



COURSE SYLLABUS¹ RED437

ADVANCED FINANCE AND INVESTMENT FOR REAL ESTATE DEVELOPMENT

- Term: Spring, 2017 - Section #51660R
MW, 10:00-11:50am, January 9, 2017, to April 26, 2017
Final Exam: Monday, May 5, 2017, 8:00am-10:00am
- Room: VPD112
- Instructor: **MARK S. RUFF**
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Phone: 424-284-8740 office; 310-210-9652 cell/text
 [@ruffmark](https://twitter.com/ruffmark)
 marksruff
 [Prof. Ruff's LinkedIn profile](#)
- Office Hrs: By appointment. I can also periodically make myself available otherwise via phone or Skype. For my online calendar, click [here](#).
- Attendance: I automate the class attendance record keeping function via the Arkaive app. The app is free to students and is available for iPhone or Android. The enrollment code for RED437 this semester is: **5CMG**. Be sure to check-in at the beginning of each class. I've set the system to allow a 15-minute check-in grace period. After the first 15 minutes of class, the system will not allow you to check-in. At the end of class, no check-out is required. For helpful YouTube instructional videos on the Arkaive attendance app, including how to check in, click [here](#). For additional information, visit www.Arkaive.com.
- Twitter: It is suggested that you "follow" me as [@ruffmark](https://twitter.com/ruffmark) via Twitter is a methodology I employ to communicate in real-time with students (e.g., if I might be running late for a class, or if we need to cancel and reschedule a class due to a professional commitment. Note that this would be rare, but it occasionally happens).
- Quote: *"It is the learning that you do after your school days that really counts. Otherwise, you know only that which everyone else knows."*
--Henry Doherty

¹ Subject to change. Note that I have left some wiggle room toward the end of the term. We will fill in the remainder of the term as the course unfolds.

COURSE DESCRIPTION:

This course is the “capstone” real estate finance course in the BRED and PPD programs, and is a lot of work, but we will also have a lot of fun along the way. The course presents both fundamental and advanced concepts and analytical methodologies used in making real estate investment, development, and financing decisions. During the course, we will analyze a variety of property types to demonstrate that the techniques presented are universal in their nature. By the end of the semester, the student should be able to:

1. Discount and compound cash flows utilizing a financial calculator and/or Excel
2. Evaluate mortgages and income-producing properties
3. Determine value
4. Understand mortgage amortizations
5. Underwrite debt to determine its real cost
6. Forecast a variety of metrics including ROI and IRR, and
7. Understand the difference between “static” and “dynamic” metrics

The course will provide the student with the tools that are critical for understanding the determination of prices and values in the real estate investment, finance, and development arenas. Topics will include valuation methodologies, use of debt and equity, leases, taxes, quantification of risk and return, and how they are modeled. Excel spreadsheets will be prepared, including loan amortization tables, static and dynamic pro-formas, and 10-year DCF models. ***This is an advanced class, so thorough knowledge of Excel is expected. A financial calculator is optional, but highly recommended. Prof. Ruff uses the “old school” HP12c financial calculator. There will be no remedial instruction in Excel or financial calculator functions and operations.***²

LEARNING OBJECTIVES:

This course provides broad exposure to the general principles of real estate finance. At the conclusion of the course, students should:

- Be able to understand the mortgage financing process and debt underwriting
- Have a thorough understanding of income-producing property (i.e., both residential and commercial) underwriting and lending
- Prepare a static and dynamic pro-forma for an income-producing property
- Understand the basic concepts of leverage, ROI, IRR, and DCF
- Prepare analyses on fixed interest amortized loans and construction loans
- Use spreadsheet software (Excel) to prepare financial analyses of income-producing properties, including projecting income and expenses, and preparing a 10-year DCF model

Pre-requisite: RED435 or PPD435

Co-requisite: None

Recommended prep: Thorough working knowledge of Excel and a financial calculator

See: <https://www.lynda.com/Excel-tutorials/Excel-2016-Essential-Training/376985-2.html?org=usc.edu>

² Depending on the finance background of the class cohort, I may conduct a number of optional financial calculator and Excel “clinics.” I held 4 such clinics at the beginning of the Fall 2016 term which were very well received by students.

