



RED 437 - Advanced Finance and Investment for Real Estate Development

Class Schedule

Time: Monday & Wednesday, 6:00 – 9:20 PM

Room: Online via Zoom

Instructor

Brian E. Miller

Email: bemiller@usc.edu

Office Hours: Monday, after class (or by appointment)

Course Overview

This course is designed to help students master the core skills needed to evaluate real estate investment and financing decisions in real-world situations. Two overarching questions guide this framework – (1) what investments should be made and (2) how should those investments be funded? The course focuses on enabling students to think critically about the factors that influence real estate valuations, risks, and returns.

Real estate professionals add value when they understand and implement these concepts, regardless of whether they are architects, brokers, capital providers, developers, government employees, or investors.

Financial Analysis

Underwriting risk will be an overarching theme throughout the course. Specifically, we will aspire to **identify risk**, **mitigate risk**, and **compensate for risk** throughout our various in-class (or pre-class) discussions, assignments, case studies, investment memos, and exams.

The learning objectives for the real estate analysis portion of the course are:

1. Interpret and apply market conditions, investment assumptions, and debt & equity constraints.
2. Analyze the risk and return differences between different real estate investments (e.g., IRRs, CF Multiples, and NPV)
3. Analyze and evaluate the risks and tradeoffs between real estate investment positions in the capital stack (e.g., debt, mezzanine, equity)
4. Compare, contrast, and recommend the appropriate investment strategy given an investment criterion.

Financial Modeling

Financial modeling (using Excel) will be our primary tool in underwriting. Excel is a learned skill on which we can all improve. Your proficiency in Excel may determine the amount of time you may require to complete the assignments, cases, and exams. Excel tutorials posted within the course curriculum are required as part of the course. External Excel tutorials and exercises are optional but recommended based on your self-assessment. Generally speaking, at the end of this course, your Excel skills will be more advanced than where they were when you began the course.

The learning objectives for the financial modeling portion of the course are:

1. Interpret and evaluate investment assumptions by building pro forma financial models using Excel.
 2. Calculate meaningful and efficient formulas and evaluation metrics into dynamic financial models.
 3. Test investment assumptions and constraints using sensitivity and scenario analyses.
-

Market Analysis

Lastly, investment analysis and financial modeling are only as good as the market information and assumptions used in our forecasting and evaluation methodologies. Although this is not a Market Analysis course, we must be informed consumers of data and observers of market dynamics.

The learning aspirations for the market analysis portion of the course are:

1. Weekly readings of real estate articles and market reports of your choice (see recommended list for options). Apply your point of view, agreement, or disagreement, through participation in in-class discussions and/or posting on discussion boards within the Brightspace class website. While only a small portion of the grade, regular participation will contribute to your success in the course, and regular practice of this skill should improve your financial analysis and underwriting.
-

Course Organization

The course is a combination of lectures, cases, and discourse (and guest speakers, as available). Lectures are intended to prepare students to think critically and creatively about issues found in the cases. The cases have been selected to provide students with a broad array of advanced real estate topics and to force them to apply concepts taught during lecture in a real-world setting. Guest speakers may play two roles – (1) they will provide context for class material and current information about a variety of markets and product types and (2) they will assist in running discussion related to individual case topics. Students are expected to be prepared to discuss every case. Assignments include excel exercises, case questions, case write-ups, and presentations. There may also be additional exercises to support cases as the semester progresses. There will be one midterm exam and a final exam; these will build on the case assignments and lectures throughout the semester.

The course is appropriate for students interested in real estate with strong finance skills and a desire to use them to underwrite real estate in a dynamic environment.

The following is a prerequisite for this course: RED 435.

Material (Textbook, Slides, & Periodicals)

There is no required textbook for this course. The *optional textbook* for further reading and student development is Underwriting Commercial Real Estate in a Dynamic World, by Chris Redfearn. It is a case book developed in conjunction with USC MRED alumni and faculty. The cases are genuine real estate deals that members of this group faced in underwriting real estate as professionals. They found the challenges sufficiently interesting to bring them back to class. Their experiences have proven an exceptionally good way of learning how to think about underwriting real estate. The cases and content contained in this book are not included in the course, but the questions and analysis approaches prepare students for advanced topics and underwriting in real estate finance and development beyond this course.

