

University of Southern California
Price School of Public Policy
RED 362—Real Estate Development Fundamentals
Spring 2021

Professor: Jorge De la Roca

Tuesday and Thursday, online, 12:00–1:50 pm

Office hours: Wednesday, online, 10:00 am–11:00 am and by appointment

Zoom Meeting IDs for classes and office hours are available on Blackboard

Email: jdelaroc@usc.edu

Course description and objectives

This course aims to understand the basics of professional Real Estate development & investment and the urban contexts in which both occur. We will cover the basic techniques of investment analysis and valuation. However, these tools are blind without a richer understanding of how land markets operate and how developers and investors assess and create value. By the end of this course, students will be able to:

- Explain the economic factors of urban growth and decay.
- Describe the location determinants for workers and firms between urban cores and suburbs.
- Analyze the links between the labor, land, and housing markets in response to urban shocks.
- Construct proformas for simple real estate investments.
- Determine the value and performance of real estate investments using proformas and financial ratios.

Course organization and requirements

The course meets twice per week on Tuesdays and Thursdays. It is an intensive class with many assignments and several examinations. There is no time to fall behind; it will be harder to catch up. As such, students should attend every class and review the asynchronous lessons in advance to contribute to in-class discussions. I want to emphasize the importance of your willingness to participate during class and group activities. Your involvement throughout this virtual experience will make it a much more enjoyable journey for everyone.

All assignments will be posted on USC Blackboard. **Note that late assignments will not be accepted and will receive no credit. Exams must be taken at the scheduled time.** If you are unable to turn in an assignment or take an exam for some exceptional reason, please let me know at least 48 hours in advance to come up with an alternative. Most of the other options will involve a grade penalty.

In the final group-based project (three students per group), students put to use the skills they learn throughout the course. The goal is to pursue a first Real Estate investment in a property of their choice within a specified metropolitan area and subject to limited financial resources.

Both midterm exams relate to a course section (e.g., urban economics or real estate finance) and the final exam covers all the class material. I will send all announcements through USC Blackboard.

Students will be graded based on the following criteria:

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| • Homework assignments (3) | 20% |
| • Final group-based project | 20% |
| • In-class midterm exam 1 | 25% |
| • In-class midterm exam 2 | 15% |
| • Final exam | 20% |

A potential grading scale is the following (note that it is subject to slight changes):

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|---|-----------------------------------|
| • A. Work of excellent quality | A (100–91), A- (91–88) |
| • B. Work of good quality | B+ (88–84), B (84–80), B- (80–76) |
| • C. Work of fair quality | C+ (76–73), C (73–71), C- (71–69) |
| • D. Work of minimum passing quality | D+ (69–67), D (67–65), D- (65–63) |
| • F. Failure to adequately complete course work | 63 and below |

Teaching Assistant

Andrew Stables (jstables@usc.edu) will help during the course. Andrew will hold weekly office hours via Zoom on Mondays from 4:00–5:00 pm. Please email him to set up an appointment and ask questions that are best addressed one-on-one.

Class materials

- Required text: Moretti, Enrico. 2012. *The New Geography of Jobs*. New York, NY: Houghton Mifflin Harcourt.
- Suggested textbook: Ling, David and Wayne Archer. 2021. *Real Estate Principles: A Valuation Approach*, 6th edition. New York, NY: McGraw Hill. The ebook rental looks like a good option ([available here](#)).
- Required tools: ms Excel. There is no need to be an expert, but it will help you a lot especially during the second half. We will hold a review session in class but you should start learning it in advance.
- Suggested (weekly) readings: The Economist, LATimes, Wall Street Journal, NYTimes

Student etiquette

usc Price has created a short video illustrating Zoom etiquette. You must view this video before the first class. Keep in mind the following etiquette tips:

- Please mute yourself when you are not talking.
- Use a headset with and external mic for the best audio quality.
- Please don't use the chatroom for non-class related matters.
- Use the "raise hand" feature to let me know you have a question or comment.

