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.

<u>**Financial Analysis**</u>

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 in completing 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 own 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 BlackBoard 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 <u>Underwriting Commercial Real Estate in a Dynamic World,</u> 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, <u>Professional Real Estate Development</u>, and/or Breuggeman and Fisher, <u>Real Estate Finance and Investments</u> or the equivalent, and/or Brett, Deborah, <u>Real Estate Market Analysis: Trends, Methods and Information Sources</u>.

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 Blackboard 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.

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. Lacking or Not Attempted

Course final grades will be determined using the following scale
A 94-100
A- 90-93
B+ 87-89
B 83-86
B- 80-82
C+ 77-79
C 73-76
C- 70-72
D+ 67-69
D 63-66
D- 60-62
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 Blackboard 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 material taught in the course before the exam date.

The Midterm Exam will be held Wednesday, June 14, 2023, 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 10, 2023, 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 encouraged 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.)

Wk #	Class Date	Class Topics	Assignment (A)/Case (C)
Preliminary Class Schedule and Content			
1	Wed 5/17	<u>Synchronous:</u> • Intro to RED 437 • Course Overview and Goals <u>Asynchronous:</u> • Pro Forma Metrics (18 min) • Extending the Framework (27 min) <u>Excel Tutorial:</u> • Pro Forma Setup – Part 1 (22 min) • Pro Forma Setup – Part 2 (29 min) • Pro Forma Setup – Part 3 (20 min)	(A #1): Pro Forma Template & Key Formula Exercises • *DUE 5/19 @ 11:59pm* (C #1): Cardinal & Gold Investments – Read
2	Mon 5/22	<u>Synchronous:</u> • Urban Economics • Pro Forma Metrics <u>Asynchronous:</u> • More Metrics & Decisions (19 min) • Capital Stack – Debt & Equity (24 min) <u>Excel Tutorial:</u> • Modeling Debt with Constraints (29 min) • Sensitivity Tables (14 min)	(C #1): Cardinal & Gold Investments – Finish Part 1
2	Wed 5/25	<u>Synchronous:</u> • Metrics & Decisions • Capital Stack – Debt & Equity <u>Asynchronous:</u> none <u>Excel Tutorial:</u> • Creating Renovation Schedules (21 min)	(A#2): Debt Exercises • *Due Wed, 5/31 @ 5:59pm* (C#1): Cardinal & Gold Investments • *Due Fri, 5/26 @ 11:59pm*
3	Mon 5/29	<u>Synchronous:</u> **Holiday – NO CLASS** <u>Asynchronous:</u> • Mortgage Debt (13 min) <u>Excel Tutorial:</u> • Fixed Rate and Interest Only Debt (13 min) • Variable Rate Debt (27 min)	(C#2): Setting Sail or Safe Harbor – Read

Wk #	Class Date	Class Topics	Assignment (A)/Case (C)
3	Wed 5/31	Synchronous: • Discuss Case #2 • Debt Review Asynchronous: none Excel Tutorial: • Variable Rate Debt – Modified Amortization Tables (29 min)	(A#2): Debt Exercises • *Due Wed, 5/31 @ 5:59pm* (C#2): Setting Sail or Safe Harbor – Finish Part 1
4	Mon 6/05	Synchronous: • Discuss Case #2 Asynchronous: • Commercial Leasing – Part 1 (15 min) Excel: • Effective Rent Calculation (8 min)	(C#2): Setting Sail or Safe Harbor • *Due Tue, 6/06 @ 11:59pm* (A#3): Effective Rent Calc • *Due Wed, 6/07 @ 5:59pm*
4	Wed 6/07	Synchronous: • Commercial Leasing Review • Intro Case #3 Asynchronous: • Commercial Leasing – Part 2 (15 min) Excel Tutorial: • Percentage Rent Calculation (8 min)	(A#3): Effective Rent Calc • *Due Wed, 6/07 @ 5:59pm* (A#4): Percentage Rent Calc • *Due Fri, 6/09 @ 11:59pm* (C#3): Stay vs. Go
5	Mon 6/12	Synchronous: • Case #2 results • Discuss Case #3 • Commercial Leasing cont'd • Midterm Review Asynchronous: none Excel Tutorial: none	(C#3): Stay vs. Go • *Due Tue, 6/13 @ 11:59pm* Practice Midterm

