

REAL ESTATE (REAL)

REAL 2040 Real Estate Law

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. Lectures and class discussion required.

Fall or Spring

Also Offered As: LGST 2040

1 Course Unit

REAL 2050 Global Real Estate: Risk, Politics and Culture

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 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. Lecture with discussion required.

Fall

Mutually Exclusive: REAL 7050

1 Course Unit

REAL 2080 Housing Markets

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 2500 (undergrads) or MGEN 61100 and 6120 for MBA's. Non-Wharton students should have taken the equivalent course in the College. Lecture with discussion required.

Spring

Also Offered As: BEPP 2080

Prerequisite: BEPP 2500

1 Course Unit

REAL 2090 Real Estate Investment: Analysis and Financing

This course provides an introduction to real estate with a focus on investment and financing issues. Project evaluation, financing strategies, investment decision making and real estate 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 impact of more complex financing and capital markets tools used in real estate. There are case studies and two midterms, (depending on instructor).

Fall or Spring

Also Offered As: FNCE 2090

Prerequisite: FNCE 1000

1 Course Unit

REAL 2150 Urban Real Estate Economics

Urban Real Estate Economics uses economic concepts to analyze real estate markets, values, and trends. The course focuses on market dynamics in the U.S. 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 optional second exam. Lecture with discussion required.

Fall or Spring

1 Course Unit

REAL 2300 Urban Fiscal Policy

This course will examine the provision of public services for firms and people through cities. Why cities exist, when fiscal policy fails, investments in infrastructure, realities of local governments such as inequality, crime, corruption, high cost of living, congestion, and unfunded pensions and debt, will be covered. We will pay special attention to recent topics, such as partnerships with the private sector, enterprise zones, the role of technology, environmental challenges, and real estate policies that promote housing affordability, such as rent control and inclusionary zoning.

Spring

Also Offered As: BEPP 2300, FNCE 2300

1 Course Unit

REAL 2360 International Housing Comparisons

This course analyzes housing finance systems and housing market outcomes across the globe. In the US, the course focuses on the development of securitization markets and addresses the 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 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.

Spring

Also Offered As: BEPP 2360

1 Course Unit

REAL 2400 Advanced Real Estate Investment and Analysis

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 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.

Spring

Mutually Exclusive: REAL 8400

Prerequisite: REAL 2090 OR FNCE 2090

1 Course Unit

REAL 3210 Real Estate Development

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 with topics 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: predominately case analysis and discussion, some lectures, project visits.

Mutually Exclusive: REAL 8210

Prerequisite: REAL 2090 OR FNCE 2090

1 Course Unit

REAL 3700 Real Estate Data Analytics

In real estate investment, data is used in a variety of ways to inform decision-making. The purpose of this course is to gain familiarity with analytical tools and techniques as they relate to guiding investment in primary real estate markets and capital markets. Students will learn statistical methods, data manipulation, data visualization, and apply business analytics tools to data on properties, mortgages, and macroeconomic indicators. A series of guest speakers will demonstrate how analytics is used in the industry, and the strengths and limitations of using data to guide investment decisions. The course will use data analytics to connect economics and finance concepts with real-world applications. The course will primarily use the R software package, but relevant materials will be provided and no prior coding experience is necessary.

Spring

Prerequisite: STAT 1010

0.5 Course Units

REAL 3750 Real Estate Disruptions

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: 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. Includes a broad set of guest lecturers (Start-up entrepreneurs, incumbents, non RE technology specialists, etc). We believe there is no one single approach to gain insight into 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.

Fall

Mutually Exclusive: REAL 8750

Prerequisite: REAL 2090 OR FNCE 2090

1 Course Unit

REAL 3900 International Real Estate Comparisons

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 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. This class is offered in the second half of the semester.

Fall

Mutually Exclusive: REAL 8900

Prerequisite: REAL 2090 OR FNCE 2090

0.5 Course Units

REAL 3960 Real Estate Entrepreneurship

This half-semester course will focus on entrepreneurial aspects of the real estate investment business. The course structure is designed to track the life cycle of real estate investing with different units focusing on discrete stages of the deal process from sourcing and capital raising through asset management and property disposition. At each juncture, granular attention will be paid to real-life deal making skills, all from the perspective of an entrepreneur operating with limited resources in different economic environments. As part of the class, you will analyze deals, models and investment documentation that, once assembled, will arm you with a "deal tool kit" that you can reference as you engage in real estate transactions throughout your career. At the end of the course, time will be allocated to discuss the trajectory of entrepreneurship and how it corresponds to careers in the real estate business.

