

**Real Estate Investments | Real Estate 209 and Finance 209  
The Wharton School | University of Pennsylvania | Fall 2013**

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& By Appointment

**Teaching Assistants**

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**Course Objectives**

Real estate is a multi-faceted field, encompassing both an operating industry and a broad category of equity and debt investments. It has its own institutional features and investment structures. As the foundation course for undergraduate students with a concentration in real estate, this class offers an overview of the industry rather than a narrow focus on a particular topic. Beyond that overview, the overriding goal of the course is to ensure fluency in the technical skills required for real estate financial analysis. These skills are essential to upper-level real estate courses and for the analyst role in the real estate industry.

**Prerequisites**

Finance 100 and Statistics 101 are strict prerequisites for enrollment. By extension, Economics 10, 001, or 002 and Mathematics 104 are also prerequisites. Subject to available space in the class, waivers will only be granted for Penn Design and Penn Law students with the permission of their advisor. The curriculum assumes no prior experience in the fields of real estate or finance.

**Course Materials**

**Required Textbook**

- » Linneman, Peter, Real Estate Finance and Investments, 3<sup>rd</sup> Edition. Note that because of significant updates, the Second Edition is **not** an effective substitute for the more recent text.

**Optional and Reference Texts Available in Print and Electronic Editions or on Reserve at Lippincott**

- » Brueggeman and Fisher, Real Estate Finance and Investments, 14<sup>th</sup> Edition
- » Geltner and Miller, Commercial Real Estate Analysis and Investments, 3<sup>rd</sup> Edition

**Other Material**

- » PowerPoint slides, additional readings, and problem sets are available through Canvas and Study.net.

**Case Studies**

Two cases will be distributed in class according to the syllabus schedule. You may choose your own group of four to six members and must work with the same team on both cases. Groups may include members from both sections. No changes to group membership will be permitted after the first case is submitted.

The cases require a variety of skills, from financial acumen to critical problem solving. You should seek a mix of talents and backgrounds on your team. All team members should work on both cases. A “divide and conquer” approach where two or three teammates work on each case will impinge on your individual preparedness for the examinations.

You may discuss the cases with other groups. However, each group is responsible for preparing case submissions independently. Since cases will be discussed on the dates they are due, late cases will not be accepted nor will extensions be granted. You may complete the cases ahead of schedule if you anticipate a conflict on the due date.

## Examinations

Two exams will be administered during regularly scheduled class time. If you cannot attend class on one of the exam dates, please do not enroll in the class. Make-up exams will not be administered except at the request of the Undergraduate Vice Dean's office. Notes from Student Health should be taken to the Vice Dean's office for endorsement by your advisor.

The second examination assumes proficiency in skills taught in the first part of the class. Exams will cover material discussed in class and during guest lectures, from class notes, the aforementioned two cases, practice problems, and assigned readings.

The exams are closed book, but you are allowed **one single-sided letter-size page** of notes into each exam.

**You will need a financial calculator for the exams.** You will not be allowed to use a computer, iPad or other tablet device, or iPhone or other smartphone in lieu of a calculator. Business and financial calculator emulator apps may not be substituted for a financial calculator. If you do not have your own financial calculator, it is your responsibility to make arrangements for access to a calculator for the exams.

## Class Format, Participation, and Expectations

- » Be present for all classes, unless you have made prior arrangements with me. Students missing a session are responsible for obtaining notes and other materials from their classmates.
- » Arrive at class on time and prepared to participate in the discussion. This means having completed the required readings **in advance** of the lecture and being ready to comment on or discuss the class material.
- » Your full attention is expected during class; you are expected to set aside non-class material and messaging.
- » Be present for speakers scheduled outside of normal class time, unless you have a conflict with another class or have spoken with me in advance about an unresolvable non-academic conflict.
- » Please refer to the Wharton Undergraduate Program's Policy on Secular & Religious Holidays for information specifically relating to absences on account of religious observance.

## Academic Integrity

The University's Code of Academic Integrity applies to all aspects of the course. Without exception, violations of the Code will result in a failing grade and referral to the Office of Student Conduct.

## Grading

Examination 1	20%
Examination 2	25%
Case 1	25%
Case 2	25%
Class Participation	5%

Subsuming a specific distribution, the mean grade point average for the class is 3.3. You must pass both exams and both cases in order to receive a passing grade for the course. Frequent or unexplained absences from class will result in a failing grade. Please refer to the Wharton Undergraduate Program's Policies: Class Expectations.

## Re-Grade Requests

In the event you believe there has been an error in the determination of your score on a case or exam:

- » You have two weeks from the date a graded exam or case is returned to submit a re-grade request.
- » Re-grade requests and requests for elaboration on point deductions will not be accepted over email. Please prepare a typed note explaining clearly the error you believe has been made, attach your exam or case to the note, and submit the request to my mailbox in the Real Estate Department office.
- » Exams or cases submitted for re-grading will be re-graded in their entirety.

