

UNDERGRADUATE REAL ESTATE CONCENTRATION

INTRODUCTION

The Wharton School has offered a real estate concentration for undergraduates since 1985. The concentration consists of one required credit unit and three electives. While the required course focuses on real estate finance, the electives allow students to explore a variety of issues related to real estate. These include real estate development, housing markets, the legal aspects of real estate investment and financing, and the relationship between government policy and real estate development.

The real estate concentration is offered under the auspices of the Real Estate Department of the Wharton School. Professor Gilles Duranton serves as the Chair of the department. Professor Ben Keys is the undergraduate advisor, and can be reached at: benkeys@wharton.upenn.edu. The Real Estate Department is located in 1400 Steinberg-Dietrich Hall and the phone number is 215-898-9687.

Before declaring a concentration at the beginning of their junior year, Wharton undergraduates have built foundations in both business and liberal arts education. The real estate concentration combines and develops the business, analytical, and communication skills students have gained during their first two years at Wharton. The results are students possessing the skills required to enter the business world, as well as an unusual sensitivity to the larger issues involved in creating and maintaining working and living environments.

THE CONCENTRATION

The real estate concentration consists of one required credit unit and three electives. Students concentrating in real estate must take the following course:

REAL 209/FNCE 209	Real Estate Finance: Investment and Analysis
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Three other c.u.s are required from the following list of electives:

REAL 204/LGST 204	Real Estate Law
REAL 205	Global Real Estate: Risk, Politics and Culture
REAL 208/BEPP 208	Housing Markets
REAL 215	Urban Real Estate Economics
REAL 230/FNCE 230/BEPP 230	Urban Fiscal Policy
REAL 236/BEPP 236	International Housing Comparisons
REAL 240	Advanced Real Estate Investment and Analysis
REAL 321*	Real Estate Development
REAL 375	Real Estate Disruptions
REAL 399	Independent Study
REAL 390	International Real Estate Comparisons
REAL 396	Real Estate Entrepreneurship

**with faculty permission in Spring semester*

COURSE DESCRIPTIONS

REAL 204 Real Estate Law

Staff

Cross listed with LGST 204, REAL 804 and LGST 804

Description: This course examines the fundamentals of real estate finance and development from a legal and managerial perspective. The course serves as a foundation course for real estate majors and provides an introduction to real estate for other students. It attempts to develop skills in using legal concepts in a real estate transactional setting. The course will be of interest to students contemplating careers in accounting, real estate development, real estate finance, city planning, or banking. The main topics covered may include the following: land acquisition, finance, choice of entity, tax aspects, management (leasing, environmental), disposition of real property, (sale of mortgaged property, foreclosures, wraparound mortgages, sale-leasebacks); and recent legal developments.

Format: Lectures and class discussion
Requirements: Midterm and final exam
Prerequisites: None
Offered: Both Terms

REAL 205 Global Real Estate: Risk, Politics and Culture

Wong

Cross-listed with REAL 705

Description: This is an introductory course to global real estate markets, with a focus on income-producing real estate assets. Globally, estimates suggest the value of investable real estate assets in the world exceeds \$60 trillion. We will discuss the basics of valuation and risk management, emphasizing concepts that are salient in the global context, including political risk, currency risk, property rights, and culture. The course will cover markets outside the United States, except for one special topic on international investors in the United States. We will focus more on the qualitative aspects of real estate investment analysis and less on the quantitative aspects. As firms expand their ventures across borders, there is a growing emphasis on the ability to assess and manage risk in a global business environment. Many of these decisions have implications on real estate assets. In this class, we will discuss the real estate business decisions of global firms, such as Blackstone, Hilton, AirBNB, WeWork, Prologis, Walmart and Amazon. This is a full semester course, open to undergraduates and MBA's.

Prerequisites: There is no pre-requisite for the course. No prior real estate experience is needed and no prior financial modelling experience is needed.
Format: Lecture with discussion required.
Offered: Will typically be held in the Fall term.

REAL 208 Housing Markets

Gyourko

Cross-listed with BEPP208/REAL708//BEPP708

Description: This course is designed for students interested in the economics and operations of housing markets. It is primarily a U.S. focused course, but does include a limited amount of international material for comparative purposes. The class is divided into four sections: (1) supply and demand for housing, including the operations of homebuilders and rental landlords; (2) house prices, including cycles and price dynamics; (3) international comparisons; and (4) public policy analysis applied to a current housing markets-related issue. This course presumes knowledge of intermediate economics, as we will apply that knowledge throughout the semester. For Wharton students, this means you must have passed BEPP 250 (undergrads) or MGEC 611/MGEC612 (MBAs). Non-Wharton students should have taken the equivalent course in the College.