Fall or Spring

Mutually Exclusive: REAL 8910

Prerequisite: FNCE 1000

0.5 Course Units

REAL 3990 Independent Study

All independent studies must be arranged and approved by a Real Estate department faculty member.

Fall or Spring

0.5-1 Course Unit

REAL 7050 Global Real Estate: Risk, Politics and Culture

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. Lecture with discussion required.

Fall

Mutually Exclusive: REAL 2050

1 Course Unit

REAL 7080 Housing Markets

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 2500 (undergrads) or MGEC 6110 for MBA's. Non-Wharton students should have taken the equivalent course in the College. Lecture with discussion required.

Spring

Also Offered As: BEPP 7080

Prerequisite: MGEC 6110

1 Course Unit

REAL 7210 Real Estate Investment: Analysis and Financing

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 impact of more complex financing and capital markets tools used in real estate. Lecture with discussion required.

Fall or Spring

Also Offered As: FNCE 7210

Prerequisite: FNCE 6110

0.5-1 Course Unit

REAL 7230 Introduction to Real Estate

The goal of this class is to help students become informed consumers of real estate advice. The class material breaks down into four major sections: 1) The financial risk and return of property level real estate investments. Be able to interpret, understand and evaluate a real estate property investment pro forma. 2) The legal landscape for investing in real estate and using legal structures to manage risk. 3) The economics of commercial real estate markets. Understanding the forces that will determine the value and income-producing potential of a real estate investment. 4) Important real estate issues of the day.

Fall or Spring

0.5 Course Units

REAL 7240 Urban Real Estate Economics

Urban Real Estate Economics uses economic concepts to analyze real estate markets, values, and trends. The course focuses on market dynamics in the U.S. 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 optional second exam. Lecture with discussion required.

Fall or Spring

Also Offered As: REAL 9450

Prerequisite: MGEC 6110 AND MGEC 6120

1 Course Unit

REAL 7300 Urban Fiscal Policy

This course will examine the provision of public services for firms and people through cities. Why cities exist, when fiscal policy fails, investments in infrastructure, realities of local governments such as inequality, crime, corruption, high cost of living, congestion, and unfunded pensions and debt, will be covered. We will pay special attention to recent topics, such as partnerships with the private sector, enterprise zones, the role of technology, environmental challenges, and real estate policies that promote housing affordability, such as rent control and inclusionary zoning.

Fall

Also Offered As: BEPP 7730, FNCE 7300

1 Course Unit

REAL 8040 Real Estate Law

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. Lectures and class discussion required.

Fall or Spring

Also Offered As: LGST 8040

1 Course Unit

REAL 8210 Real Estate Development

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 with topics 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: predominately case analysis and discussion, some lectures, project visits.

Also Offered As: ARCH 7680

Mutually Exclusive: REAL 3210

Prerequisite: REAL 7210 OR FNCE 7210

1 Course Unit

REAL 8360 International Housing Comparisons

This course analyzes housing finance systems and housing market outcomes across the globe. In the US, the course focuses on the development of securitization markets and addresses the 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 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.

Spring

Also Offered As: BEPP 8360

Prerequisite: FNCE 6130

1 Course Unit

REAL 8400 Advanced Real Estate Investment and Analysis

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 721. 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.

Spring

Mutually Exclusive: REAL 2400

Prerequisite: REAL 7210 OR FNCE 7210

1 Course Unit

REAL 8700 Real Estate Data Analytics

In real estate investment, data is used in a variety of ways to inform decision-making. The purpose of this course is to gain familiarity with analytical tools and techniques as they relate to guiding investment in primary real estate markets and capital markets. Students will learn statistical methods, data manipulation, data visualization, and apply business analytics tools to data on properties, mortgages, and macroeconomic indicators. A series of guest speakers will demonstrate how analytics is used in the industry, and the strengths and limitations of using data to guide investment decisions. The course will use data analytics to connect economics and finance concepts with real-world applications. The course will use the R software package, but relevant materials will be provided and no prior coding experience is necessary.

