

Econ 448 Syllabus

Spring 2024

Seminar – Housing Markets & Real Estate

Course Meets: Tuesdays, 1:00 pm – 2:50 pm, King 339.

Contact Details

Instructor: Prof. Ron Cheung [he/him]

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Office: Rice Hall 229

In-person office hours. Mondays, 10:30 am – 11:30 am; Wednesdays, 1:30 pm – 2:30 pm; Thursdays, 1:30 pm – 2:30 pm. No appointment necessary; just drop in (first come, first served). None of the times above work for you? Please email me and we'll schedule an alternative time.

Course Description and Learning Objectives

This seminar explores various aspects of real estate and the housing market through reading of microeconomic literature.

- We will start with land, the most fundamental characteristic of real estate, and we discuss its valuation, its regulation and its use.
- Then we dig deep into housing markets, beginning with an important technique known as hedonic pricing. We also look at gentrification and housing policy, particularly as it relates to affordability and access.
- We end the seminar with a look at government and its role in regulating and influencing the housing sector.

Learning goals for this course:

- (1) learn about the issues and complexity facing real estate and housing markets, and how economic analysis can provide insights;
- (2) come up with an original research question related to housing for your term paper;
- (3) find, configure and assemble a data set to answer your question;
- (4) use econometric techniques to execute a thoughtful, scholarly economic research paper;
- (5) improve your oral presentation and critiquing skills by leading class discussion and by presenting the results of your paper.

QFR Goals

This course is designated QFR (Quantitative & Formal Reasoning). This course will focus on the following goals as a way to hone your quantitative and formal reasoning skills:

- Interpretation - Explain information presented in mathematical forms and/or within a formal reasoning system.
- Application / Analysis - Make judgments and draw appropriate conclusions based on the quantitative and/or formal analysis of data.
- Limitations – Identify the assumptions within formal reasoning/mathematical methods; assess the reliability, generalizability, and uncertainty of conclusions; recognize the risks of using methods improperly.
- Communication – Relay results in a manner appropriate to the audience using suitable terminology, symbols, and conventions.

Readings

There are two sets of required readings: a short book and a set of academic journal articles.

Required book: *Fixer-Upper: How to Repair America's Broken Housing Systems* by Jenny Schuetz, published by Brookings Institution Press. Copies of the book are available from the bookstore, or you can purchase one online.

Required readings: Crucial to this course is a set of readings mostly from academic journals. All readings will be posted on Blackboard for you to download. We'll determine a schedule for presentations of readings.

There are also two useful (but not required) textbooks for this class. These are resources for learning more about the fundamental models we study in this class. If you don't want to buy the books, copies of them are in the library:

- John McDonald and Dan McMillen's 2010 book *Urban Economics and Real Estate: Theory and Policy* (2nd edition).
- Denise DiPasquale and William Wheaton's 1995 book *Urban Economics and Real Estate Markets*.

Prerequisites

The two absolute prerequisites for the course are intermediate microeconomics (Econ 253) and econometrics (Econ 255).

- You need micro because this seminar assumes knowledge of the intermediate theory of the consumer and of the firm.
- You need econometrics because the main requirement for passing this course is the completion of an empirical research paper. You must come up with an idea to test empirically, obtain data and analyze it using econometric software (Stata preferred). This does not mean simply calculating averages and plotting graphs; it means applying multiple regression techniques. You will be at a serious disadvantage if you have not taken a course in econometrics.

Remote Accessibility

This information is subject to change depending on the situation.

Meetings

- The course is a traditional class with in-person attendance expected.
- If we ever have to have a virtual class, you will be given the appropriate link.

Submitted Work

- All work for the class will be submitted electronically via Gradescope, which is connected through Blackboard. Some of you may have used the platform for another course; if so, you'll see this course on your dashboard as long as you used your Oberlin email to register.
- I will be providing a separate tutorial on how to use Gradescope.

Grading

There are five components to your course grade.

Participation (15%). Please take an active role in this class. You are expected:

(1) to attend every class. Penalties beyond excusable absences are at my discretion after consultation with you.