Students should have a working knowledge of the material in Peiser, Richard B. and Hamilton, David, Professional Real Estate Development, and/or Breuggeman and Fisher, Real Estate Finance and Investments or the equivalent, and/or Brett, Deborah, Real Estate Market Analysis: Trends, Methods and Information Sources.

There are many real estate finance texts: Geltner & Miller, Jacobus, Linnemann, etc. Very simply: you are expected to know the basics of real estate finance prior to starting this class. We will practice and deepen that knowledge, but you should know the basics prior to starting this class. Course readings will be posted on the class Brightspace site as necessary. You should stay abreast of happenings in the larger real estate world and use your reading as an opportunity to test your command of the language of real estate and the underlying logic.

It is recommended to read the LA Business Journal, Wall Street Journal, and others. But additional resources include more industry-specific blogs such as Calculated Risk, Housing Wire, and Urbanize LA. There are many good sources out there; please feel free to make suggestions to the class for more.

Excel Tutorials

I encourage students to seek out additional MS Excel tutorials as needed (e.g., YouTube tutorials), but I prioritize my Excel tutorials provided within the course first for course-specific requirements. If additional Excel training is needed, let's talk about the most efficient approach to what is needed.

Attendance

On-camera attendance at the regular weekly class meetings is expected. If a student is unable to attend a class meeting, the student is expected to email the instructor to let the instructor know that he/she will be unable to attend class. We will attempt to record all class sessions and the student is expected to review the class recording on their own time if a class is missed. However, there is no guarantee that a class session will be recorded, and the student should not rely on the certainty of a class session recording. Other excused absences include student-athletes who provide the instructor, in advance, with Travel Request letters and or students who give advance notice of religious observation.

Missing a class meeting will not excuse a student from any assignment or case due dates. Any relief for assignment or case due dates due to an excused absence must be requested and agreed to by the instructor before the due date.

Late Turn-In Policy

Any cases or assignments that are turned in after the due date ("late") will be subject to a penalty of up to a 5% - 20% deduction (depending on duration). Any case or assignment that is more than 1 week late will not be eligible for any course credit (at instructor's discretion). **DO NOT FALL BEHIND**. Please reach out to the instructor immediately if you are experiencing any extraordinary circumstances.

Grade Evaluation

Cases – 40%
Assignments – 15%
Midterm Exam – 20%
Final Exam – 20%
Participation – 5% (in-class, discussions, articles, etc.)
Total – 100%

Grading Standard and Scale:

- A: Displays Mastery
- B: Displays Good Understanding
- C: Needs Improvement
- D or lower: Lacking or Not Attempted

Course final grades will be determined using the following scale:

A 94-100	C 73-76
A- 90-93	C- 70-72
B+ 87-89	D+ 67-69
B 83-86	D 63-66
B- 80-82	D- 60-62
C+ 77-79	F 59 and below

Cases (40%)

The “Cases” portion of the final grade will be an equally weighted average of the individual grades from the cases covered during the semester. Individual case grades will be based upon financial models and investment memos. Verbal presentations of your position on the cases will contribute to the participation portion of the grade. Detailed information on these cases will be posted to Brightspace along with the expectations for each case. Students are required to come to class prepared to discuss each case.

Preparation Assignments (15%)

The Case Preparation Assignments portion of the final grade will be an equally weighted average of the individual grades from the assignments covered during the semester.

Midterm (20%)

The exam will cover the application of the material taught in the course before the exam date.

*The Midterm Exam will be held **Wednesday, June 12, 2024**, from 6:00 PM to 9:20 PM and will take the place of our normal class.*

Final Exam (20%)

The final exam will be cumulative. Students are responsible for verifying the final exam date and time.

*The Final Exam is scheduled for **Monday, July 8, 2024**, from 6:00 PM – 9:20 PM.*

Participation (5%)

Participation grades will be based on a student’s ability to contribute positively to class discussion, including bringing in news articles for discussion (e.g., Discussion Boards). Video/On-Camera participation is expected for best student engagement experience. Actively and regularly contributing positively to class discussions will increase a participation grade. (e.g., arriving late, sleeping in class, not paying attention, or using electronic devices during class (other than computers/laptops for online sessions) will decrease a participation grade.