Spring

Prerequisite: STAT 6130

0.5 Course Units

REAL 8750 Real Estate Disruptions

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: 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 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, VC's, non RE technology specialists, etc). We believe there is no one single approach to gain insight into 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.

Fall

Mutually Exclusive: REAL 3750

Prerequisite: REAL 7210 OR FNCE 7210

1 Course Unit

REAL 8900 International Real Estate Comparisons

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 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. Prerequisite: This class is offered in the second half of the semester.

Fall

Mutually Exclusive: REAL 3900

Prerequisite: REAL 7210 OR FNCE 7210

0.5 Course Units

REAL 8910 Real Estate Entrepreneurship

This half-semester course will focus on entrepreneurial aspects of the real estate investment business. The course structure is designed to track the life cycle of real estate investing with different units focusing on discrete stages of the deal process from sourcing and capital raising through asset management and property disposition. At each juncture, granular attention will be paid to real-life deal making skills, all from the perspective of an entrepreneur operating with limited resources in different economic environments. As part of the class, you will analyze deals, models and investment documentation that, once assembled, will arm you with a "deal tool kit" that you can reference as you engage in real estate transactions throughout your career. At the end of the course, time will be allocated to discuss the trajectory of entrepreneurship and how it corresponds to careers in the real estate business.

Fall

Mutually Exclusive: REAL 3960

Prerequisite: FNCE 6110

0.5 Course Units

REAL 8990 Independent Study

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

Fall or Spring

0.5-1 Course Unit

REAL 9450 Urban Real Estate Economics

Urban Real Estate Economics uses economic concepts to analyze real estate markets, values, and trends. The course focuses on market dynamics in the U.S. 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 optional second exam. Lecture with discussion required.

Fall or Spring

Also Offered As: REAL 7240

Prerequisite: MGEC 6110 AND MGEC 6120

1 Course Unit

REAL 9460 Advanced Topics in Urban Economics

This course addresses advanced topics in urban and real estate economics. The course will mix theory and empirics and will cover a broad range of topics including the modeling and estimation of agglomeration economies, land use and urban costs, transportation in cities, urban growth, migration between cities etc. The classes will mix formal presentations made by the instructor and student-led discussions of recent academic papers. In addition to presentations, students will be expected to complete a series of assignments including a short original research paper. PhD students will be expected to complete a research paper in addition to the successful completion of the course examination requirements. Prerequisites: The course assumes that students have familiarity with standard first year econometrics and microeconomics.

Fall or Spring

0.5-1 Course Unit

REAL 9470 Advanced Real Estate and Urban Economics

This course covers fundamental topics in the broad fields of urban economics and real estate. We will focus on the application of econometric methods and economic modelling to analyze important issues, such as household sorting and valuation of local amenities, racial segregation, and the provision of local public goods.

Not Offered Every Year

0.5-1 Course Unit

REAL 9480 Household Real Estate Decision-Making

In this course we will study theory and evidence of how households make decisions surrounding real estate, how they interact with the financial sector, and how housing and mortgage choices influence urban markets and household balance sheets. We will examine real estate decisions from both supply and demand perspectives. There will be a special focus on the tools of modern empirical research, emphasizing the many challenges to causal identification and popular methodologies to overcome and address these challenges. The course will cover topics in mortgage choice, refinancing, renegotiation, default and foreclosure, discrimination, housing search, and market segmentation. Prerequisites: The course assumes that students have familiarity with standard first year econometrics and microeconomics.

Spring

0.5 Course Units

REAL 9620 Applied Economics Seminar

The goal of this course is to help doctoral students develop critical thinking skills through both seminar participation and writing of referee reports. To this end students will attend the Wharton Applied Economics each Wednesday at noon seminar when it meets; prepare two written referee reports on WAE papers per semester, due before the seminar is presented. After attending the seminar and the ensuing discussion of the paper, students will prepare follow-up evaluations of their referee report reports, due one week after the seminar.

Two Term Class, Student may enter either term; credit given after both terms are complete

Also Offered As: BEPP 9620

0.5-1 Course Unit

REAL 9950 Dissertation

Dissertation

Fall or Spring

0 Course Units

REAL 9999 Independent Study

Independent Study

Not Offered Every Year

1 Course Unit