Prerequisites: Managerial Economics (BEPP 250) or equivalent.
Format: Lecture with discussion required.
Offered: Spring Term

REAL 209 Real Estate Investments: Analysis and Financing

Ferreira, Handbury, Harari, Keys, Sinai, Wong

Cross-listed with FNCE 209

Description: This course provides an introduction to real estate with a focus on investment and financing issues. Project evaluation, financing strategies, investment decision making, and capital markets are covered. No prior knowledge of the industry is required, but students are expected to rapidly acquire a working knowledge of real estate markets. Classes are conducted in a standard lecture format with discussion required. The course contains cases that help students evaluate the impacts of more complex financing and capital markets tools used in real estate.

Format: Lectures and class discussion required.
Requirements: Midterm(s), case studies
Prerequisites: FNCE 100
Offered: Both Terms

REAL 215 Urban Real Estate Economics

Wachter

Cross-listed with REAL 724

Description: Urban Real Estate Economics uses economic concepts to analyze real estate markets, values, and trends. The course focuses on market dynamics in the US and internationally, with an emphasis on how urban growth and local and federal government policies impact urban development and real estate pricing.

A group development project gives hands on experience, and invited guest speakers bring industry knowledge. Besides the group project and presentation, problem sets are required along with a midterm and an optional second exam.

Format: Lectures and discussions; occasional guest lecturers
Requirements: Midterm, market analysis project and second exam.
Prerequisites: FNCE 100 & 101
Offered: Spring Term

REAL 230 Urban Fiscal Policy

Inman, Ferreira

Cross-listed with FNCE 230, BEPP 230, REAL 730, FNCE 730, and BEPP 773

Description: The purpose of this course is to examine the financing of governments in the urban economy. Topics to be covered include the causes and consequences of the urban fiscal crisis, the design of optimal tax and spending policies for local governments, funding of public infrastructures and the workings of the municipal bond market, privatization of government services, and public financial systems for emerging economies. Applications include analyses of recent financial crises, local services and taxes as important determinants of real estate prices, the infrastructure crises, financing and the provision of public education, and fiscal constitutions for new democracies using South Africa as an example.

Format: Lecture and class discussion
Requirements: Midterm and Final Exams
Prerequisites: FNCE 101
Offered: Fall Term

REAL 236 International Housing Comparisons

Wachter

Cross listed with BEPP 236, REAL 836 and BEPP 836

Description: This course analyzes housing finance systems and housing market outcomes across the globe. In the US, the course focuses on development of securitization markets and addresses current challenges of housing finance reform, including the future of Fannie Mae and Freddie Mac. Internationally, the course covers issues of access to housing and housing informality in developing countries, financial crises arising out of the housing sector,

and potential market-oriented and public policy solutions. The course features a wide array of speakers in finance, government and academia who contribute their perspectives to pressing issues of mortgage market design.

Format: Lectures, guest speakers and discussion
Requirements: Paper, Homework assignments, Midterm exam, and a Second exam
Prerequisites: FNCE 101 Monetary Economics and the Global Economy, Econ 10
Offered: Spring Term Only
Other: Real Estate concentration preference

REAL 240 Advanced Real Estate Investment and Analysis

Sinai

Cross listed with REAL 840

Description: This course is designed for majors in Real Estate, but is also open to finance-oriented students who wish a deeper analysis of real estate investment and investment analysis issues than that offered in REAL/FNCE 209. The class will contain a mixture of lectures, guest speakers and case discussions. Academic research is paired with recent industry analysis of key issues in order to marry sound theory and empirical results with current events and practices. Several classes will include lectures outlining what economics and finance tell us about a number of topics. Generally, these will be followed by guest lectures from industry professionals who will focus on a specific application of the principles introduced in the lectures.

Format: Lecture, industry speakers.
Materials: Coursepack
Offered: Spring Term only
Prerequisites: REAL/FNCE 209

REAL 321 Real Estate Development

Staff

Cross listed with ARCH 768 and REAL 821

Description: This course evaluates “ground-up” development as well as re-hab, re-development, and acquisition investments. We examine raw and developed land and the similarities and differences of traditional real estate product types including office, R&D, retail, warehouses, single family and multi-family residential, mixed use, and land as well as “specialty” uses like golf courses, assisted living, and fractional share ownership. Emphasis is on concise analysis and decision-making. We discuss the development process, including market analysis, site acquisition, due diligence, zoning, entitlements, approvals, site planning, building design, construction, financing, leasing, and ongoing management and disposition. Special topics like workouts and running a development company are also discussed. Course lessons apply to all markets but the class discusses U.S. markets only. Throughout the course, we focus on risk management and leadership issues. Numerous guest lecturers who are leaders in the real estate industry participate in the learning process.

