



FBE 591: Real Estate Finance and Investments

Fall 2020

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Class Meeting: Monday/Wednesday, 5-6:20pm

Office Hours: Monday/Wednesday, 2:30-3:30pm, or by appointment.

Zoom Information

The Zoom link is provided under “USC Zoom Pro Meeting” on Blackboard. Logging on to Blackboard will take you directly into the classroom without waiting in a “waiting room”.

Here is USC’s page for students on how to use their USC Zoom account:

<https://keep-teaching.usc.edu/students/student-toolkit/classroom/zoom/>.

If you have any questions about Zoom, please contact the Marshall Help Desk at helpdesk@marshall.usc.edu.

Classroom Policies

1. Class attendance and participation is important in developing a coherent view of the materials covered in the course. Unless accommodated as described in (b) below, attendance and active participation is expected at the synchronous Zoom class sessions.
 - a. Students are expected to have cameras on during the synchronous Zoom sessions, and preferably use headsets or earphones to ensure the best audio quality. *Please advise me if you have circumstances under which you will not be able to meet these expectations.*
 - b. For students who are located in a time zone where the synchronous class sessions or exams fall outside the window of 7 a.m. to 10 p.m. in your local time zone, please contact me. You will not be penalized for not attending the live Zoom class sessions. The Zoom sessions will be recorded and posted on Blackboard, and you will be responsible for watching the recorded sessions. Exams and other synchronous assessments will be scheduled for students to be able to complete the assessment between 7 a.m. and 10 p.m. in your local time zone.
2. During synchronous Zoom sessions, the following netiquette is expected:
 - a. Please do:
 - i. Log into class promptly.
 - ii. Arrange to attend class where there is a reliable internet connection and try to eliminate distractions. Do not connect via a small screen, such as a phone.
 - iii. Dress respectfully. Video conference business meetings are and will be the norm, so practice your professional telepresence.

- iv. If you use a virtual background, please keep it respectfully professional.
 - v. Display both your first and last name during video conferencing and synchronous class meetings.
 - vi. Respectfully minimize distractions by muting and or turning off video if necessary and when appropriate.
 - vii. Engage in appropriate tone and language with instructors and classmates.
- b. Please try not to:
- i. Engage in a simultaneous activity not related to the class.
 - ii. Interact with persons who are not part of the class during the class session.
 - iii. Leave frequently or not be on camera for extended periods of time.
 - iv. Have other persons or pets in view of the camera.

3. All Zoom sessions will be recorded and posted on the Blackboard Course pages.

Course Description

Real estate is a critical part of the economy and aggregate wealth. The primary goal of this course is to develop an understanding of the principle issues involved in real estate investment and finance. Our treatment of real estate will be rigorously based on the modern finance theory. In the first half of the course, we will cover real estate investment analysis, valuation and financing at the “micro” (individual property) level. In the second half, we will cover mortgages, and briefly discuss real estate capital markets. This course is designed to provide the student with essential tools to understand how real estate value is determined, created, and influenced. We will cover a critical set of analytic concepts and techniques essential for students planning careers in almost any aspect of real estate. It is also a valuable course for finance majors who may become involved with real estate at the corporate level or alternatively as investors, investment advisors, or providers of capital.

Learning Objectives

Students successfully completing this course will be able to:

- Interpret current event articles and case studies through the lens of the formal finance, real estate, economics concepts learned in the course
- Perform a qualitative and quantitative evaluation of income-producing properties, which includes:
 - Using industry-standard terminology and techniques for valuing income producing real estate
 - Making cash flow projections and preparing proforma statements using spreadsheets
 - Evaluating risk of investments and developing expected return measures
- Explain the roles of debt and equity in the structure of real estate transactions
- Understand the mechanics, pros and cons of different types of mortgages. Calculate the APR, payments of mortgages, understand how debt financing affects the risk of the investment
- Navigate the loan underwriting process
- Develop a basic cash flow model using ARGUS Enterprise.

Required Materials

There is no required textbook for the class. The main recommended textbook is Geltner, Miller, Clayton and Eichholtz, *Commercial Real Estate Analysis & Investments*, South-Western Educational Publishing; 3rd edition (February, 2013). It is available from all major online booksellers and at the USC bookstore. You can use any edition of the textbook. Most of the lectures will be based on Geltner et al. As an alternative reference you may use Breggeman and Fisher, *Real Estate Finance and Investments*, which is adapted in several other real estate finance courses at Marshall.