(2) to have read the assigned readings and to be prepared to discuss them thoughtfully. All questions are welcome, especially if there are technical/quantitative elements or terms you aren't familiar with. You should keep in mind that this seminar is meant to illustrate the *process* and the *methodology* of economic research, so don't be afraid to ask questions about models, assumptions, data, etc.

Is my absence excused? There are many extenuating reasons why an absence can be excused during a random attendance check: illness, medical emergencies, personal or family emergencies, and others. I encourage you to let me know of these absences in advance, if possible. Obviously, sometimes that is impossible, and it is understandable that you may need to contact me after your absence. In summary, prompt communication is the key to ensuring that you are not penalized for an unexcused absence.

Reading Write-Ups (15%). You must submit in a write-up of your thoughts on the assigned academic paper for each meeting, starting in Week 2. The length of the write-up is suggested to be 1 or 2 double-spaced pages. In the write-up, you should discuss:

- Two things you found interesting about the readings. For example, you can tie it to your own experience or what you'd learned in other classes. You can talk about an aspect of the modeling

that you liked, or something about the data or econometrics. You can also talk about the conclusion the paper draws and any directions for policy that you envision; *and*

- Two potential questions or shortcomings of the paper or ways in which the analysis can be extended. For example, you might question an assumption that the author makes about the model or the data. You might to know how the paper might be different if it was set somewhere else. Or you might take issue with a policy prescription at the end; *and*
- Anything you found unclear, confusing, troubling, etc. It can be the definition of a variable or a term. Or it can be something in the empirical result that are not sure about.

PLEASE type your write-up, as you will convert it to a PDF and submit it to Gradescope by no later than the class start time. I also suggest you bring a copy of it to class so you can reference it while we discuss the paper.

Write-ups will be graded as ✓+ (~A), ✓ (~B) or ✓- (~C). If you get a ✓-, you may choose to redo the assignment. Gradescope will allow you to submit a write-up up to 24 hours late; there will be a one-step penalty for late submissions.

Data Exercises (10%). A series of data exercises will familiarize you with working with datasets. You will need to use Stata (available in the Social Science Data Lab – King 137) to complete most of these exercises. I have asked CIT to give you swipe card access to the King building in the evenings and on the weekends. I will post the code to get into the lab on Blackboard.

Final Presentation (10%). You will present twice in this course. First, beginning in Week 3, each class will have a student responsible for giving a 15 minute presentation of the academic reading for the day. In the last two weeks of class, you will give a 15 minute *presentation* of your paper. You are graded only on this presentation of your paper. Grades are based on preparedness, clarity, organization, flow and depth.

Note: The most challenging aspect of presentations is to distil your understanding of the material, your ideas and your questions into a *very* limited amount of time. As such, time limits for presentations will be adhered to strictly –it’s helpful to do a run-through before you present!

You will receive a handout with directions and guidance for the presentations. It is expected that you’ll use presentation software (PowerPoint, Google Slides, etc.).

Research Paper (50% - see breakdown below). The research paper will be an empirical analysis of a question related to real estate or housing markets. You should select a topic yourself and clear it with me. I will be happy to consult with you regarding topic choice. You cannot pass the seminar without completing an acceptable research paper.

Length: The paper should be between 15 and 20 pages, not counting references, figures and tables, *double-spaced*. Type should be between 10 and 12 point font.

Content: A good paper addresses an interesting and well-defined issue, presents relevant data and methodology and applies economic analysis intelligently. Relevant policy recommendations are

desirable. A good paper is also well organized, clear, free of writing errors and coherent. Please choose a standard format for citing your sources and apply it consistently.

Paper Milestones:

