This course applies the latest economic thinking and research to the task of analyzing real estate market fundamentals: understanding urban spatial structure, city fiscal and regulatory policies, forecasting supply/demand and real estate cyclicalities. In addition to the 2 weekly lectures, and readings, the course involves 5 largely computer-based exercises (30% of grade), a mid term and final exam (each 35% of grade). The exams are 1½ hours and cover material in each half of the course.

The course materials are two. First, there will be 12 lecture PPT files that represent the material in the lectures (see outline below). *Revisions to these will be posted on the course web site just prior to each set of lectures.* This material represents a significant update and expansion of the text DiPasquale and Wheaton, *Economics and Real Estate Markets* (Prentice Hall, 1996). Some texts are available at the MIT Coop, and CopyTech has Xerox copies (it is officially out of print). However, the lecture files will enable students to cover the material without purchase of the text. Second, there is a set of journal articles (listed below) that are all posted on the course website (either as URLs or PDF files). These are *required* reading and can also be downloaded.

**COURSE OUTLINE**

I. Introduction (9/7, 9/12)
   A. The Real Estate Sector: the Capital and Property markets
      1. Review of Economic concepts
   B. Micro and Macro economic analysis
   C. **EXERCISE**: Comparative statics: predicting changes in real estate markets (9/12–9/19)

II. Residential land markets: prices and land use (*no class on 9/14, 9/19, 9/21*)
   A. Location and rents: spatial equilibrium
   B. Submarkets and land use segregation
   C. Urban growth, rents and prices

III. Residential development (9/26, 9/28, 10/5)
   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 (9/28 – 10/5)

IV. Industrial Location (10/3)
   A. Historical development and changing technology
   B. Transportation and shipping costs
   C. Tax and public policy effects

V. Office location: Edge Cities (10/5, 10/12, *no class on 10/10*)
   A. The office market and the Labor Market
   B. Theories of Multiple centered cities.
      1. Agglomeration and employment clustering
      2. The commercial Land Market
VI. Retail Location, Centers (10/17, 10/19)
   A. Retail Travel patterns and the distribution of stores
   B. Pricing, spatial competition, the internet
   C. Shopping centers, store clustering, agglomeration
   D. EXERCISE: simulating potential shopping center demand (10/19-11/2).

MID-TERM EXAM (10/24– in class, on material in sections I-VI)

VII. Local Government and land markets (10/26, 10/31)
   A. Property taxes, public expenditure and local services
   B. Community choice, "capitalization", and income segregation
   C. The fiscal incentives for land use regulation

VIII. Regulating Development (11/2, 11/16)
   A. Public goods and "Neighborhood" effects.
   B. Internalizing external effects through government or private contracts.
   C. Congestion, transportation infrastructure, planning regional development.

IX. Macro analysis of housing (11/9, 11/14, 11/16)
   A. Units, households and Tenure choice
      1. Demographic, economic influences
   B. Housing appreciation, mortgages and the cost of owning
   C. Moving, Vacancy and Sales: the demand for housing quality.
   D. Housing supply

X. Macro Analysis of non-residential property (11/21, 11/28, 11/30, no class on 11/23)
   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 a market forecast: apartments (11/30- 12/8)

XI. Time Series Analysis of Real Estate Markets (12/5, 12/7)
   A. Asset pricing: Expectations, information, "efficient markets".
   B. The time-series properties of housing and commercial space markets.
   C. Alternative approaches to forecasting markets.
   D. Risk metrics

XII. Regional Growth and Real Estate Markets (12/12)
   A. The Determinants of metropolitan growth
      1. Export demand and Industrial development
      2. Birth rates, migration and Wages
   B. A model analyzing metropolitan growth
      1. Demand and Supply Shocks, real estate and the cost of living
   C. Economic competition within a system of cities

FINAL EXAM: (12/18, 10:30-12:00 in classroom, 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.


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.

Archer, Wayne, Marc Smith, ”Explaining Location Patterns of Suburban Offices”, Real Estate Economics, 31, 2, (2003)


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

Stroebel, J. and J. Vavra, "House Prices, local Demand, and Retail Prices" , (2014), *Chicago Booth School, NYU Stern School.*


Rolheiser, L. "Commercial Property Tax Incidence: Evidence from the rental market", *MIT Center for Real Estate (Cambridge)*, June, 2017

Fuest, Peichl, Siegloch, "Do higher local corporate taxes reduce wages: micro evidence from Germany", *ZEW discussion paper 16-003 (Mannheim)*, December, 2015


Hans Koster, Jan Rouwendal, "The effects of mixed land use on Residential property Values", *Tinbergen Institute Paper TI2010-105/3* (October, 2010).


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”, 


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


XI. Time Series Analysis of Real Estate Markets.


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