There will be supplemental readings and cases, which will be made available at the Blackboard website. The Harvard Business School cases (required) can be purchased online from Harvard Business Online. To purchase the cases, you need to go to: <https://hbsp.harvard.edu/import/746153> and register/sign in. The website will allow you to purchase a digital copy of each case for \$4.25 using your credit card. The remaining course materials will be posted on the Blackboard.

Case/project submissions will be made through ForClass. Each student should sign up for ForClass using the link provided on Blackboard. Please make sure that the name you use on ForClass matches your name on Blackboard and you upload a photo. It costs \$10 per student to register for the site. For each case/project there will be several questions posted on this site. Make sure to complete your submission by the due date and time announced on Blackboard.

Prerequisites and Recommended Preparation

GSBA 521x or GSBA 548. Individuals should have a good understanding of basic financial concepts and techniques such as cash flow discounting, risk and return. A profound background in real estate is neither expected nor necessary, a solid background in finance is much more critical. A basic knowledge of Microsoft Excel is also highly recommended. The use of a financial calculator which can compute annuities/present values and IRRs, such as HP 10B II or 17B II+ is allowed, but is neither necessary nor encouraged. If you elect to use it, you will need to learn how to operate the calculator, no tutorial will be given in class.

Course Notes and Communication

Most of the communication outside of class time will take place on Blackboard. I will post all class related information, including the syllabus, lecture notes, Zoom recordings, most of the readings and cases on the Blackboard. Please check the Blackboard site regularly for class materials and announcements. If you have any class related questions or comments outside of the class time, please use the **Blackboard Discussion Board** to communicate with me and your classmates. Please check the previous postings before creating a posting to see whether you can find answers to your questions there. My answers will be visible to the entire class, which hopefully will create a wealth of information for the class. This system will replace e-mail communication about class related matters. If you would like to meet me for a class related or personal matter, please try to follow my office hours listed above.

Grading Policies

This is a very “applied” course. In order to gain hands-on practice, you will be working on several projects, case studies, and assignments, which will account for the majority of your grade in this class. Your grade will be determined by assignments, five project/cases (through ForClass),

a midterm exam, a final exam, a final project, and class participation. The grade breakdown will be as follows:

Class participation	10%
Assignments	10%
Four project / case submissions	20%
Final project	20%
Midterm exam	20%
Final exam	20%

Midterm and Final exam: There will be one midterm exam and one final exam. Exams will cover all materials examined in class or the class notes. The two tests will jointly account for 50% of your grade. When calculating your course grade, I will choose the larger score based on the following weights: (i) 10% on the midterm and 30% on the final exam; and (ii) 20% on both exams. Both test scores will be standardized to make them comparable ($\frac{\text{score} - \text{mean}}{\text{standard deviation}}$). The midterm will test material covered up to the exam. In the final exam, emphasis will be placed on material covered after the midterm. However, remember that the latter material builds heavily on the earlier material.

Exams will be **open book/notes** and **students are required to be on Zoom with their video on**.

Assignments: There will be homework assignments and exercises which are aimed towards giving you the opportunity to use the techniques we learn in class and prepare you for the exams. These assignments are marked with “A” in the course outline below, and will be posted on Blackboard. Total homework grade (which accounts for 10% of your grade in this course) will be based on the best two out of three individual homework grades. Therefore, one assignment may be missed without a grading penalty. **Assignments should be turned in using the Blackboard assignments module, late assignments will not be accepted.** I encourage you to discuss the assignments with your classmates; but each student is responsible for preparing and uploading his/her solution independently.

ForClass submissions for cases / projects: Answers to five case/project questions (marked with “C” in the outline below) are to be submitted through ForClass. Each student is required to make a separate submission, but you are encouraged to work on the cases in groups. **ForClass submissions for case and projects are due at 4pm on the day they are discussed in class. Late assignments will not be accepted.** ForClass submissions will account for 20% of your grade.

Final project: The group project will serve as the culmination of the class. The goal of this project is to search for a potential real estate investment, and to present your group's investment proposal to the rest of the class during the last week of the semester. You are expected to attend all of the presentations and provide constructive feedback to your classmates. The potential investment will be the acquisition of an existing development. The source of your development can be the local broker community, the Internet (CoStar, Loopnet, ...), the Wall Street Journal, or your own contacts. The project analysis and presentation will account for 20% of your grade in the course.