- Use a non-distracting virtual background.
- Please dress appropriately.
- “If it’s not appropriate in class, it’s not appropriate online.”

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.

Academic 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 the instructor (or to a TA) as early in the semester as possible. Website and contact information for DSP: [click here](#), (213) 740-0776 (Phone), (213) 740-6948 (TDD only), (213) 740-8216 (FAX), ability@usc.edu.

Support systems

We are sc: This site will replace the USC Coronavirus site over time and has resources and information unique for this semester, including FAQs, COVID-19 testing, Student Health, Mental Health, Housing and Dining, Community Guidelines, Trojan Learn and Check (both required before returning to campus), International FAQs, etc.

usc Experience: This site will become USC’s interactive quad for the semester, including events and unique online experiences.

usc Student Basic Needs: A site for students to request assistance for basic needs from USC, including food insecurity, housing, financial aid, and technology, which can include a Hotspot (for internet access) and a loaner laptop.

usc Keep Teaching Student Toolkit: Includes tools and resources to help students learn, collaborate, communicate, and participate in the online learning environment, including Zoom, Slack, and Google Drive.

National Suicide Prevention Lifeline, 1 (800) 273-8255, 24/7 on call

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Office of Equity and Diversity (OED), (213) 740-5086

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.

Title IX Office, (213) 821-8298

Avenue to report incidents of bias, hate crimes, and microaggressions for appropriate investigation

and response.

[usc Campus Support & 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 at usc](#)

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) 442-120, 24/7 on call

Non-emergency assistance or information.

Broad course schedule

Week 1, Jan 19–Jan 21	Class overview. Why study Real Estate?
Week 2–3, Jan 26–Feb 2	Urban areas: Why do cities exist? Explaining urban growth
Week 3–4, Feb 2–Feb 11	Urban areas: Location choice. The monocentric city model
Week 4–5, Feb 11–Feb 18	Urban areas: Suburbanization
Week 6, Feb 23	Urban areas: Zoning
Week 6, Feb 25	Urban areas: Racial residential segregation
Week 7, Mar 2	Urban areas: First midterm review and Q&A
Week 7, Mar 4	Urban areas: First midterm examination
Week 8, Mar 9	Real Estate fundamentals: Introduction
Week 8, Mar 11	Real Estate fundamentals: Proformas
Week 9, Mar 16–Mar 18	Real Estate fundamentals: Discount rate and present value
Week 10, Mar 23	Wellness Day (No class)
Week 10, Mar 25	First follow-up on final assignment
Week 11, Mar 30–Apr 1	Real Estate fundamentals: Mortgages and debt in proforma
Week 12, Apr 6–Apr 8	Real Estate fundamentals: Financial ratios and valuation
Week 13, Apr 13	Real Estate fundamentals: Guest speaker
Week 13, Apr 15	Real Estate fundamentals: Second midterm review and Q&A
Week 14, Apr 20	Real Estate fundamentals: Second midterm examination
Week 14, Apr 22	Wellness Day (No class)
Week 15, Apr 27–29	Final assignment presentations
Week 16, May 12	Final exam (cumulative), 2:00–4:00 pm

Detailed course schedule and readings

Week 1. Class Overview

We review the organization of the course. We define a metropolitan area and discuss some stylized facts of urbanization and metropolitan areas in the United States. We provide a brief description of how the Real Estate space market and the Real Estate asset market operate.

- Readings: Moretti (NGJ): Introduction; Chapter 1, "American Rust";
Chapter 2, "Smart Labor: Microchips, Movies, and Multipliers."
Supplementary: United Nations. 2019. "World Urbanization Prospects 2018: Highlights";
readings Frey, William. 2012. "Population growth in metro America since 1980:
Putting the volatile 2000s in perspective."

