

University of Southern California  
Price School of Public Policy  
RED 362—Real Estate Development Fundamentals  
Fall 2020

Professor: Jorge De la Roca  
Tuesday and Thursday, online, 8:00–9:50 am  
Office hours: Wednesday, online, 9:00 am–10:00 am and by appointment  
Zoom Meeting IDs for classes and office hours are available on Blackboard  
Email: [jdelaroc@usc.edu](mailto:jdelaroc@usc.edu)

### Course description and objectives

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

- Explain 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 are expected to attend every class and review the asynchronous lessons in advance, so that they can 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 in the scheduled time. If for some **exceptional reason** you are unable to turn in an assignment or take an exam, please let me know at least 48 hours in advance, so that I can come up with an alternative. Most of the alternatives will involve a grade penalty.

In the final group-based project 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 neighborhood and subject to an amount of capital.

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**. All announcements will be sent through USC Blackboard.

Students will be graded based on the following criteria:

- Homework assignments (4) 25%
- Final group-based project 10%
- In-class midterm exam 1 25%
- In-class midterm exam 2 15%
- Final exam 25%

### Teaching Assistant

Jordy Coutin ([jcoutin@usc.edu](mailto:jcoutin@usc.edu)) and Andrew Stables ([jstables@usc.edu](mailto:jstables@usc.edu)) will help during the course. Jordy will hold weekly office hours via Zoom on Tuesdays from 2:00-3:00 pm. Andrew hold weekly office hours via Zoom on Mondays from 3:00-4:00 pm. They are also considering holding review sessions before the first and second midterm examinations. Feel free to email them 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: Geltner, David, Norman Miller, Jim Clayton, and Piet Eichholtz. 2013. *Commercial Real Estate Analysis And Investments*, 3<sup>rd</sup> edition. Mason, OH: OnCourse Learning.
- 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 brief review session in class.
- Suggested (weekly) readings
  - Curbed LA: The Los Angeles Neighborhoods and Real Estate Blog, all manner of Southern California Real Estate, <http://la.curbed.com/>
  - Several sources: 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](http://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](mailto: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

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Week 1, Aug 18–Aug 20	Class overview. Why study Real Estate?
Week 1–2, Aug 20–Aug 27	Urban areas: Why do cities exist? Explaining urban growth
Week 3–4, Sep 1–Sep 8	Urban areas: Location choice. The monocentric city model
Week 4–5, Sep 10–Sep 15	Urban areas: Suburbanization
Week 5, Sep 17	Urban areas: Zoning
Week 6, Sep 22	Urban areas: Racial residential segregation
Week 6, Sep 24	Urban areas: First midterm review and Q&A
Week 7, Sep 29	Urban areas: First midterm examination
Week 7, Oct 1	Real Estate fundamentals: Introduction
Week 8, Oct 6	Real Estate fundamentals: Proformas
Week 8–9, Oct 8–Oct 13	Real Estate fundamentals: Discount rate and present value
Week 9–10, Oct 15–Oct 22	Real Estate fundamentals: Mortgages and debt in proforma
Week 11, Oct 27–Oct 29	Real Estate fundamentals: Financial ratios and valuation
Week 12, Nov 3	Real Estate fundamentals: Guest speaker
Week 12, Nov 5	Real Estate fundamentals: Second midterm examination
Week 13, Nov 10–12	Final assignment presentations
Week 14, Nov 17	Final exam (cumulative), 8:00–10:00 am

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## 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 1–2. 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 move to study urban growth/decline based on the concepts of city' 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 the built up area in a city, specially how density and building height vary as we move away from the city center. We then examine location choices of firms and workers 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 September 3.

### Weeks 4–5. Urban areas: Suburbanization

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

for firms and households, such as changes in transportation technology 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 5. 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 consequences 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 the preferences of whites and minorities 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 examine the enduring effects of segregation policies in u.s. metropolitan areas, such as 'redlining' maps, on 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 September 22.

### **Weeks 6–7. Urban areas: First midterm examination**

We review Assignment 2 during class on Thursday, September 24. You should prepare remaining questions you may have for the first midterm on Tuesday, September 29.

### **Week 7. Real Estate fundamentals: Introduction**

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

## **Week 8. Real Estate fundamentals: Proformas**

A proforma is as 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 the main components of the proforma and focus on the revenue side and operating expenses of a property.

## **Weeks 8–9. 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 in order to standardize the value of an investment. We study 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 9–10. 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. We will have a short Excel review during class on October 20.

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.

Assignment 3: Due October 22.

## **Week 11. 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.

## **Week 12. Real Estate fundamentals: Second midterm examination**

We will have a guest speaker on Tuesday, November 3. Attendance is highly encouraged.

The second midterm examination will take place on Thursday, November 5. The exam is not cumulative, only lectures after first midterm will be tested.

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.

Assignment 4: Due November 3.

### **Week 13. 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 four students. The assignment is due Tuesday, November 10 and includes a group presentation with slides of approximately 15 minutes, including questions from the audience.

Final examination: Tuesday, November 17, 8:00–10:00 am