Class participation: Class participation accounts for 10% of your course grade. Since participation requires attendance, attendance will be an input into your participation grade. I encourage you to ask your questions to gain clarity, enrich discussion or bring a different perspective. At-

tendance will be taken, and absences and late arrivals will be considered as a factor in class participation. I expect everybody to prepare for and attend the classes, participate in case/project discussions and offer answers to my questions.

Re-grading: All requests for re-grades must be submitted in writing within a week of my returning the graded assignment or exam. You must submit the entire assignment or exam along with your detailed description of what you think was scored incorrectly. Re-grading may potentially lead to a lower grade.

ADDITIONAL INFORMATION

Technology Requirements

The following equipment and system requirements are recommended to successfully participate in this online course:

- Computer with webcam
- Earphones or headset
- Reliable (preferably high speed) Internet connection
- Current operating system for Windows or Mac
- Current browser
 - o Google Chrome
 - o Firefox
 - o Internet Explorer (not recommended)
 - o Safari (Mac)

For technical support please see:

- **USC Systems** (Blackboard, USC Login, MyUSC)
For assistance with your USC login or other USC systems, please call +1 (213) 740-5555 or email Consult@usc.edu. They are open Mon – Fri 9:30 am – 5:00 pm and weekends from 8:00 am – 5:00 pm (all Pacific time).
- **Zoom Video Web Conferencing System** (Live Zoom Sessions)
For assistance using Zoom, go to Zoom Support Page. You may also call +1 (888) 799-9666 ext. 2. They are available 24/7.
- **Marshall Systems** (MyMarshall, Marshall Outlook email)
For assistance with Marshall systems you can call +1 (213) 740-3000 Mon-Fri 8am-6pm (Pacific), email HelpDesk@marshall.usc.edu or use our self-help service portal as shown below. The portal allows you to get immediate assistance by searching for the information you need. You can also use it to chat with a technician or input a request. To access the service portal, follow these steps:
 - o On a computer or mobile device, go to MyMarshall Home Page and click the “Help” link on the upper right.
 - o Log in using your Marshall username and password.
 - o (If you don’t know your Marshall login please follow the onscreen instructions pertaining to login issues. You will need to know how to login to your Marshall account for accessing Argus Enterprise in week 8.)

If your computer does not have Microsoft Word, Office 365 package is available to you free of charge and allows you to install Word, Excel, PowerPoint, Outlook, OneNote, Publisher, and Access on up to 5 PCs or Macs and Office apps on other mobile devices including tablets. Office 365 also includes unlimited cloud storage on OneDrive. To download Office 365 log into your student (University) email through a web browser, choose Settings (top right corner), and select software. If you have further questions or need help with the software, please contact the USC ITS service portal.

Notice on Academic Integrity

The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. It is often difficult to distinguish between a culpable act and inadvertent behavior resulting from the nervous tensions accompanying examinations. Where a clear violation has occurred, however, the instructor may disqualify the student's work as unacceptable and assign a failing mark on the paper.

Academic dishonesty includes: (Faculty Handbook, 1994: 21-22):

- Examination behavior - any use of external assistance during an examination shall be considered academically dishonest unless expressly permitted by the teacher.
- Plagiarism - the appropriation and subsequent passing off of another's ideas or words as one's own. If the words or ideas of another are used, acknowledgment of the original source must be made through recognized referencing practices.
- Other types of academic dishonesty - submitting a paper written by or obtained from another, using a paper or essay in more than one class without the teacher's express permission, obtaining a copy of an examination in advance without the knowledge and consent of the teacher, changing academic records outside of normal procedures and/or petitions, using another person to complete homework assignments or take-home exams without the knowledge or consent of the teacher.

USC Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, "Behavior Violating University Standards" <https://policy.usc.edu/scampus-part-b/>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Support Systems:

Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.
<https://engemannshc.usc.edu/counseling/>

National Suicide Prevention Lifeline - 1-800-273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <http://www.suicidepreventionlifeline.org>

Relationship & Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp/>

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <http://sarc.usc.edu/>

Office of Equity and Diversity (OED)/Title IX compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class.
<https://equity.usc.edu/>

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <https://studentaffairs.usc.edu/bias-assessment-response-support/>

The Office of Disability Services and Programs

Provides certification for students with disabilities and helps arrange relevant accommodations.
<dsp.usc.edu>

Student Support & Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <https://studentaffairs.usc.edu/ssa/>

Diversity at USC – <https://diversity.usc.edu/>

Tab for Events, Programs and Training, Task Force (including representatives for each school), Chronology, Participate, Resources for Students

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. <emergency.usc.edu>

USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.