1. **Fri., 23 Feb. 2024: "Preliminary Question"** By this date you should pick a preliminary idea. Submit one or two potential research questions that you are considering addressing – no more than one page per question. Provide a description of why this topic is of interest to you, what data or methods you would ideally use (or know exists) to answer the research question, and (if possible) summarize at least one academic paper that has addressed a similar question. Also **bring a copy of your idea(s) to class Tues. 27 Feb.**, as I will ask each of you to tell us about it.
2. **Fri., 15 Mar. 2024: "Model-Literature."** You must submit a refined research question, as well as a **literature review** related to the topic summarizing at least three academic papers (with a proper annotated bibliography). The research question should, if possible, be written as an empirical model. [In other words, you posit a dependent variable and a set of independent variables). Also, identify at least one data resource that you plan to use and how you will access the data. You should aim for a document length of three to four double-spaced pages.
3. In the week of 19 March, please make an appointment to meet with me to discuss your plan for data collection.
4. **Fri., 5 Apr. 2024: "Model-Literature-Data."** Add to your refined question with more literature that you find, plus a section on your data and your variables. This extended outline will be about 6 pages or so.
5. **Fri., 19 Apr. 2024: "Model-Literature-Data-Results"**. By this time, you should have data, an empirical model and some preliminary results. Please add to your extended outline with some summary statistics of your data and some discussion of your initial results.
6. **Fri., 26 Apr. 2024: "Draft"**. Tighten up your results section, discuss them in the context of your question, and, if possible, craft a conclusion. For this draft, aim for a paper that is about 80% complete. Late drafts will incur a daily penalty of 5% off the final paper grade.
7. **Tue., 30 Apr. and Tue., 7 May:** You will present the draft of your paper to the class. The results may not be your final ones, and you may not have tied everything up in a conclusion yet, but that is all right.
8. **Saturday, 18 May, 11 am ET: "Complete Paper"** After incorporating feedback from your presentation, you must hand in a *complete version* of your paper by this time.

Departmental Final Project Policy

Courses in the Department of Economics have a common final project policy. It is the default policy that if a course has no final exam but has a final project, it is due at the official time and day set by the registrar for a final exam in that class. It is your responsibility to make sure you know the designated exam date for this class by going to <https://www.oberlin.edu/registrar/final-exams> before you continue with this class. The dates and times are provided so you have ample time to plan travel accordingly.

Rescheduling a final project due date is reserved for students facing extenuating circumstances. The department's policy is that you must seek an emergency or educational incomplete from the Academic Advising Resource Center (AARC).

This policy aims to accommodate genuine cases of need while maintaining the integrity and fairness of the assessment process.

In-Class Rules

- Laptops for taking notes and for referencing the assigned articles are acceptable, but I trust you not to use the laptop for non-class related purposes (Internet, instant messaging, browsing for property, etc.).
- Please contribute to classroom discussion, but try not to disrupt other students' learning by arriving late, leaving the classroom frequently, going off-topic with your comments, etc. If you must arrive late or leave early, please let me know if possible.

Honor Code

I, along with the rest of the College faculty, am developing a policy for the use of ChatGPT and other artificial intelligence (AI) tools in the classroom. The speed of evolution in the technology means that policy may need to be tailored and altered dynamically. The following policy is the default policy for this class; I may alter it as necessary.

You **do not** have my permission to use AI software and tools in my class. This applies to all submitted work: assignments, exams, and final project.

Please note that the Student Honor Committee recently updated the Honor Code Charter (found [here](#)), which now includes the following as an example of cheating (see B.2.vii on page 3): Utilizing artificial intelligence software or other related programs to create or assist with assignments on the behalf of a student unless otherwise specified by the faculty member and/or the Office of Disability & Access.

As you do not have my permission to use AI software in the class, instances of suspected violation will be reported to the Honor Committee.

Students with Disabilities

It is the policy and practice of Oberlin College and Conservatory to create inclusive learning environments. If there are aspects of the instruction or design of this course that present barriers to your inclusion or an accurate assessment of your needs to best complete course requirements (e.g., time-limited exams, inaccessible web content, use of videos without captions), please communicate this with your professor and contact the Office for Disability & Access to request accommodations. Office: 440-775-5588, Mudd Center 205. Students can learn more about the accommodation process on ODA's website (www.oberlin.edu/disability-access).