Wk #	Class Date	Class Topics	Assignment (A)/Case (C)
5	Wed 6/14	Synchronous: • Midterm Asynchronous: • Equity Structures (8 min) • Mezzanine Financing (5 min)	(C#4): The Doheny – Read
6	Mon 6/19	Synchronous: **Holiday – NO CLASS** Asynchronous: none Excel Tutorial: • Waterfall Demo (38 min)	(A#5): Waterfalls Lab • *Due Fri, 6/23 @ midnight* (C#4): The Doheny – Finish Part 1
6	Wed 6/22	Synchronous: • Midterm debrief • Discuss Case #4 • Waterfalls – Debt & Equity Asynchronous: none Excel Tutorial: • Mezz & Equity Waterfall Demo – Part 1 (52 min) • Mezz & Equity Waterfall Demo – Part 2 (10 min)	(A#5): Waterfalls Lab • *Due Fri, 6/23 @ 11:59pm* (C#4): The Doheny – Finish Part 1 & 2 • *Due Mon, 6/26 @ 5:59pm*
7	Mon 6/26	Synchronous: • Discuss Case #4 • Intro Case #5 Asynchronous: • Project Development Financing (12 min) • Land Development Financing (7 min)	(C#4): The Doheny • *Due Mon, 6/26 @ 5:59pm* (C#5): Institutional Capital or Family Office - Read

Wk #	Class Date	Class Topics	Assignment (A)/Case (C)
7	Wed 6/28	<u>Synchronous:</u> • Discuss Case #5 • Review Development • Construction Loans <u>Asynchronous:</u> none <u>Excel Tutorial:</u> • Static PF & Construction Loans (21 min)	(A#6): Construction Loans • *Due Fri, 6/30 @ 11:59pm* (C#5): Institutional Capital or Family Office – *Finish Part 1*
8	Mon 7/03	<u>Synchronous:</u> **Holiday – NO CLASS** <u>Asynchronous:</u> • Structuring Real Estate Investments (13 min) • Real Estate Investment Funds (13 min) <u>Excel Tutorial:</u> none	(C#5): Institutional Capital or Family Office – *Finish Part 1 & 2*
8	Wed 7/05	<u>Synchronous:</u> • Guest Speaker (TBD) • Discuss Case #5 • Real Estate Funds • Final Exam Review <u>Asynchronous:</u> none <u>Excel:</u> none	(C#5): Institutional Capital or Family Office • *Due Fri, 7/07 @ 11:59pm*
9	Mon 7/10	**Final Exam – Monday, 7/10 @ 6:00 – 9:20pm**	

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" 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, policy.usc.edu/scientific-misconduct.

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 memo write-ups. ***Sharing spreadsheets and memos 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 memo.

Support System Resources:

- **Student Health Counseling Services:** (213) 740-7711 – 24/7 on call engemannshc.usc.edu/counseling. Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.
- **National Suicide Prevention Lifeline:** (800) 273-8255 – 24/7 on call suicidepreventionlife-line.org. Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.
- **Relationship and Sexual Violence Prevention Services (RSVP):** (213) 740-4900 – 24/7 on call engemannshc.usc.edu/rsvp. Free and confidential therapy services, workshops, and training for situations related to gender-based harm.
- **Office of Equity and Diversity (OED), Title IX:** (213) 740-5086, equity.usc.edu, titleix.usc.edu. Information about how to get help or help a survivor of harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following protected characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations.
- **Bias Assessment Response and Support:** (213) 740-2421, studentaffairs.usc.edu/bias-assessment-response-support. Avenue to report incidents of bias, hate crimes, and microaggressions for appropriate investigation and response.
- **The Office of Disability Services and Programs:** (213) 740-0776, dsp.usc.edu. Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test-taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

- **USC Support and Advocacy:** (213) 821-4710, studentaffairs.usc.edu/ssa. Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.
- **Diversity at USC:** (213) 740-2101, diversity.usc.edu. 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, dps.usc.edu, emergency.usc.edu. 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, dps.usc.edu. Non-emergency assistance or information.