Excel spreadsheets will be prepared and a number of in-class “labs” will be conducted. Exhibits will be posted usually in .pdf format on Blackboard.

REQUIRED TEXTBOOK:

Real Estate Finance and Investments
William B. Brueggeman and Jeffrey D. Fisher
15th ed., © 2016, McGraw-Hill Education
ISBN 978-0-07-337735-3

OPTIONAL READING:

(N.B.: You will not be responsible for any material from these texts/books, but they are listed here if you have a thirst for additional knowledge and have an abundance of free time.)

The Geography of Nowhere
James Howard Kunstler
© 1993, Touchstone
ISBN 978-0-671-88825-1 (paperback)
Be sure to check the movie “*The End of Suburbia*” (available at Netflix or YouTube.com which was drawn extensively from Kunstler’s book).

Home From Nowhere
James Howard Kunstler
© 1996, Touchstone
ISBN 978-0-684-83737-6 (paperback)

Crabgrass Frontier: The Suburbanization of the United States
Kenneth T. Jackson
© 1985, Oxford University Press
ISBN 978-0-19-504983-1 (paperback)

[Dr. Peter Gordon's blog](#)

A blog exploring the intersection of economic thinking and urban planning, real estate development, and related big-think themes. Dr. Gordon is a former Dean of the (formerly known as) School of Urban and Regional Planning and is one of my former Professor’s in the MRED program.

DESCRIPTION AND ASSESSMENT OF ASSIGNMENTS:

The course will include homework, case studies, 2 Mid-Terms, a Final Project, and a Final Exam. Final Project grading will be based on the report addressing all aspects of the outline and project description provided on Blackboard and during class. Grading will also consider how well the student has included creative, analytical, and feasible solutions for the project.

BASIS FOR DETERMINING GRADES:

Students will be graded based on the following:

- Homework and case studies: 20%
- 2 Mid-Terms @ 12.5% each: 25%

- Final Project: 20%
- Final Exam (cumulative): 25%
- Attendance: 5%
- In-class participation: 5%

Grading Standards:

- A: Work of excellent quality, exceeding both requirements and expectations
- B: Work of good quality, meeting both requirements and expectations
- C: Work of fair quality
- D: Work of minimum passing quality
- F: Failure to adequately complete course work

To receive a grade of “A” in this course, students must complete all work on-time and submit work of superior quality at every stage. Work must address all aspects of the required assignments, exceed the minimum requirements, and demonstrate critical and creative thinking.

Student work must be turned in on time. Late submissions of work will only be accepted at the Instructor’s discretion and with a severe grade penalty of *at least* 1 full letter grade reduction, or more, depending on how late the submission is. Be certain to make a copy of your work if you desire to keep a copy for your permanent file or record.

OTHER INFORMATION:

Disability Services:

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. DSP is located at 3601 Watt Way (GFS120) and is open from 8:30am to 5:00pm Monday through Friday. The phone number for DSP is (213) 740-0776, or may be contacted by email at ability@usc.edu.

Instructor’s policy on cell phone, texting, or other social media-type use during class:

Zero tolerance. If you must use your cell phone or otherwise surf the web during class for other than class appropriate use, please be courteous to me and other students and step outside the class. You are required to leave the class for that entire class session for any violation of this policy. Based on the reported experiences of other students and the workload in class, it is doubtful that you will have either the time or the inclination to focus on anything other than what is occurring in class.

Additional information at the directive of the Vice-Provost, Undergraduate Programs, from Memo to Faculty (dtd 09/14/14), required insert into all undergraduate Course Syllabi:

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 Section 11, *Behavior Violating University Standards* <https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/>. 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/>.

The recommended sanction for violations of academic integrity, such as plagiarism or cheating on an exam, is a final grade of “F” for the course, and/or suspension or expulsion from the University with a permanent notation on your transcript.

