-sided). Exams must be taken in class, in the same time and location of regular lectures.

**Make-ups are not given without 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. Re-graded exams can change your grade up or down.

*Cases:*

The three cases constitute 30 points of your grade (10 points each for case). Cases are group projects and require a variety of skills, from financial savvy to management. You will get to form your own group, and you are also allowed to form groups with students from my other sections (provide that I am teaching more than one section this semester!). Groups can have 3, 4 or 5 members. No exceptions allowed.

Cases are due on "case discussion day" at 1:30pm. Use Canvas to upload an electronic copy of your case before that deadline. Online submissions are automatically locked at 1:30pm, so do not wait until the last minute to turn in your case.

Each case will also have a strict page limit. Any pages that exceed the page limit will be removed and returned, unread and ungraded. 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 discussion day," attendance is mandatory. If you choose to miss a case discussion day, 10% will be deducted from your grade in that case.

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, the nature of the problem, and steps you have taken to mitigate the problem. If two or more serious complaints are registered against you by your group members, 20% will be deducted from your grade.

*Class Participation:*

Below is a set of concert rules that I expect you to follow, and that will count as part of the grade assigned to class participation:

- Arrive on time for class;

- Always display name tents; always!
- No laptops allowed. Ipads are OK for taking notes only;
- Turn off cell phones;
- Be prepared to be “cold-called” - I expect that you will be ready to answer every question in a manner that demonstrates serious thought on your part; you should also ask questions;
- Most importantly: Respect your fellow students’ desire to learn.

Guest Lectures:

We will have three special guest lecturers during the semester - see course outline below for exact times, dates and location. The materials covered by our guests may be tested on the exams. Attendance is required; students with conflicting schedules should email me in advance, so that we can record the guest lecture.

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.

**Course Outline – See Canvas for Updates**

- January 15: Introduction:  
Linneman, chapters 1 and 2  
Zell, “Real Estate: Past Present and Future”  
“Emerging Trends in Real Estate 2014”
- January 22: Leases and Fundamentals:  
Linneman, chapter 3  
Rybczynski “The Changing Design of Shopping Places”  
Linneman and Moy “The Evolution of Retailing in the United States”
- January 27: Pro Forma Tools:  
Linneman, chapter 4 and pre-requisites I and II  
Vernon Martin III “Nine Abuses in Pro Forma Cash Flow Projections”
- January 29: Cap Rates and Risk:  
Linneman, chapters 5 and 7
- February 3: Introduction to Debt and Mortgages:  
Linneman, chapters 12, 13 and pre-requisite III
- February 5: Mortgages II
- February 10: Taxes and Real Estate:  
Linneman, chapter 4
- February 12: Commercial Real Estate Cycles:  
Linneman, chapter 20  
Lawrence Smith “Adjustment Mechanisms in Real Estate Markets”
- February 17: Case #1 discussion
- February 19: More on Cycles
- February 24: **(6pm at SH-DH 350): Guest Lecture: Jeffrey S. Olson, CEO, Equity One**
- February 26: Housing Busts, Price Dynamics, and Household Mobility  
Ferreira and Gyourko “Anatomy of the Beginning of the Housing Boom”  
Ferreira, Gyourko, and Tracy “Housing Busts and Household Mobility”
- March 3: More on Housing
- March 5: First midterm exam
- March 10: Spring Break starts

- March 17: Development:  
Linneman, chapters 8 and 9  
Terwilliger “Developer: Villain or Hero”  
Gyourko and Summers “Residential Land-Use Regulation in the Philadelphia MSA”
- March 19: Lenders and Debt Structures:  
Linneman, chapter 15
- March 24: No class – see tomorrow’s guest speaker
- March 25: **(6pm at SH-DH 350)** *Guest Lecture: Gerald Ronon, President and COO of Lubert-Adler*
- March 26: Case #2 discussion
- March 31: Introduction to CMBS:  
Linneman, chapter 14  
Riddough “Determinants of Commercial Mortgage Choice”
- April 2: CMBS Risks:  
Linneman, supplemental II  
Poindexter “Defaults in Securitized Real Estate Loans”  
Nomura “The CMBX: the Future is Here”
- April 7: REITs:  
Linneman, chapters 10 and 18  
REITs: Nuts and Bolts – Primer #1, Merrill Lynch  
Zell “Liquid Real Estate”  
Crocker “Inside the Revolution”
- April 8: **(6pm at SH-DH 350)** *Guest Lecture: Stephen Plavin, CEO, President and Director, Blackstone Mortgage Trust*
- April 9: More on REITs
- April 14: No Class – see guest lecture on April 8
- April 16: Case #3 presentations, first day
- April 21: Case #3 presentations, second day
- April 23: The Rent/Own Decision for Housing and Commercial Properties:  
Linneman, chapters 16 and 19  
Deng and Gyourko “Real Estate Ownership by Non-Real Estate Firms”
- April 28: More on Rent/Own Decision
- April 30: Second midterm exam