Weeks 2–3. Urban areas: Why do cities exist? Explaining urban growth

We examine some economic factors that explain the existence of cities, mainly agglomeration economies, and discuss the empirical evidence and mechanisms behind them. We then study urban growth/decline based on a city's economic base and the multiplier effect. To this end, we learn a labor market demand and supply framework.

- Readings: Moretti (NGJ): Chapter 3, "The Great Divergence";
Chapter 4, "Forces of Attraction."
Supplementary: Owen, David. 2004. "Green Manhattan";
readings Judis, John B. 2020. "It's the economies, stupid";
Badger, Emily. 2020. "Density is normally good for us. That will be true
coronavirus too";
Davidson, Justin. 2020. "COVID-19 data reveal that urban density is not
the enemy."

Weeks 3–4. Urban areas: Location choice. The monocentric city model

We highlight stylized facts of a city's built-up area, mainly how density and building height vary as we move away from the city center. We then examine firms and workers' location choices within a city and introduce the monocentric city model to explain the tradeoff between commuting costs and demand for land in cities. We will understand bid-rent curves and how land consumption varies throughout a city.

- Readings: Moretti (NGJ): Chapter 5, "The Inequality of Mobility and the Cost of Living";
Chapter 6, "Poverty Traps and Sexy Cities";
Chapter 7, "The New Human Capital Century."
Bertaud, Alain. 2015. "Spatial distribution of land prices and densities:
The models developed by economists."
Supplementary: The Economist. 2019. "Modern cities become less dense as they grow";
readings Shah, Neil. 2015. "The end of the suburbs and four other American
migration myths."

Assignment 1: Due February 11.

Weeks 4–5. Urban areas: Suburbanization

We present suburbanization patterns in the United States and other developed countries, underscoring the main differences between both. We then examine the causes of suburbanization for

firms and households, such as transportation technology changes and the financing of public services. We also define urban sprawl and analyze whether there is a role for government intervention and the implications associated with government policies.

- Readings: Mieszkowski, Peter and Edwin S. Mills. 1993. "The causes of metropolitan suburbanization."
Burchfield, Marcy, Henry G. Overman, Diego Puga, and Matthew A. Turner. 2006. "Causes of Sprawl: A Portrait from Space'."
- Supplementary: Glaeser, Edward L., Matthew E. Kahn, and Jordan Rappaport. 2008. "Why do the poor live in cities? The role of public transportation";
readings Baum-Snow, Nathaniel. 2007. "Did highways cause suburbanization?"

Week 6. Urban areas: Zoning

We present an economic view on land regulation and explain the externalities associated with zoning policies. We then study the causes, characteristics and consequences of three types of zoning policies: use zoning, fiscal zoning, and characteristics/design zoning. Lastly, we examine the implications of growth controls, mainly the case of an urban growth boundary.

- Readings: Postrel, Virginia. 2007. "A tale of two townhouses";
suburbanization."
Fischel, William A. 1997. "Comment on Carl Abbott's 'The Portland region: Where cities and suburbs talk to each other and often agree'."

Week 6. Urban areas: Racial residential segregation

We start by presenting the differences in whites and minorities' preferences for the racial composition of their neighborhoods. We continue examining how extreme segregation can arise from social interactions in white preferences when the share of minorities in a neighborhood reaches a 'tipping' point. We then discuss the enduring effects of segregation policies in u.s. metropolitan areas, such as 'redlining' maps, homeownership, housing values, and credit access.

- Readings: Card, David, Alexandre Mas, and Jesse Rothstein. 2008. "Tipping and the dynamics of segregation";
Aaronson, Daniel, Daniel Hartley, and Bhash Mazumder. 2019. The effects of the 1930s HOLC 'redlining' maps."
- Supplementary: Cutler, David M., Edward L. Glaeser, and Jacob L. Vigdor. 1999. "The rise and decline of the American ghetto";
readings Williams, Aaron and Armand Emamdjomeh. 2018. "America is more diverse than ever—but still segregated."