Heavy and/or undocumented reliance on material found on the World Wide Web/internet is discouraged, though identifying information later obtained in hard copy format is not. If web-based material is used, all such material must be fully documented with regard to author as well as the URL.

If you have any questions about academic integrity or citation standards, please ask in advance.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* <http://equity.usc.edu/> or to the *Department of Public Safety* <http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us>. This is important for the safety whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* <http://www.usc.edu/student-affairs/cwm/> provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

Support Systems:

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu/> will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

INSTRUCTOR'S POLICY ON RETENTION OF ACADEMIC WORK PRODUCT:

All exams, quizzes, homework assignments, case studies, projects, and any other academic work product(s) submitted will be retained by the Instructor. You are advised to retain a copy of all work product submitted.

SCHEDULE OF CLASS TOPICS:

The course meets twice per week, for approximately 2 hours each class meeting. Students are expected to attend each class and to have read the required readings *prior* to class so that they can contribute to in-class discussions. Depending on progress during sessions, the topics and readings for each week are subject to change. Guest Speaker availability, if any, is subject to change due to their professional commitments.

There is extensive finance calculation and spreadsheet work throughout the course. In addition, there will be short quizzes and/or homework assignments, including in-class labs. Students are expected to bring a computer to class that is capable of running Excel. Excel exercises will be part of class. Although there will be no instruction on how to use a financial calculator, it is highly recommended that you know how to utilize the functions of a financial calculator and bring it to class each session. Prof. Ruff utilizes the HP12c financial calculator.

A team Final Project will be assigned which requires the identification of a real property currently offered for sale and to generate a series of financial projections for that project, including a narrative, and an in-class equity “pitch.” As RED435 is a pre-requisite for this course, a Rent Survey is required as part of your Final Project. More to follow later on the Final Project.

CLASS MEETINGS:

<i>Date</i>	<i>Title of Material Covered</i>	<i>Nature of Material Covered</i>
Week #1 01/09 and 01/11	Introduction; basic concepts	Monday, 01/09: <ul style="list-style-type: none"> • Review Syllabus, course expectations, etc. • Excel tutorial(s) • Review static pro-forma and metrics • In-class lab • Assign Homework #1: Diagnostic (due 01/10, 5:00pm) Wednesday, 01/11: <ul style="list-style-type: none"> • Review Diagnostic • Excel tutorial(s) • Review TVM concepts #1 (PV, FV, i, n, pmt)
Week #2 01/16 and 01/18	More basic concepts	Monday, 01/16: <ul style="list-style-type: none"> • No class, MLK Jr. holiday Wednesday, 01/18: <ul style="list-style-type: none"> • Review TVM concepts #2 (IRR, NPV) • In-class lab(s) • Assign Homework #2: Reconstruction of operating statement, static metrics (due Monday, 01/23, by 10:00am)
Week #3 01/23 and 01/25	Mortgages (additional applications); Leases	Monday, 01/23: <ul style="list-style-type: none"> • Chapter 6: Mortgages: Additional Concepts, Analysis, and Applications • In-class lab Wednesday, 01/25: <ul style="list-style-type: none"> • Chapter 9: Income-Producing Properties: Leases, Rents, and the Market for Space