## Schedule

Readings shown on the syllabus are in addition to the slide deck for each class, exercises and problem sets, and any supplementary material posted to Canvas. Readings are available in (L)inneman (C)anvas or (S)tudy.net as indicated. Chapters from Linneman are indicated as (L: chapter).

Week	Class	Date	Topic
0	1	August 29	<b>No Class</b>
1	2	September 3	<b>The Commercial Real Estate Asset Class</b> Emerging Trends in Real Estate 2013 (C) What is Real Estate (L:2)
	3	September 5	<b>Space Markets – Demand</b> Markets for Real Estate Assets and Space (S) Understanding Commercial Real Estate: Just How Different from Housing Is It? (C)
2	4	September 10	<b>Space Markets – Leases</b> Fundamentals of Commercial Leases (L:3)
	5	September 12	<b>Pro Forma Analysis – Modeling Revenue</b> Property Level Pro Forma Analysis (L:4) Financial Modeling (L:5)
3	6	September 17	<b>Pro Forma Analysis – Modeling Expenses</b> Ground Leases as a Source of Finance (L:15) Nine Common Abuses in Pro Forma Cash Flow Projections (S)
	7	September 19	<b>Pro Forma Analysis – Discounted Cash Flow</b> Basics of Discounted Cash Flow and Net Present Value Analysis (L:PI)
4	8	September 24	<b>Asset Markets – Valuation</b> Real Estate Market Fundamentals and Asset Pricing (S) How Reliable are Commercial Appraisals? Another Look (S)
	9	September 26	<b>Asset Markets – Valuation</b> Capital Markets Impact on Commercial Real Estate Cap Rates: A Practitioner's View (S) The Secular and Cyclic Determinants of Capitalization Rates (S)
5	10	October 1	<b>Development – Supply of Space</b> Adjustment Mechanisms in Real Estate Markets (S) Development Pro Forma Analysis (L:8) Development Feasibility Analysis (L:9)
	11	October 3	<b>Development – Supply of Space</b> Readings Continued from Class 10
		October 3	<b>Case I, Part I Due by 10:30</b>

6	12	October 8	No Class / Sam Zell Speaking Date TBA
		October 10	<b>Fall Break</b>
7	13	October 15	<b>Debt Markets</b> Should You Borrow (L:12) The Use of Debt and Mortgages (L:13) Guide to Real Estate Capital Markets (S)
	14	October 17	<b>Debt Markets – Mortgage Math</b> Amortization Fundamentals (L:PIII)
		October 17	<b>Case I, Part II Due by 10:30</b>
8	15	October 22	<b>Debt Markets – Credit Risk</b> Term Default, Balloon Risk, and Credit Risk in Commercial Mortgages (C) Commercial Mortgage Defaults 1972-2011 (C)
	16	October 24	<b>Examination I</b>
9	17	October 29	<b>Real Estate Investment Trusts (REITs)</b> REITs and Liquid Real Estate (L:18) Basic Valuation of a Real Estate Investment Trust (S)
	18	October 31	<b>Real Estate Investment Trusts (REITs)</b> UPREITs: A Vehicle for Tax Deferral and Asset Growth (S)
10	19	November 5	<b>Commercial Mortgage-Backed Securities (CMBS)</b> CMBS Basics (L:14) How to Build a Bond (S) The Past, Present, and Future of CMBS (S)
	20	November 7	<b>Commercial Mortgage-Backed Securities (CMBS)</b> A Look at a Real CMBS Issue (L:SI1) Defaults in Securitized Real Estate Loans (S)
11	21	November 12	<b>Investment Structures</b> Real Estate Private Equity Funds (L:17)
	22	November 14	<b>Investment Returns and the Real Estate Cycle</b> Internal Rate of Return: What It Is and Isn't (L:PII) Return Characteristics of Commercial Real Estate (L:SI) Real Estate Cycles (L:20) Booms and Busts in Real Estate Markets (C)
12	23	November 19	<b>Corporate Real Estate</b> Corporate Real Estate Decision Making (L:19)
	Supplementary	November 20	Schlager Lecture – Keith Gelb
	24	November 21	Review for Examination II
13	25	November 26	<b>Examination II</b>
		November 28	<b>Thanksgiving Break</b>
14	27	December 3	<b>The Real Estate Portfolio</b> Is Beta Risk Becoming More Important in Real Estate Markets (C)
	28	December 5	<b>Current Issues in Real Estate</b> Is the FHA the Next Housing Bailout (C)
		December 5	<b>Case II Due by 10:30</b>
15	29	December 10	Last Day of Class Case II Group Presentations