Advanced Finance and Investment for Real Estate Development **Section 51652**



Session Dates (session code 525)

First day of classes:	Wednesday, May 15, 2024
Last day to add:	Monday, May 27, 2024
Last day to change to Pass/No Pass:	Monday, May 27, 2024
Last day to drop without a mark of "W" and receive a refund:	Monday, May 27, 2024
Last day to withdraw without a "W" on transcript or change pass/no pass to letter grade:	Monday, June 10, 2024
Last day to drop with a mark of "W":	Friday, June 28, 2024
Last day of classes:	Tuesday, July 9, 2024
End of session:	Tuesday, July 9, 2024

Preliminary Class Schedule and Content

Wk #	Class Date	Class Topics	Assignment (A)/Case (C)
1	Wed 5/15	<p><u>Asynchronous (prior to class):</u></p> <ul style="list-style-type: none"> Pro Forma Metrics Extending the Framework <p><u>Synchronous:</u></p> <ul style="list-style-type: none"> Intro to RED 437 Course Overview and Goals Urban Economics Pro Forma Metrics <p><u>Excel Tutorial:</u></p> <ul style="list-style-type: none"> Pro Forma Setup – Part 1 (22 min) Pro Forma Setup – Part 2 (29 min) Pro Forma Setup – Part 3 (20 min) 	<p>(A #1): Pro Forma Template & Key Formula Exercises</p> <ul style="list-style-type: none"> <i>DUE 5/17 @ 11:59pm</i> <p>(C #1): Cardinal & Gold Investments – Read</p>
2	Mon 5/20	<p><u>Asynchronous (prior to class):</u></p> <ul style="list-style-type: none"> More Metrics & Decisions Capital Stack – Debt & Equity <p><u>Synchronous:</u></p> <ul style="list-style-type: none"> Review Urban Economics Review Pro Forma Metrics Lab – Pro Forma Setup <p><u>Excel Tutorial:</u></p> <ul style="list-style-type: none"> Modeling Debt with Constraints (29 min) Sensitivity Tables (14 min) 	<p>(C #1): Cardinal & Gold Investments – Finish Part 1</p>
2	Wed 5/22	<p><u>Asynchronous (prior to class):</u> none</p> <p><u>Synchronous:</u></p> <ul style="list-style-type: none"> Review Metrics & Decisions Review Capital Stack – Debt & Equity Lab – Case 1 Demo <p><u>Excel Tutorial:</u></p> <ul style="list-style-type: none"> Creating Renovation Schedules (21 min) 	<p>(A#2): Debt Exercises</p> <ul style="list-style-type: none"> <i>Due Wed, 5/29 @ 5:59pm</i> <p>(C#1): Cardinal & Gold Investments</p> <ul style="list-style-type: none"> <i>Due Fri, 5/24 @ 11:59pm</i>
3	Mon 5/27	<p><u>Asynchronous (prior to class):</u></p> <ul style="list-style-type: none"> Mortgage Debt <p><u>Synchronous:</u> Holiday – NO CLASS</p> <p><u>Excel Tutorial:</u></p> <ul style="list-style-type: none"> Fixed Rate and Interest Only Debt (13 min) Variable Rate Debt (27 min) 	