Assignment 2: Due February 25.

Week 7. Urban areas: First midterm examination

We review Assignment 2 or the previous midterm during class on Tuesday, March 2. You should prepare remaining questions you may have for the first midterm on Thursday, March 4.

Week 8. Real Estate fundamentals: Introduction

We turn into the Real Estate asset market. We study the characteristics that make Real Estate unique and the cyclical behavior of Real Estate markets. We also cover the stages of Real Estate development briefly.

Week 8. Real Estate fundamentals: Proformas

A proforma is a document used to organize and forecast cash flow assumptions for a property. We discuss how the role of cash flows and time frame affect the structure of a proforma. We then study proforma's main components and focus on the revenue and operating expenses of a property.

Week 9. Real Estate fundamentals: Discount rate and present value

Proformas have different time frames and cash flows over time. We investigate in detail the time frame component of proformas to standardize the value of an investment. We study the compounding of interest rates and the concepts of present and future value. We examine how to incorporate opportunity costs, inflation, and risk in the value of money over time. We finish by introducing the concept of discount rate and understanding how it affects project value.

Class discussion on the effects of regulation:

- The Economist. 2015. [Space and the city](#).
- Grabar, Henry. 2016. [The incredible shrinking megacity: How Los Angeles engineered a housing crisis](#).

Week 10. First follow-up on final assignment

We hold our first Wellness Day on March 23 (no class). At this stage, students must have formed their groups (three students per group) for the final assignment. You need to decide the metropolitan area you will invest in and be ready to discuss two or three projects you consider as potential investments.

Week 11. Real Estate fundamentals: Mortgages and debt in proforma

We study the structure of mortgages and the most common types of mortgages. We go through applications of level-payment or self-liquidating mortgages in Excel. We continue analyzing debt service in the proforma and examining the concepts of leveraged and unleveraged cash flows.

Class discussion on the affordable housing crisis:

- Buhayar, Noah and Christopher Cannon. 2019. [How California became America's housing market nightmare](#).
- Dougherty, Conor. 2019. [Why \\$4.5 billion from big tech won't end California housing crisis](#).

Week 12. Real Estate fundamentals: Financial ratios and valuation

We study the most common financial ratios used in Real Estate such as the cash-on-cash, the free and clear return and the debt constant. We continue examining other ratios that are important from the lender's perspective, such as the loan-to-value, the debt coverage and the break-even point. We then explain the concept of capitalization rate as a proxy for project value in Real Estate and the Internal rate of return (IRR) as a complementary measure of value.

Class discussion on the effects of gentrification:

- Badger, Emily. 2015. [Here is everything we know about whether gentrification pushes poor people out](#).
- Cortright, Joe. 2015. [In defense of gentrification](#).
- Capps, Kriston. 2019. [The hidden winners in neighborhood gentrification](#).

Assignment 3: Due April 8.

Week 13. Real Estate fundamentals: Guest speaker

We will have a guest speaker on Tuesday, April 13. Attendance is highly encouraged. On Thursday, April 15, we will have a short review of the second midterm. You should prepare remaining questions you may have.

Additional readings we may cover if time allows:

- Badger, Emily. 2016. *It takes way too long to build new housing in expensive cities.*
- Michele, Lerner. 2018. *10 years later: How the housing market has changed since the crash.*

Week 14. Real Estate fundamentals: Second midterm examination

The second midterm examination will take place on Tuesday, April 20. The exam is not cumulative, only lectures after first midterm will be tested. We hold our second Wellness Day on April 22 (no class).

Week 15. Final assignment presentation

Please find detailed instructions in USC Blackboard. The goal is to pursue your first Real Estate investment using all the tools we have studied in class. For this final assignment, you need to work in groups of three students. The assignment is due Tuesday, April 27, and includes a group presentation with slides of approximately 10-12 minutes, including questions from the audience.

Final examination: Tuesday, May 12, 2:00–4:00 pm