Brief Outline of Course (bold = student presents a paper)

Wk	Day	Topic	Coursework
1	6 Feb.	<i>Introduction; the “Four-Quadrant” Model</i>	
2	13 Feb.	Land	
3	20 Feb.	Hedonic Analysis	“Preliminary Questions” due Fri. 23 Feb.
4	27 Feb.	Development	Share preliminary questions together in class.
5	5 Mar.	Housing Segregation	
6	12 Mar.	Housing Affordability	“Model-Literature” due Fri. 15 Mar.
7	19 Mar.	Housing and the Pandemic	Must schedule a meeting to discuss a plan for data collection.
26 Mar. SPRING BREAK – no class			
8	2 Apr.	Housing Demand: Local Amenities	“Model-Literature-Data” due Fri. 5 Apr.
9	9 Apr.	Housing Supply: Land Use Regulation	
10	16 Apr.	Housing Policy: Public Housing & Gentrification	“Model-Literature-Data-Results” due Fri. 19 Apr.
11	23 Apr.	Housing Policy: The New Economy	“Draft” due Fri., 26 Apr.
12	30 Apr.	<i>Paper Presentations</i>	
13	7 May	<i>Paper Presentations</i>	
			“Complete Paper” due 11 am ET, Saturday, 18 May

Detailed Reading List

(Note: D&W = DiPasquale & Wheaton book; M&M = McDonald and McMillen book.)

Week 1 (6 Feb.) – Introduction; the “Four-Quadrant” Model

Background (no write-ups required)

- Helsley, Robert. Excerpt on the four-quadrant model, 2003. **(Available on Blackboard). Please read after class.**

Week 2 (13 Feb.) – Land

To do before class (No write-up required)

- Take a look at the Lincoln Institute of Land Policy’s *Atlas of Urban Expansion* at <https://www.lincolninst.edu/research-data/data/atlas-urban-expansion>. Take a look at how land is used in different cities around the world. What factors encourage or discourage urban growth? What interesting facts do you notice about cities and how they use land?

For discussion (Write-up required)

- Schuetz, Chapter 1
- Burchfield, Marcy, Henry Overman, Diego Puga and Matthew Turner (2006), “Causes of Sprawl: A Portrait from Space,” *Quarterly Journal of Economics*, 121:2, p. 587-633.

Optional background (no write-up required)

- D&W, Chapter 3

Week 3 (20 Feb.) – What Determines Value: Hedonic Analysis

Read before class (No write-up required) – article is posted in Blackboard

- Sopanzetti, Ben (2010), “Hedonic Regression Analysis in Real Estate Markets: A Primer.” In: Lee CF., Lee A.C., Lee J. (eds) *Handbook of Quantitative Finance and Risk Management*. Springer, Boston, MA. *Section 78.7, 78.8 and 78.9 can be skipped.*

For discussion (Write-up required)

- Schuetz, Chapter 2
- Meltzer, Rachel and Ron Cheung (2014), “How are homeowners associations capitalized into property values?” *Regional Science and Urban Economics*, 46, p. 93-102.

Optional background (No write-up required)

- M&M, Chapter 10, Sections A to E (not including part on discrimination) *and* Appendix
- D&W, Chapter 4, p. 60-72

Week 4 (27 Feb.) – What Determines Value: Development

To do before class (No write-up required)

- Browse through the University City District’s website at <https://www.universitycity.org/>. Take note of what types of activities the district does, and the involvement of the University of Pennsylvania in those activities. In particular, browse through the tab “What We Do” and think about how the local neighborhood is impacted through the district’s projects and initiatives.

For discussion (Write-up required)

- Schuetz, Chapter 3
- Ehlenz, Meagan M. (2016), “Neighborhood Revitalization and the Anchor Institution: Assessing the Impact of the University of Pennsylvania’s West Philadelphia Initiatives on University City,” *Urban Affairs Review*, 52(5), p. 714-750.

Optional background (no write-up required)

- M&M, Chapter 10, Section I

Week 5 (5 Mar.) – Housing Segregation

To do before class (No write-up required)

- Take a look at the “Mapping Inequality” webpage maintained by the University of Richmond at <https://dsl.richmond.edu/panorama/redlining>. Please read the material under the Introduction tab, and then take a look at some historical redlining maps from an area of the country you are familiar with.

