Course Content. This course applies the latest economic thinking and research to the task of analyzing real estate market fundamentals. The first 6 weeks are essentially microeconomic in nature: studying the operation of the perfectly product-differentiated urban land market and the location of different uses within cities. The second half of the course in more macroeconomic: examining the aggregate demand for housing as well as industrial, office, retail commercial space and the innate volatility of stock-flow markets with imperfect information and collateral constraints.

Course Operation. The course involves 25 live lectures. The lecture PPT’s that are posted on Stellar Sunday evenings will be those presented that week in class. The lecture content represents a significant update and expansion of the text DiPasquale and Wheaton, Economics and Real Estate Markets (Prentice Hall, 1996). A full PDF the text is on the stellar site as is a set of journal articles (listed below). All articles are required readings and can also be downloaded.

ALL participants, including instructors, will be masked at all times while in 9-354.

Course Expectations. Course participants will be expected to attend the live lectures. While in the lecture, all participants must have a name-card that is visible to the instructor – no exceptions. In addition to the 2 weekly lectures, and readings, the course involves 5 largely computer-based exercises (40% of grade). These can be done in groups, but each group member must submit a unique (aside from numbers) answer. There will be a closed-book midterm and final exam will each of which will count 30% of the grade. The exams are 1½ hours and cover material in each half of the course.

Recitation, Open Hours. A recitation will be given each Wednesday, 5:00-6:30, conducted by Anne Kinsella Thompson. Professor Wheaton will hold virtual office hours from 3-5pm on Thursdays after class; URL will be forthcoming.

COURSE OUTLINE

I. Introduction (9/9, 9/14)
   A. The Real Estate Sector: Capital and Property markets
      1. Review of Economic concepts with 4 quadrant model
   B. Micro and Macro economic analysis
   C. EXERCISE: Comparative statics: understanding changes in real estate markets (9/9-9/16)

II. Residential land markets: prices, transportation, land use (9/16, 9/21)
   A. Location and rents: spatial equilibrium
   B. Submarkets and land use segregation
   C. Urban growth, rents and prices

III. Residential development (9/23, 9/28)
A. The highest use for residential development
B. Location, land use and density
C. Transition between land uses (gentrification, redevelopment)
D. EXERCISE: determining optimal housing FAR (9/23 – 9/30)

IV. Industrial Location (9/30)
   A. Historical development and changing technology
   B. Transportation and shipping costs
   C. Alternative land uses

V. Office location: Edge Cities, Urban Form (10/5, 10/7)
   A. The office space market and the Labor Market
   B. Theories of Multiple centered cities.
      1. Agglomeration and employment clustering
      2. The commercial Land Market

VI. Retail Location, Shopping Centers, E-commerce (10/12, 10/14)
   A. Retail Travel patterns and the distribution of stores
   B. Pricing, spatial competition, internet competition
   C. Shopping centers, store clustering, agglomeration
   D. EXERCISE: What happened to malls. (10/12-10/17).

MID-TERM EXAM (10/19, class time, on material in sections I-VI)

VII. Regulating/managing Development: City Planning (10/21, 10/26)
    A. Public goods and "Neighborhood" effects.
    B. Internalizing external effects through government or private contracts.
    C. Congestion, transportation infrastructure, planning regional development.

VIII. Local Government and land markets (10/28, 11/2)
    A. Property taxes, public expenditure and local services
    B. Community choice, competition, "capitalization",
    C. The fiscal incentives for land use regulation, income segregation

IX. Macro analysis of housing (11/4, 11/9, 11/16) (no class on 11/11)
    A. Housing units, households and tenure choice, demographic, economic influences
    B. Housing appreciation, mortgages and the cost of owning
    C. Moving, Vacancy and Sales: the demand for housing quality.
    D. Alternative sources of housing supply

X. Macro Analysis of non-residential property (11/18, 11/23, 11/30) (no class 11/24)
    A. The operation of non-residential Markets.
    1. Vacancy, absorption, market frictions
2. Leasing, term structures.
   B. Long term trends in space usage and demand.
   C. Stock flow theory and real estate cycles.
   D. EXERCISE: Developing alternative MSA apartment forecasts (11/30-12/9)

XI. Time Series Analysis of Real Estate Markets (12/2, 12/7)
   A. Asset pricing: expectations, information, "efficient markets". Cap rates
   B. The time-series properties of housing and commercial space markets.
   C. Alternative approaches to forecasting markets.

XII. Regional Growth and Real Estate Markets (12/9)
   A. The determinants of metropolitan growth
      1. Export demand and Industrial development
      2. Innovation, entrepreneurship
   B. A model analyzing impact of demand and supply shocks on real estate
   C. Mobility, economic equilibrium between cities: specialization, labor sorting.

FINAL EXAM: (Week of 12/13, on material is sections VII-XII)
11.433(15.021j) Reading List

I. Introduction, Real Estate micro, macroeconomics: DiPasquale and Wheaton, Chapters 1, 2.

Wheaton, W. et. al., “100 years of Commercial Real Estate Prices in Manhattan”, Real Estate Economics 37, 1 (2009), 69-84.


II. Residential Land Markets: DiPasquale and Wheaton, Chapter 3.


Gupta, Nieuwerburgh, KontoKosta, “Take the Q Train: Value Capture in Public Infrastructure Projects”, NBER, Columbia University WP, (July. 2020)

III. Residential Development: DiPasquale and Wheaton, Chapter 4.


IV. Industrial Location: DiPasquale and Wheaton, Chapter 5.


V. Office Location and Edge Cities: DiPasquale and Wheaton, Chapter 5.


VI. Retail Development: DiPasquale and Wheaton, Chapter 6.


Chetty, R. and N. Hendren, “The Impact of Neighborhoods on Intergenerational Mobility…” (2015), Harvard University and NBER.

Fesselmeyer, Seah, and Kwok, “The Effects of Localized Density on House Prices in Singapore” (2018), Regional Science and Urban Economics, 71,


VIII. Local Governments and Land Markets: DiPasquale and Wheaton, Chapter 13.


IX. Macro housing analysis: DiPasquale and Wheaton, Chapters 8,9,10.

Todd Sinai and N. Souleles "Owner Occupied Housing as a Hedge Against Rent Risk”, *Quarterly Journal of Economics*, (May, 2005), 763-789.


X. Macro Analysis of Non-residential property: DiPasquale and Wheaton, Chapters 11,12.


Adams-Prassl, Boneva, Golin, Rauh, “Work that can be done from Home: Evidence on Variation within and across Occupations and Industries”, *IZA* paper 13374 (June, 2020)

XI. Time Series Analysis of Real Estate Markets.


XII. Regional Growth and Real Estate Markets: DiPasquale and Wheaton, Chapter 7.

Roback, J. "Wages, Rents and the Quality of Life." *Journal of Political Economy* (December 1982)

