

**Real Estate Finance: Investment and Analysis**  
**REAL/FNCE 209**  
**Fall 2018, at JMHH 370, MW 1:30pm**

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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:

Thursdays, from noon to 1:30pm at 1466 SH-DH, unless otherwise noted in the updated Canvas calendar. You can also schedule OH 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 edition 3.1). 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 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 the regular lectures. **Make-ups are not given without a formal approval of the Wharton Undergraduate 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.

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. See more details at the end of this syllabus.

*Cases:*

The three cases constitute 30 points of your grade (10 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 should feel free to change groups during the semester. Groups can have 2, 3, or 4 members. No exceptions allowed. Each group should turn in one hard copy of the case at "case discussion 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 Undergraduate Office.

It is your responsibility to make sure your entire team prepares the cases independently. Violations by any team member will result in the entire team getting a zero on the assignment. You may verbally discuss the cases with other students who are currently enrolled in FNCE/REAL 209. Each group must separately prepare their own case materials and write-ups without reference to anyone else's case materials or write-ups. You may not obtain assistance from former students, current or past employees of firms involved with the cases. You may not share your written materials or Excel with anyone at any point.

Violations of these rules will be treated as violations of Penn's Code of Academic Integrity. I do not distinguish between the plagiarizer – the team using other's materials – and the provider of the materials. Do not circulate your solutions to the cases. If I find your case to be the source of plagiarized material, I will report the violation and do my best to retroactively change your grade.

*Class Participation:*

Class participation accounts for 10 points of your grade. I will explicitly record your attendance in the class using the Wharton Connect App. Arriving 10 or more minutes late for class is treated as an absence. You are allowed to have 2 free absences per semester. Other absences will only be excused if also officially approved by the Wharton Undergraduate Office. 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:

- Always display name tents
- Turn off cell phones (right after using the Wharton Connect App!)
- No laptops allowed; Ipads are OK for taking notes only
- Be prepared to be “cold-called”
- You should also ask questions
- Respect your fellow students’ desire to learn.

You should also choose a seat during the first week of classes, and use that seat during the whole semester.

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.

Copyrights:

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**Course Outline – See Canvas for online articles and updates**

- August 28: Introduction  
Linneman, chapter 1: “Introduction: Risks and Opportunities”  
Linneman, chapter 2: “What is Real Estate?”
- September 3: No class (Labor Day)
- September 5: Leases and Fundamentals  
Linneman, chapter 3: “The Fundamentals of Commercial Leases”
- September 10: 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 12: 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 17: More on Valuation and Risks
- September 19: Mortgages  
Linneman, chapter 12: “Should You Borrow?”  
Linneman, chapter 13: “The Use of Debt and Mortgages”  
Linneman pre-requisite III: “Amortization Fundamentals”
- September 24: More on Mortgages
- September 26: Taxes and Real Estate:  
Linneman, chapter 4: p. 53-56 and p. 58-62.
- September 26: **Special guest lecture with Brandon Weber, Co-Founder and CPO, VTS, at JMHH G06 auditorium, 4:30-5:30pm.**

October 1: No class (see guest lecture on September 26)

**October 3: Case #1 discussion**

October 8: Commercial Real Estate Cycles  
Linneman, chapter 20: "Real Estate Cycles"

October 9 (Tuesday): **Special guest lecture with Ronald Kravit, Co-Head North American Real Estate, Cerberus Capital Management, at SH-DH 350, 4:30-5:30pm.**

October 10: More on Cycles

**October 15: First midterm exam**

October 17: Development  
Linneman, chapter 8: "Development Pro Forma Analysis"  
Linneman, chapter 9: "Development Feasibility Analysis"

October 22: 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"

October 24: No class (see guest lecture on October 9)

**October 29: Case #2 discussion**

October 31: CMBS  
Linneman, chapter 14: "Commercial Mortgage Backed Securities"  
Linneman, supplemental II: "A Look at a Real CMBS Issue"

November 5: More on CMBS

November 7: REITs  
Linneman, chapter 10: "Real Estate Company Analysis"  
Linneman, chapter 16: "Real Estate Exit Strategies"

Linneman, chapter 18: “REITs and Liquid Real Estate”

November 7: **Special guest lecture with Nick Kittredge, President of East Region, Prologis, at SH-DH 350, 4:30-5:30pm.**

November 12: More on REITs

**November 14: Case #3 discussion**

November 19: No class (see guest lecture on November 7)

November 21: No class (Thanksgiving)

November 26: Rent/Own Decision for Commercial Properties  
Linneman, 19: “Corporate Real Estate Decision Making”

November 28 Rent/Own Decision for Housing

December 3: Housing Booms and Busts

**December 5: Second midterm exam**

December 10: Wrap up  
Linneman, 21: “There Are a Lot of Right Ways to Do It”  
Linneman, supplemental III: “Careers in Real Estate”

## Regrade Policy

I strive for accuracy and equity in the grading for this class. However, despite our best efforts, grading is sometimes imperfect and the onus for bringing any errors to my attention falls upon you.

The following set of rules provides a mechanism for requesting regrades to correct grading errors. If you do not follow these rules, you will forfeit your right to a regrade. The rules are designed to maintain fairness by not rewarding gratuitous regrade requests while also not penalizing students for bringing errors to my attention.

To submit a regrade request:

- 1) Please *type* up a cover letter with a bullet point outline of:
  - a. The question involved
  - b. The points requested
  - c. A substantive explanation of the request
- 2) Submit the cover letter along with the assignment to me in person or put it in the box outside my office (1466 SHDH)
- 3) Email me to inform that you have dropped off your midterm request

### *General policies:*

- 1) Regrade requests will be accepted for ***1 week*** following the return of an assignment.
- 2) If you request a regrade, the entire assignment will be reviewed. Errors tend to be random and offset each other. It would be unfair to the rest of the class to correct only the grading errors that went against you but not the ones in your favor.
- 3) Do not submit regrade requests by email only.
- 4) Under no circumstances will I consider regrade requests that allege that the grading guidelines are unfair. The guidelines are applied equally to everyone, thus are equitable.
- 5) Under no circumstances will I go over the grading of your assignment in “real time,” with no forewarning.