For discussion (Write-up required)

- Schuetz, Chapter 4
- Aaronson, Hartley, Mazumder and Stinson (2023), “The Long-Run Effects of the 1930s Redlining Maps on Children,” *Journal of Economic Literature* 61(3), p. 846-862

Optional background (no write-up required)

- M&M, Chapter 10, Section E and F (part on discrimination)
- M&M, Chapter 11, Section C

Week 6 (12 Mar.) – Housing Affordability

Read before class (No write-up required) – follow the link

- Jenny Schuetz, “Yet more evidence that housing affordability is getting worse,” <https://www.brookings.edu/blog/the-avenue/2017/10/31/yet-more-evidence-that-housing-affordability-is-getting-worse/>

For discussion (Write-up required)

- Schuetz, Chapter 5
- Metcalf, Gabriel (2018), “Sand Castles Before the Tide? Affordable Housing in Expensive Cities,” *The Journal of Economic Perspectives*, 32(1), p. 59-80

Optional background (no write-up required)

- M&M, Chapter 11, Section B. Also Chapter 14, Section F.

Week 7 (19 Mar.) – Housing and the Pandemic

To do before class (No write-up required)

- Think of a way in which the pandemic might have fundamentally *or* temporarily altered real estate. This can be residential or commercial; rental, ownership, or even second-home/vacation property. Look in the news for an article about this hypothesis.

For discussion (Write-up required)

- Schuetz, Chapter 6

- Francke, Marc and Korevaar, Matthijs (2021), “Housing markets in a pandemic: Evidence from historical outbreaks.” *Journal of Urban Economics* 123.

Spring break, no class on 26 March.

Week 8 (2 Apr.) – Housing Demand: Local Amenities

To do before class (No write-up required)

- Read the blog article “Building the Housing of the Future” in <https://www.bcg.com/publications/2019/building-the-housing-of-the-future>.
- What kinds of amenities will “add value” to the house of the future? What kinds of amenities may become less important?

For discussion (Write-up required)

- Schuetz, Chapter 7
- Brasington, David and Haurin, Donald (2006), “Educational Outcomes and House Values: a Test of the Value Added Approach,” *Journal of Regional Science* 46(2), p. 245-268. Note the econometric model in Sections 7 and 8 are difficult; do the best as you can in understanding the intuition of these sections.

Optional background (no write-up required)

- M&M, Chapter 14, Sections A-E.

Week 9 (9 Apr.) – Housing Supply: Land Use Regulation

To do before class (No write-up required)

- Watch the video “An Introduction to Zoning” at <https://www.youtube.com/watch?v=9kVWDWMcLT4>.
- Then watch “Are NIMBYs selfish?” at <https://www.youtube.com/watch?v=OrnK90UI9lo>. Do you agree with the presenter’s argument? When may regulation be desirable or undesirable?

For discussion (Write-up required)

- Schuetz, Chapter 8
- Glaeser, Edward and Joseph Gyourko (2018), “The Economic Implications of Housing Supply”, *Journal of Economic Perspectives* 32(1), p. 3-30.

Optional background (no write-up required)

- D&W, Chapter 14

Week 10 (16 Apr.) – Housing Policy: Gentrification

To do before class (No write-up required)

- Read about the “Atlas of Inequality” at <https://www.bloomberg.com/news/articles/2019-03-06/the-atlas-of-inequality-maps-micro-level-segregation>. Then, follow the link to the map (or go to: <https://inequality.media.mit.edu/#>) and explore the atlas. If the atlas covers a city that you are familiar with, take a look at the frequenters of familiar businesses – is there economic segregation?

For discussion (Write-up required)

- Atuesta, Laura and Hewings, Geoffrey (2019), “Housing appreciation patterns in low-income neighborhoods: Exploring gentrification in Chicago.” *Journal of Housing Economics* 44, p. 35-47

Week 11 (23 Apr.) – Housing Policy: The New Economy

To do before class (No write-up required)

- Go to the Airbnb website (www.airbnb.com), and look at the listings in a city you are familiar with. Do you think that Airbnb is materially affecting house prices or rents in this city? Just parts of the city?
- What is the most unusual/amusing/amazing listing you can find on Airbnb?

For discussion (Write-up required)

- Barron, Kyle, Edward Kung and Davide Proserpio (2021), “The Effect of Home-Sharing on House Prices and Rents: Evidence from Airbnb,” *Marketing Science* 40(1): p. 23-47.

Week 12 (30 Apr.) – Student Presentations 1

- Presentations of four student papers.

Week 13 (7 May) – Student Presentations 2

- Presentations of four student papers.