Format: Predominantly case analysis and discussion, some lecture, project visits.
Requirements: Class participation, multiple papers. Readings include articles, books, and related materials as well as the case studies.
Prerequisites: REAL/FNCE 209. This prerequisite is STRICTLY enforced for this class unless it is undersubscribed
Materials: Coursepack
Offered: Both terms

REAL 375 Real Estate Disruptions

Duranton, Staff

Cross listed with REAL 875

Description: Real Estate is changing dramatically for the first time in perhaps one hundred years. This class will examine how technology is changing in many facets (all) of the industry. This course will address how technology has already changed the demand for real estate, how it will likely change in the future the way real estate is used, designed, developed, constructed, managed, leased, maintained, and financed. Among many questions to be

considered are: Can you crowd fund real estate development? Will the office business become a part of hospitality? Can we build new buildings like we assemble legos? How will autonomous vehicles affect the demand for space and property values? What is the future of new data analytics services?

This is a team-taught mini half credit course that will bring together a recognized industry leader and Wharton faculty. Included will be a broad set of guest lecturers (Start-up entrepreneurs, incumbents, VCs, non RE technology specialists, etc). We believe there is no one single approach to gain insight about disruptions and change under uncertainty so we will propose a mix of approaches including, in-depth case-studies, interactions with guest lecturers who handle those issues daily, learning from economic history and other industries, and drawing from core economic concepts.

Format:	Team-taught mini half credit course that will bring together a recognized industry leader and Wharton faculty. Included will be a broad set of guest lecturers. It is a first quarter mini.
Prerequisites:	Students are responsible for knowing the material covered in Real Estate Investments (REAL/FNCE 209 AND 721). The class will be taught assuming you have mastered these topics. This pre-requisite is STRICTLY enforced unless the class is under-subscribed.
Offered:	Fall Term only
Grading/evaluation:	2 memos: 20% each, 40% in total 1 business plan for a disruptive RE tech start-up due at the end of the class: 40% (with equal weight to the presentation and the paper) Class participation/attendance: 20%

** This course counts as one half of an elective course.*

REAL 390 International Real Estate Comparisons

Staff

Cross-listed with REAL 890

Description: As a truly non-U.S. focused course, we explore the world of cross-border real estate development, with a focus on fast growing emerging market economies. Topics will emphasize the importance of strategy and implementation in cross-border real estate investment, and include: the rationale, opportunities and risks of international real estate investing; the macro factors that influence the performance of real estate markets across countries; market specific factors that impact RE investment performance (property rights, taxes, transparency, planning procedures); the qualitative aspects of identifying and achieving successful projects; and the growing market for international RE securities and strategies for portfolio management. Classes will combine a lecture on specific aspects of global cross-border RE in the first half of the class and an international case presentations in the second half. Cases will be presented by leading executives in charge of major international RE projects or funds. Cases have been selected to cover different types of RE development – residential, office, retail, hospitality and logistics - important emerging market countries/continents (East / South Asia, Latin America, Sub-Saharan Africa, the Middle East) and different development and investment strategies.

Format:	This course allows for the interaction of faculty lectures, student presentations, case analyses, and leading industry speakers. It is a second quarter mini..
Prerequisites:	REAL/FNCE 209
Materials:	Course pack
Offered:	Fall Term only

**This course counts as one half of an elective course.*

REAL 396 Real Estate Entrepreneurship

Staff

Cross-listed with REAL 891

Description: What makes a successful entrepreneur in the real estate industry? This half semester mini-course exposes undergraduates and MBA students to the broad entrepreneurial aspects of creating and executing real estate investments. The course consists of lectures by the professor, case discussions, and guest lectures by leading

entrepreneurs. Lectures and discussions will emphasize real estate entrepreneurship, leadership and challenges often encountered in creating successful real estate investments rather than development processes. Cases will be used to illustrate investment decision making and financial evaluations. Short written responses to questions raised in each case will be assigned. Class members are expected to engage the speakers with questions and discussion as well as explain their views on cases. Class participation and writings will each represent 50% of the grade.

Format: This course consists of lectures by the professor; case discussion and guest lectures by leading entrepreneurs. It is a first quarter mini.

Materials: Course pack

Offered: Fall Term

**This course counts as one half of an elective course.*

REAL 399 Independent Study

Staff

Description: All independent studies must be arranged and approved by a Real Estate Department faculty member.

Offered: Both Terms

Other: Real Estate concentration preference

ADDITIONAL INFORMATION

Additional information on the opportunities and resources available to students concentrating in real estate at The Wharton School can be found on the following web pages:

The Wharton Real Estate Department:

- <http://real-estate.wharton.upenn.edu/> (World Wide Site)
- **The Wharton Real Estate Club:** <http://www.whartonrealestateclub.com/>
- **The Wharton Geographic Information Systems (GIS) Lab:** <http://gislab.wharton.upenn.edu/>
- **The Samuel Zell and Robert Lurie Real Estate Center at Wharton:** <http://realestate.wharton.upenn.edu/>