Wk #	Class Date	Class Topics	Assignment (A)/Case (C)
3	Wed 5/29	<p><u>Asynchronous (prior to class):</u> none</p> <p><u>Synchronous:</u></p> <ul style="list-style-type: none"> • Intro Case #2 • Debt Review • Lab – Modeling Debt <p><u>Excel Tutorial:</u></p> <ul style="list-style-type: none"> • Variable Rate Debt – Modified Amortization Tables (29 min) 	<p>(A#2): Debt Exercises</p> <ul style="list-style-type: none"> • Due Wed, 5/29 @ 5:59pm <p>(C#2): Setting Sail or Safe Harbor – Read</p>
4	Mon 6/03	<p><u>Asynchronous (prior to class):</u></p> <ul style="list-style-type: none"> • Commercial Leasing – Part 1 <p><u>Synchronous:</u></p> <ul style="list-style-type: none"> • Commercial Leasing Review • Discuss Case #2 • Lab – Case 2 Pro Forma Setup <p><u>Excel:</u></p> <ul style="list-style-type: none"> • Effective Rent Calculation (8 min) 	<p>(C#2): Setting Sail or Safe Harbor – Finish Part 1</p> <p>(A#3): Effective Rent Calc</p> <ul style="list-style-type: none"> • Due Wed, 6/05 @ 5:59pm
4	Wed 6/05	<p><u>Asynchronous (prior to class):</u></p> <ul style="list-style-type: none"> • Commercial Leasing – Part 2 <p><u>Synchronous:</u></p> <ul style="list-style-type: none"> • Commercial Leasing Review • Intro Case #3 • Lab – Case 2 part 1 <p><u>Excel Tutorial:</u></p> <ul style="list-style-type: none"> • Percentage Rent Calculation (8 min) 	<p>(A#3): Effective Rent Calc</p> <ul style="list-style-type: none"> • Due Wed, 6/05 @ 5:59pm <p>(A#4): Percentage Rent Calc</p> <ul style="list-style-type: none"> • Due Fri, 6/07 @ 11:59pm <p>(C#3): Stay vs. Go</p>
5	Mon 6/10	<p><u>Asynchronous (prior to class):</u> none</p> <p><u>Synchronous:</u></p> <ul style="list-style-type: none"> • Case #2 results • Discuss Case #3 • Midterm Review • Lab – Effective Rent <p><u>Excel Tutorial:</u> none</p>	<p>(C#3): Stay vs. Go</p> <ul style="list-style-type: none"> • Due Tue, 6/14 @ 11:59pm <p>Practice Midterm</p>

Wk #	Class Date	Class Topics	Assignment (A)/Case (C)
5	Wed 6/12	<p><u>Asynchronous (prior to class):</u> none</p> <p><u>Synchronous:</u></p> <ul style="list-style-type: none"> • Midterm 	<p>(C#3): Stay vs. Go</p> <ul style="list-style-type: none"> • Due Tue, 6/14 @ 11:59pm <p>(C#4): The Doheny – Read</p>
6	Mon 6/17	<p><u>Asynchronous (prior to class):</u></p> <ul style="list-style-type: none"> • Equity Structures • Mezzanine Financing <p><u>Synchronous:</u></p> <ul style="list-style-type: none"> • Midterm debrief • Discuss Case #4 • Waterfalls – Debt & Equity <p><u>Excel Tutorial:</u></p> <ul style="list-style-type: none"> • Waterfall Demo (38 min) 	<p>(A#5): Waterfalls Lab</p> <ul style="list-style-type: none"> • Due Fri, 6/21 @ 11:59pm <p>(C#4): The Doheny – Finish Part 1</p>
6	Wed 6/19	<p><u>Asynchronous (prior to class):</u> none</p> <p><u>Synchronous:</u> Holiday – NO CLASS</p> <p><u>Excel Tutorial:</u></p> <ul style="list-style-type: none"> • Mezz & Equity Waterfall Demo – Part 1 (52 min) • Mezz & Equity Waterfall Demo – Part 2 (10 min) 	<p>(A#5): Waterfalls Lab</p> <ul style="list-style-type: none"> • Due Fri, 6/21 @ 11:59pm <p>(C#4): The Doheny – Finish Part 1 & 2</p> <ul style="list-style-type: none"> • Due Wed, 6/26 @ 5:59pm
7	Mon 6/24	<p><u>Asynchronous (prior to class):</u></p> <ul style="list-style-type: none"> • Project Development Financing • Land Development Financing <p><u>Synchronous:</u></p> <ul style="list-style-type: none"> • Discuss Case #4 • Intro Case #5 • Lab – TBD 	<p>(C#4): The Doheny</p> <ul style="list-style-type: none"> • Due Wed, 6/26 @ 5:59pm <p>(C#5): Institutional Capital or Family Office - Read</p>
7	Wed 6/26	<p><u>Asynchronous (prior to class):</u> none</p> <p><u>Synchronous:</u></p> <ul style="list-style-type: none"> • Discuss Case #5 • Review Development • Construction Loans <p><u>Excel Tutorial:</u></p> <ul style="list-style-type: none"> • Static PF & Construction Loans (21 min) 	<p>(C#5): Institutional Capital or Family Office – Read</p>