		<ul style="list-style-type: none"> In-class lab Assign Homework #3: Static metrics with effective cost of debt (due Monday, 01/30, by 10:00am)
Week #4 01/30 and 02/01	Quiz, Case study #1	<p>Monday, 01/30:</p> <ul style="list-style-type: none"> Quiz; closed book, closed note; you may use a financial calculator and/or spreadsheet for the quiz <p>Wednesday, 02/01:</p> <ul style="list-style-type: none"> Case study #1: Huntington Flats, part 1 (due no later than 10:00am, Monday, 02/06); you may work individually or in teams TBD In-class lab – all kinds of calcs
Week #5 02/06 and 02/08	Case study #1 due, Mid-Term #1	<p>Monday, 02/06:</p> <ul style="list-style-type: none"> Huntington Flats, part 1 due Prepare for Mid-Term #1 <p>Wednesday, 02/08:</p> <ul style="list-style-type: none"> Mid-Term #1; closed book, closed note; you may use a financial calculator and/or spreadsheet for the exam
Week #6 02/13 and 02/15	Review M/T #1, Introduce 10-year DCF model	<p>Monday, 02/13:</p> <ul style="list-style-type: none"> Review Mid-Term #1 Introduce the 10-year DCF model <p>Wednesday, 02/15:</p> <ul style="list-style-type: none"> Underwrite property Build 10-year DCF model In-class lab
Week #7 02/20 and 02/22	Valuation Methodologies; Highest and Best Use	<p>Monday, 02/20:</p> <ul style="list-style-type: none"> No class, President's Day holiday <p>Wednesday, 02/22:</p> <ul style="list-style-type: none"> Chapter 10, Valuation Methodologies Highest and best use In-class lab Homework TBD
Week #8 02/27 and 03/01	Risk Analysis; Partitioning the IRR; Build 10-yr DCF model	<p>Monday, 02/27:</p> <ul style="list-style-type: none"> Chapter 13: Risk Analysis and partitioning the IRR <p>Wednesday, 03/01:</p> <ul style="list-style-type: none"> Quiz #2 – build 10-year DCF model and partition
Week #9 03/06 and 03/08	Marginal rate or return	<p>Monday, 03/06:</p> <ul style="list-style-type: none"> Chapter 14, part 1 In-class lab, MRR

		<p>Wednesday, 03/08:</p> <ul style="list-style-type: none"> • TBD
Week #10 03/13 and 03/15	No class, Spring break	<ul style="list-style-type: none"> • No class, Spring break
Week #11 03/20 and 03/22	Mid-Term #2	<p>Monday, 03/20:</p> <ul style="list-style-type: none"> • Review for M/T #2 <p>Wednesday, 03/22:</p> <ul style="list-style-type: none"> • Mid-Term #2, CLOSED BOOK, CLOSED NOTE
Week #12 03/27 and 03/29	Conclude MRR, Final project team meetings	<p>Monday, 03/27:</p> <ul style="list-style-type: none"> • Conclude MRR – alternatives to disposition (refinance, rehab) • In-class Final Project team meetings <p>Wednesday, 03/29:</p> <ul style="list-style-type: none"> • Conclude in-class Final Project team meetings • Assign Homework #5 – “Rehab or not so much”
Week #13 04/03 and 04/05	Review M/T #2 and Homework #5	<p>Monday, 04/03:</p> <ul style="list-style-type: none"> • Class canceled <p>Wednesday, 04/05:</p> <ul style="list-style-type: none"> • Review M/T #2 and Homework #5
Week #14 04/10 and 04/12	Construction and Landev financing	<p>Monday, 04/10:</p> <ul style="list-style-type: none"> • Chapters 16 and 17 <p>Wednesday, 04/12:</p> <ul style="list-style-type: none"> • Prof. John Loper will guest lecture our class today and will present the topic, “Everything you always wanted to know about leases, but were afraid to ask.”
Week #15 04/17 and 04/19	Structuring Joint Ventures	<p>Monday, 04/17:</p> <ul style="list-style-type: none"> • Chapter 18, the IRR Preference vs. the IRR Lookback (Part 1) <p>Wednesday, 04/19:</p> <ul style="list-style-type: none"> • Chapter 18, (Part 2)
Week #16 04/24 and 04/26	Final Project presentations	<p>Monday, 04/24:</p> <ul style="list-style-type: none"> • Final Project presentations <p>Wednesday, 04/26:</p> <ul style="list-style-type: none"> • Final Project presentations
Final Exam	Monday, May 5 th , 8:00am-10:00am	<ul style="list-style-type: none"> • CLOSED BOOK, CLOSED NOTE. You may use a financial calculator and/or fresh spreadsheet.