

The Wharton School, University of Pennsylvania
REAL/FNCE 721-406 Real Estate Finance: Investment and Analysis
Spring 2016, JMHH 360, MW 1:30-3:00pm
Professor Fernando Ferreira
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Introduction:

This course provides a broad introduction to real estate markets. Value of land, real estate prices, project evaluation, financing strategies, and capital markets issues related to real estate are covered. No prior experience with the real estate 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 3:00pm to 4pm 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”, (any edition), 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).

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.

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.

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 60 points of the course grade (30 points each). 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 40 points of your grade (13 points for 1st and 2nd cases, and 14 for 3rd 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 therefore you are responsible to make the team work!). You are also allowed to form groups with students from my other sections, provided that I am teaching more than one section this semester. You can also change groups during the semester. Groups can have 2, 3, 4 or 5 members. No exceptions allowed.

Cases are due on "case discussion day" at 1:30pm. Each group should turn in one hard copy of the case on discussion day.

Attendance is "mandatory" on case discussion day: 10% of your grade in that case will be deducted if you choose to miss a case discussion (because of other issues, such as weddings, family trips, job interviews, etc.).

Each case will also have a strict page limit. Any pages that exceed the page limit will be removed and returned, unread and ungraded. Groups cannot collaborate with each other. Late cases will not be accepted nor will extensions be given without approval from Wharton Division's Office.

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. I pads are OK for taking notes only;
- Turn off cell phones;
- Be prepared to be "cold-called"; 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 IRRs. 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 13: Introduction:
Linneman, chapters 1 and 2
Zell, “Real Estate: Past Present and Future”
“Emerging Trends in Real Estate 2016”
- January 20: 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 25: Pro Forma Tools:
Linneman, chapter 4 and pre-requisites I and II
Vernon Martin III “Nine Abuses in Pro Forma Cash Flow Projections”
- January 27: Cap Rates and Risk:
Linneman, chapters 5 and 7
- February 1: Introduction to Debt and Mortgages:
Linneman, chapters 12, 13 and pre-requisite III
- February 3: Mortgages II
- February 8: Taxes and Real Estate:
Linneman, chapter 4
- February 10: Case #1 discussion
- February 15: **(6pm at TBA): Riggs Kubiak, CEO, Honest Buildings**
- February 17: Commercial Real Estate Cycles:
Linneman, chapter 20
Lawrence Smith “Adjustment Mechanisms in Real Estate Markets”
- February 22: 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”
- February 24: More on Housing
- February 29: First midterm exam
- March 2: No class

- March 14: Development:
Linneman, chapters 8 and 9
Terwilliger “Developer: Villain or Hero”
Gyourko and Summers “Residential Land-Use Regulation in the Philadelphia MSA”
- March 16: Lenders and Debt Structures:
Linneman, chapter 15
- March 21: Introduction to CMBS:
Linneman, chapter 14
Riddough “Determinants of Commercial Mortgage Choice”
- March 23: Case #2 discussion
- March 28: CMBS Risks:
Linneman, supplemental II
Poindexter “Defaults in Securitized Real Estate Loans”
Nomura “The CMBX: the Future is Here”
- March 30: **(6pm at TBA)** *Adam Gallistel, Managing Director and Deputy Regional Head for the Americas, GIC Real Estate*
- April 4: Double duty day: REITs + **(6pm at TBA)** *Bruce Gamble, Managing Director of Global Construction, Navigant*
Linneman, chapters 10 and 18
REITs: Nuts and Bolts – Primer #1, Merrill Lynch
Zell “Liquid Real Estate”
Crocker “Inside the Revolution”
- April 6: More on REITs
- April 11: Case #3 presentations, first day
- April 13: Case #3 presentations, second day
- April 18: 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 20: More on Rent/Own Decision
- April 25: Second midterm exam
- April 27: No class (see guest lecture on April 4)