

**Real Estate Finance and Investment Analysis | Real Estate 209 and Finance 209**  
**The Wharton School of the University of Pennsylvania | Fall 2012 | As of September 11 2012**

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### Teaching Assistants

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Please see Canvas for TA office hour schedules and locations

### Course Objectives

Real estate is a multi-faceted field, encompassing both an operating industry and a broad category of 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. The curriculum assumes no prior real estate experience. If you have prior experience in the industry, some topics will be familiar to you.

### Course Materials

**Required Textbook:** Linneman, Peter, Real Estate Finance and Investments, 3<sup>rd</sup> Edition. Note that because of significant updates, the 2<sup>nd</sup> Edition is not an effective substitute for the more recent version.

**Optional or Reference Text:** Brueggeman and Fisher, Real Estate Finance and Investments, 14<sup>th</sup> Edition

**PowerPoint Slides and Required Readings** are available through Canvas and Study.net.

**Calculator** You must have a financial calculator capable of evaluating annuities and present values. You are also responsible for knowing how to use these functions.

### Cases

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. If you cannot find a group, you may request an assignment. 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 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 are welcome to complete the cases ahead of schedule if you anticipate a conflict on the due date.

### **Midterm Examinations**

**Two midterm exams will be administered during regularly scheduled class time.** Exams must be taken at the assigned time. Make-up exams will not be administered except at the request of the undergraduate dean's office.

The second examination is not cumulative in content but assumes proficiency in skills taught in the first part of the class. Exams will cover material discussed in class and during guest lectures, class notes, the aforementioned cases, practice problems, and assigned readings.

The exams are closed book, but you are allowed **one single-sided 8.5" x 11"** 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.

### **Class Format, Participation, and Expectations**

Classes involve a highly interactive balance of lecture, discussion, problem review, and guest speakers.

Be prepared for class. This means having completed the required readings in advance of the lecture and being ready to comment on or discuss the class material.

Participate in class discussions, and speak up if you have questions.

Be present for all classes, unless you have made prior arrangements with me. Students missing a session are expected to obtain notes and other materials from their classmates.

Please refer to the Wharton Undergraduate Program's Policy on Secular & Religious Holidays for information specifically relating to absences on account of religious observance.

Be present for speakers scheduled outside of normal class time, unless you have a conflict with another class or fixed obligation.

You will not find every topic we cover to be of interest to you, but I expect that you will be a good sport about it. Students who are considering a career in real estate development, for example, are often interested in very different issues than students who are considering a career on Wall Street. All the topics we will cover are of interest to someone in the class, but few are of interest to everyone.

### **Classroom Etiquette**

Please arrive on time and be ready to devote your full attention for the duration of the class.

You may use a laptop or tablet, but only to take class notes. **This privilege will be suspended if it is abused.**

iPhones, smartphones, and other communication devices may not be used during class time.

### **Grading**

The course grade will be based on the two equally weighted midterm examinations and the two equally weighted cases. Each exam and case is 25 percent of your final grade. You must pass both exams and both cases in order to receive a passing grade for the course.

Though class participation is not an explicit component of the grading scheme, frequent absences will result in a failing grade. Please refer to the Wharton Undergraduate Program's *Policies: Class Expectations*.

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.

## Real Estate Finance and Investment Analysis 209 | Fall 2012 | Chandan | Course Calendar

Please note that additional readings will be assigned and posted to Canvas.

CLASS	DATE	TOPIC	REQUIRED READING
1	Th Sept 6	Overview Introduction to Real Estate Markets	Reading: Emerging Trends in Real Estate 2012 Linneman C1: Introduction Linneman C2: What is Real Estate (Except Supplement A)
2	Tu Sept 11	Cash Flow: Revenue and Expenses	Linneman C3: The Fundamentals of Commercial Leases Linneman C4: Property Level Pro Forma Analysis
3	Th Sept 13	<i>NOTE No Class: Guest Speaker Offset</i>	
4	Tu Sept 18 <i>Rosh Hashanah</i>	Cash Flow: Revenue and Expenses	Reading: Nine Abuses Common in Pro Forma Cash Flow Projections Linneman C5: Financial Modeling Linneman C6: Due Diligence Analysis
5	Th Sept 20	Cash Flow: Revenue and Expenses <b>Case 1 Distributed</b>	—
6	Tu Sept 25	Valuation	Reading: How Reliable Are Commercial Appraisals? Linneman C7: Use and Selection of Cap Rates Linneman PI: Discounted Cash Flow, Net Present Value Linneman PII: Internal Rate of Return
7	Th Sept 27	Valuation, Continued	Linneman C16: Exit Strategies
8	Tu Oct 2 <i>Sukkot</i>	Development	Linneman C8: Development Pro Forma Analysis Linneman C9: Development Feasibility Analysis Linneman C20: Real Estate Cycles
9	Th Oct 4	Financing	Linneman C12: Should You Borrow? Linneman C13: The Use of Debt and Mortgages Linneman PIII: Amortization Fundamentals
	Tu Oct 9	Financing, Continued	—
10	Th Oct 11	Financing: Alternative Finance	Reading: Guide to Real Estate Capital Markets: Participating Debt and Equity Linneman C15: Ground Leases as a Source of Finance
11	Tu Oct 16	Midterm Review	

		<b>Case 1, Part 1 Due</b>	
12	Th Oct 18	<b>Midterm Examination I</b>	
13	Tu Oct 23	<i>No Class: Fall Break</i>	
14	Th Oct 25	Financing, Capital Sources	Reading: The Mortgage REITs: Dynamos or Duds? Reading: Overview of Fannie Mae's Multifamily Business
15	Tu Oct 30	Financing, Securitization <b>Case 1, Part 2 Due</b>	Linneman C14: Commercial Mortgage-Backed Securities Linneman SII: A Look at a Real CMBS Issue Reading: How to Build a Bond Reading: CMBS: Past, Present, and Future
16	Th Nov 1	Case 1 Discussion <b>Case 2 Distributed</b>	
17	Tu Nov 6	Financing, Debt Performance	Linneman C11: Bankruptcy Basics Reading: Defaults in Securitized Real Estate Loans
18	Th Nov 8	Investment Structures	Linneman C10: Real Estate Company Analysis Linneman C17: Private Equity Funds
19	Tu Nov 13	Investment Structures: REITs <b>Guest Speaker: Sam Zell</b>	Linneman C18: REITs and Liquid Real Estate Reading: REITs for Rookies Reading: Basic Valuation of a REIT Reading: REITs and Taxes
20	Th Nov 15	Investment Structures: REITs, Continued	Reading: REIT Share Prices and the Declining Relative Importance of Commercial Real Estate Reading: Liquid Real Estate Reading: The Pressure on Public REITs to Grow Larger Reading: REITs as an Alternative Investment in Volatile Financial Markets Reading: UPREITs: A Vehicle for Tax Deferral and Asset Growth
21	Tu Nov 20	<b>Case 2 Due</b> Case 2 Discussion	
	Th Nov 22	<i>No Class: Thanksgiving Break</i>	
22	Tu Nov 27	Market Restructuring	Reading: Real Estate: Past, Present, and Future Reading: Inside the Revolution Reading: The Forces Changing the Real Estate Industry

			Reading: The Forces Changing Real Estate: Five Years Later
23	Th Nov 29	Market Restructuring, Continued	–
24	Tu Dec 4	The Rent v Own Decision Review for Midterm II	Linneman C19: Corporate Real Estate Decision Making
25	Th Dec 6	<b>Midterm Examination II</b>	

Preliminary; September 6, 2012