

COLUMBIA  
**GSAPP**  
REAL ESTATE  
DEVELOPMENT

COURSE SYLLABUS

**PORTFOLIO AND RISK MANAGEMENT**

**SPRING 2018**

**PLAN 6712 1.5 CREDITS**

**Instructor:**

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**Teaching Assistant:**

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**Schedule:**

Thursdays, 2:00pm-4:00pm  
200 S. Fayerweather

**COURSE DESCRIPTION**

This course is intended to give students of real estate development a foundation in portfolio and risk management as it applies to individual real estate investments, multiple investments, and portfolios of mixed real estate assets and real estate assets (including securities) as a component of institutional portfolios. This course examines the methods employed in both strategic and tactical decision-making. Students learn how to balance the potential for positive financial reward with concurrent exposure to risk and uncertainty in both single assets and portfolios. The course provides an examination of modern portfolio theory, capital market theory, and asset pricing models, particularly as they apply to real estate. The course evaluates advantages and disadvantages of small versus large-scale investments, single versus multiple property type portfolios, and local, regional, national, and global market diversification strategies. It will also examine the interaction of volatility, risk, and diversification.

**COURSE STRUCTURE**

The class will involve a mix of weekly in-person lectures and active discussion by all students. Please make sure to check Canvas regularly, as it will be used for posting the course syllabus, selected class materials/handouts, and other relevant material.

**Application:**

Most critical to the student's learning in this course is the application of the learnt concepts and methods of finance to real life real estate development and investment situations. This application will be achieved by the student's participation in the following activities:

1. **Attendance and Participation in Class:** Concepts and analytical methods will be learned by reasoning through the real estate investment and development processes. Students are **expected to engage** in

these investigative sessions with the professor by asking questions, responding to queries, and challenging notions.

2. **Exams** will be undertaken **individually** by the student throughout the semester in order to ascertain that specific student's progress in understanding and utilizing the concepts and analytical methods.

## **COURSE REQUIREMENTS**

Students will be expected to attend and participate in class discussions as these will factor in to the final grade.

- **Attendance:** Class attendance will be reflected in the final grade. An email notifying the professor of your expected absence is recommended. If a class is missed, the student is responsible for reviewing the posted class notes and make arrangements to meet with the professor to ensure that the lessons of the missed class are understood.
- **Class Participation:** Students are required to participate in all class discussions. Active participation will be an essential component of your grade in the course.
- **Class Preparedness:** Students are required to read all assigned readings for each class, together with any supplemental presentations, case studies and homework assignments. Readings from the required textbook (or e-book) and recommended readings are provided in the Course Outline below.

## **CLASS TEXTBOOKS**

- Optional textbook: *Investment Analysis and Portfolio Management*, 10<sup>th</sup> edition; Frank K. Reilly, Keith C. Brown
- Optional textbook: *Commercial Real Estate Analysis and Investments*, Geltner, D., Miller, N., Clayton, J. and Eichholtz, P.
- Optional textbook: *Does the Capital Asset Pricing Model Work?*, Mullins, David W. Jr (Harvard Business Publishing: <https://cb.hbsp.harvard.edu/cbmp/pages/home>)

## **COURSE GRADING CRITERIA**

**Course grading criteria are as follows:**

- 1) Attendance and class participation in the discussion of technical material, quizzes, and case studies: 10%.
- 2) FINAL EXAM: 90%

## **Course Outline:**

Session 1: 03/22/18

Topics: Course Overview; Introduction to Statistics and Investments; Efficient Market Hypothesis

Reading Assignment:

- *Geltner, Miller, Clayton, Eichholtz, Chapter 7, 13.1-13.2*
- *Reilly, Brown, Chapters 1, 6*

Session 2: 03/29/18

Topics: Modern Portfolio Theory

Reading Assignment:

- *Geltner, Miller, Clayton, Eichholtz, Chapter 21*
- *Reilly, Brown, Chapter 7*

Session 3: 04/05/18

Topics: Modern Portfolio Theory (continued); Capital Market Theory and Asset Pricing Models

Reading Assignment:

- *Geltner, Miller, Clayton, Eichholtz, Chapter 21*
- *Reilly, Brown, Chapter 7*

Session 4: 04/12/18

Topics: Capital Market Theory and Asset Pricing Models (continued)

Reading Assignment:

- *Geltner, Miller, Clayton, Eichholtz, Chapter 22*
- *Reilly, Brown, Chapters 8*

Session 5: 04/19/18

Topics: Testing of Capital Market Theory and Pricing Models

Real Estate Derivatives

Reading Assignment:

- *Reilly, Brown, Chapter 9*

Session 6: 04/26/18

Real Estate Derivatives (continued)

Topic: The Real Economy and Real Estate / Importance of Cycles

Reading Assignment:

- *Size-Tiered Economic Geography: A New View of the US Real Estate Markets*  
Smith, A., Hess, R., and Liang, Y. Prudential Real Estate Investors, October 2004
- *Size-Tiered Economic Geography: 2010 Update*  
Liang, Y., Fiorilla, P., and Lumban-Tobing, P. Prudential Real Estate Investors, July 2010
- *Life After The Disconnect*  
Prudential Real Estate Investors, June 2004
- *The Retail-Office Performance Rotation: Implications for Investors*  
Conner, P. and Severino, R. Prudential Real Estate Investors, January 2006
- *Deleveraging the Commercial Real Estate Market*  
Fiorilla, P and Hess, R. Prudential Real Estate Investors, December 2008

**Final Take-Home Exam**