Wk #	Class Date	Class Topics	Assignment (A)/Case (C)
8	Mon 7/01	<u>Asynchronous (prior to class):</u> <ul style="list-style-type: none"> • Structuring Real Estate Investments • Real Estate Investment Funds <u>Synchronous:</u> <ul style="list-style-type: none"> • Review Real Estate Entity Structures • Review Real Estate Investment Funds • Lab – Static Pro Formas & Construction Loans <u>Excel Tutorial:</u> none	(C#5): Institutional Capital or Family Office – <i>Finish Part 1 & 2</i>
8	Wed 7/03	<u>Asynchronous (prior to class):</u> none <u>Synchronous:</u> <ul style="list-style-type: none"> • Discuss Case #5 • Real Estate Funds • Final Exam Review <u>Excel:</u> none	(C#5): Institutional Capital or Family Office – <i>Finish Part 1 & 2</i> <ul style="list-style-type: none"> • <i>Due Mon, 7/08 @ 5:59pm</i>
9	Mon 7/08	Final Exam – Monday, 7/08 @ 6:00 – 9:20pm	

Course Policy for Use of AI-Generated Tools

Since creating, analytical, and critical thinking skills are part of the learning outcomes of this course, all assignments should be prepared by the student working individually. Students may not have another person or entity complete any substantive portion of the assignment. Developing strong competencies in these areas will prepare you for a competitive workplace. Therefore, using AI-generated tools is prohibited in this course, will be identified as plagiarism, and will be reported to the Office of Academic Integrity.

Course Content Distribution and Synchronous Session Recordings Policies

USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment.

Recording a university class without the express permission of the instructor and announcement to the class, or unless conducted pursuant to an Office of Student Accessibility Services (OSAS) accommodation. Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study. This includes but is not limited to providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relation to the class, whether obtained in class, via email, on the internet, or via any other media. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

Course Evaluations

Course evaluation occurs at the end of the term. It is an important review of students' experience in the class and is used to provide feedback to the instructor and Price administration to improve the course for future classes. However, students are encouraged to offer unsolicited feedback at any time directly to the instructor to improve the current course. Please reach out to the instructor through office hours or via email to provide feedback.

Academic Integrity:

While I do think it is valuable to work together to discuss approaches to financial modeling or interpreting assumptions, you are each expected to complete your own financial models and investment recommendations. **Sharing spreadsheets and/or recommendation deliverables is strictly prohibited.** Any violation of this will be referred for review by the appropriate channels for such academic integrity violations and may result in zero credit for the case/assignment/exam. Please do not test this, as it is not too difficult to discover. I will review every spreadsheet model and deliverable.

The University of Southern California is foremost a learning community committed to fostering successful scholars and researchers dedicated to the pursuit of knowledge and the transmission of ideas. Academic misconduct is in contrast to the university's mission to educate students through a broad array of first-rank academic, professional, and extracurricular programs and includes any act of dishonesty in the submission of academic work (either in draft or final form).

This course will follow the expectations for academic integrity as stated in the [USC Student Handbook](#). All students are expected to submit assignments that are original work and prepared specifically for the course/section in this academic term. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s). Students suspected of engaging in academic misconduct will be reported to the Office of Academic Integrity.

Other violations of academic misconduct include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see the [student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Students and Disability Accommodations:

USC welcomes students with disabilities into all of the University's educational programs. [The Office of Student Accessibility Services](#) (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

Support Systems:

[Counseling and Mental Health](#) - (213) 740-9355 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

[988 Suicide and Crisis Lifeline](#) - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

[Relationship and Sexual Violence Prevention Services \(RSVP\)](#) - (213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

[Office for Equity, Equal Opportunity, and Title IX \(EEO-TIX\)](#) - (213) 740-5086

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

[Reporting Incidents of Bias or Harassment](#) - (213) 740-5086 or (213) 821-8298

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services \(OSAS\)](#) - (213) 740-0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

[USC Campus Support and Intervention](#) - (213) 740-0411

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

[Diversity, Equity and Inclusion](#) - (213) 740-2101

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

[USC Emergency](#) - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

[USC Department of Public Safety](#) - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call

Non-emergency assistance or information.

[Office of the Ombuds](#) - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](#) - (323) 442-2850 or otfp@med.usc.edu

Confidential Lifestyle Redesign services for USC students to support health-promoting habits and routines that enhance quality of life and academic performance.