

The Wharton School, University of Pennsylvania
REAL/FNCE 721 Real Estate Finance: Investment and Analysis
Fall 2017, JMHH F50, MW 1:30pm and 3pm
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Introduction:

This course provides a broad introduction to real estate markets. Value of real estate, 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 concepts. Classes are conducted in a standard lecture format with discussions 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:

Fridays, from 1pm to 2:30pm 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”, by Peter Linneman, is the main reference material and I strongly advise you to purchase a copy (any edition works but the schedule assignment below is based on the most recent 3.1 edition). The book is a great introduction to the Real Estate topics that we will address in class, 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. But be aware that both these textbooks do not cover a number of topics discussed in class.

Canvas:

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

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

Readings:

Please read the assigned book chapters before coming to class. I also regularly post on Canvas several online articles that supplement the book chapters and give you a better understanding of recent issues and trends in the Real Estate industry. There is no bulkpack for this course.

Grading:

The dates and times of 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 midterms, three cases, and class participation. There is no final exam in this course.

Exams:

Two midterm exams count for 54 points of the course grade (27 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 the regular lectures.

Make-ups are not given without a formal approval of the MBA Program Office. 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 36 points of your grade (12 points for each 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". Each group should turn in one hard copy of the case that day. Attendance is "mandatory" in the sense that 10% of your grade in that case will be deducted if you choose to miss a case discussion (because of any reason, such as family trips, job interviews, etc.). Late cases will not be accepted nor will extensions be given without approval from Wharton MBA Program Office.

Class Participation:

Class participation accounts for 10 points of your grade. I will explicitly record your attendance in the class. You should also choose a seat during the first week of classes, and use that seat during the whole semester. I also reserve the right to use superb or sub-par class participation to adjust the class participation grade. Sub-par participation includes not following any of the concert rules below:

- 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;
- 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. While 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 financial calculator to take the exams.

Course Outline – See Canvas for online articles and updates

- August 30: Introduction
Linneman, chapter 1: “Introduction: Risks and Opportunities”
Linneman, chapter 2: “What is Real Estate?”
- September 4: No class (Labor Day)
- September 6: Leases and Fundamentals
Linneman, chapter 3: “The Fundamentals of Commercial Leases”
- September 11: Pro Forma Tools
Linneman, chapter 4: “Property Level Pro Forma Analysis”
Linneman, pre-requisite I: “The Basics of Discounted Cash Flow and Net Present Value Analyses”
Linneman, pre-requisite II: “IRR: What It Is and What It Isn’t”
Linneman, supplemental IV: “ARGUS Financial Software”
- September 13: Valuation and Risks
Linneman, chapter 5: “Financial Modelling”
Linneman, chapter 6: “Real Estate Due Diligence Analysis”
Linneman, chapter 7: “The Use and Selection of Cap Rates”
- September 18: More on Valuation and Risks
- September 20: Mortgages
Linneman, chapter 12: “Should You Borrow?”
Linneman, chapter 13: “The Use of Debt and Mortgages”
Linneman pre-requisite III: “Amortization Fundamentals”
- September 25: More on Mortgages
- September 25: **Special guest lecture with Sam Zell, Chairman of Equity Group Investments, at 6pm at TBA**
- September 27: Taxes and Real Estate:
Linneman, chapter 4: p. 53-56 and p. 58-62.

- October 2: No class (see guest lecture on September 25)
- October 4: Case #1 discussion
- October 9: Commercial Real Estate Cycles
Linneman, chapter 20: "Real Estate Cycles"
- October 10 (Tuesday): **Special guest lecture with Alfonso Munk, CIO Americas, PGIM Real Estate, at 6pm at TBA**
- October 11: More on Cycles
- October 16: First midterm exam
- October 18: Development
Linneman, chapter 8: "Development Pro Forma Analysis"
Linneman, chapter 9: "Development Feasibility Analysis"
- October 23: Housing Booms and Busts
- October 25: No class (see guest lecture on October 10)
- October 27 (Friday): Zell-Lurie Fall Meeting (not required but highly recommended)
- October 30: Case #2 discussion
- November 1: Lenders and Alternative Debt Structures
Linneman, chapter 11: "Real Estate Bankruptcy Basics"
Linneman, chapter 12, p. 210-212
Linneman, chapter 15 "Ground Leases as a Source of Finance"
- November 6: CMBS
Linneman, chapter 14: "Commercial Mortgage Backed Securities"
Linneman, supplemental II: "A Look at a Real CMBS Issue"
- November 7 (Tuesday): **Special guest lecture with TBA**

November 8: More on CMBS

November 13: REITs

Linneman, chapter 10: "Real Estate Company Analysis"

Linneman, chapter 16: "Real Estate Exit Strategies"

Linneman, chapter 18: "REITs and Liquid Real Estate"

November 15: Case #3 discussion

November 20: No class (see guest lecture on November 7)

November 22: No class (Thanksgiving)

November 27: More on REITs

November 29: Rent/Own Decision for Commercial Properties

Linneman, 19: "Corporate Real Estate Decision Making"

December 4 Rent/Own Decision for Housing

December 6: Second midterm exam

December 11: Wrap up

Linneman, 21: "There Are a Lot of Right Ways to Do It"

Linneman, supplemental III: "Careers in Real Estate"