Provides overall safety to USC community. <dps.usc.edu>

Students with Disabilities

USC is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance,

attendance, or grades in this course and require accommodations, you must first register with the Office of Disability Services and Programs (www.usc.edu/disability). DSP provides certification for students with disabilities and helps arrange the relevant accommodations. Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me as early in the semester as possible. Students requesting test-related accommodations will need to share and discuss their DSP recommended accommodation letter with me at least three weeks before the date the accommodations will be needed. DSP is located in GFS (Grace Ford Salvatori Hall) 120 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776. Email: ability@usc.edu.

This syllabus is an invitation to you as a student to engage in an exciting and interactive study of real estate finance and investments. My instruction will focus on real-world engagement with real estate investments; it will provide you with information, offer practice with skills, and enhance your preliminary understanding of real estate concepts. It is my intention to provide a collaborative and supportive learning environment where students learn from one another both in and out of the classroom. To that end, modifications to this syllabus might be warranted as determined by the instructor as I assess the learning needs of this particular class of students.

TENTATIVE COURSE OUTLINE*

Week #1 (8/17, 8/19)

Course overview

Space and asset markets (GM[†] Ch 1)

Real estate investments - background (GM Ch 7)

Emerging trends in real estate 2020

Recent WSJ articles on real estate markets

Bonus Assignment: HW 0 (week 1 article punchlines) is due on 8/19.

Week #2 (8/24, 8/26)

Real estate investments - risk and return (GM Ch 8,9,10)

Refreshener reading: RWJ[‡] Ch 4, 6, 9.

Week #3 (8/31, 9/2)

Real estate valuation - Cash flow proformas (GM Ch 11, 12)

Warm-up project: House valuation, writeup is due on 8/31. (C)

Additional articles on housing:

Home prices must fall far to be in sync with rents, *Wall Street Journal*, 1/3/2008.

Your home by the numbers, *Business Week*, 6/14/2004.

Some new math on homes, *New York Times*, 4/1/2006.

Week #4 (9/9)

No class on 9/7 (Labor day).

Case Study: Pinckney Street, case writeup is due on 9/9. (C)

Week #5 (9/14, 9/16)

Real estate valuation, cont'd. (GM Ch 12)

Reviewing Discounted Cash Flow Analyses, *The Appraisal Journal*, Jan 1990.

HW 1 (valuation) is due on 9/16. (A)

Week #6 (9/21, 9/23)

Leverage and valuation (GM Ch 13)

Case Study: 2050 Tubeway Avenue, part I, case writeup is due on 9/23. (C)

Week #7 (9/28, 9/30)

Midterm review on 9/28.

Midterm exam on 9/30 during class.

* You should expect some deviations from the outline. Significant changes will be announced on the Blackboard and/or in class.

[†] Geltner, Miller, Clayton & Eichholtz.

[‡] Ross, Westerfield & Jaffe, main textbook for GSBA 521 and 548.

Week #8 (10/5, 10/7)

Argus tutorial

Leverage and valuation, cont'd. (GM Ch 13)

Case Study: Angus Cartwright IV, case writeup due on 10/7. (C)

Week #9 (10/12, 10/14)

Taxes and valuation (GM Ch 14)

TCJA 2017 and real estate

Mortgages (GM Ch 17,19)

Refreshener reading: RWJ Ch 7 (Bonds)

HW 2 (Argus HW, Tubeway Avenue) is due on 10/21. (A)

Week #10 (10/19, 10/21)

Mortgages cont'd.

Underwriting

Final project progress report is due on 10/21.

3-minute final project update presentation on 10/21.

Week #11 (10/26, 10/28)

Case Study: Wildcat Capital Investors: Real Estate Private Equity, case writeup due on 10/26. (C)

Guest speaker on 10/28.

Mark Jacobs, Managing Director and Co-Portfolio Manager, Oaktree Capital Management, LP.

Week #12 (11/2, 11/4)

Guest speaker on 11/2.

Reza Etedali, CEO & Founder

REZA Investment Group Inc.

HW 3 (mortgages) is due on 11/4. (A)

Final exam review on 11/4.

Week #13 (11/9, 11/11)

Final project executive summary is due on Sunday, November 8, at 11:59pm.

Final project presentations

Project reports (slides and supporting documents) are due on the day of the presentation, at 9am.

Final Exam: November 18, 4:30-6:30pm.