

Department of Urban and Regional Planning

URP6931: Housing and Real Estate Finance

Fall 2024

Monday 3:00-3:50 pm; Wednesday 3:00-4:55 pm

RNK 0220

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Office hours: MW 1:30-2:30 pm

[Book online only](#)

Course description

This course is intended for planning and design students interested in housing and real estate finance. It will impart students with the applied skills used by public and private professionals working in the housing and real estate sector. Throughout the semester, students will learn fundamental financial and mortgage analysis skills, valuation and appraisal techniques, investment metrics and analysis, financial feasibility for redevelopment vs new construction, dealmaking, and equity financing with public incentives.

Students will navigate case studies of real-world examples and engage with professionals working in the field to gain a broader perspective of the practice of housing and real estate development. Special topics include but are not limited to affordable housing finance, home insurance crisis, inflation and interest rates, and climate finance. By the end of the semester, students will be able to complete an analysis for a housing/real estate acquisition or new development project.

Learning objectives

1. Demonstrate technical competence in all forms of real estate finance from calculating mortgage payments to analyzing cash flows and economic returns across major property types.
2. Achieve proficiency in property valuation techniques.
3. Integrate public financing opportunities into proformas.
4. Understand current trends in real estate capital markets.
5. Demonstrate an understanding of the implications of various tax issues for real estate development and investment.
6. Navigate common decision-making issues in real estate.

Prerequisites

No prior experience in finance is required.

Required text and technology

1. *Brueggeman W and Fisher JD (2022) *Real Estate Finance & Investments 17th edition*. New York: McGraw Hill.
2. Harvard Business School Coursepack available at: <https://hbsp.harvard.edu/import/1195483>
3. HP-12c financial calculator—purchase an online app for your phone for a few dollars
4. Microsoft Excel

*The textbook is available in the reserves at the Architecture and Fine Arts Library and online.

Recommended but optional

Peiser R and Hamilton D (2012) *Professional Real Estate Development: The ULI Guide to the Business*, 3rd edition. Washington DC: The Urban Land Institute.

Detter D and Fölster S (2017) *The Public Wealth of Cities: How to Unlock Hidden Assets to Boost Growth and Prosperity*. Brookings Institution Press.

Assignments and evaluation

Your evaluation is based on the following course components:

| | | |
|----------------------------------|------------|---------------------|
| 1. Problem sets and assignments: | 15% | ongoing |
| 2. Mortgage quiz: | 5% | September 23 |
| 3. Appraisal project: | 10% | October 18 |
| 4. Midterm exam: | 25% | November 6 |
| 5. Final project: | 25% | December 9, 5:00 pm |
| 6. Participation: | <u>20%</u> | ongoing |
| | 100% | |

A complete course schedule is provided below. Note most assignments are due outside of the class period.

The relationship between letter grades and numeric grades is: (≥ 94.0), A- (≥ 90.0), B+ (≥ 87.0), B (≥ 83.0), B- (≥ 80.0), C+ (≥ 77.0), C (≥ 73.0), C- (≥ 70.0), D+ (≥ 67.0), D (≥ 63.0), D- (≥ 60.0), and E (< 60.0). Where A=4.0, A-=3.67, B+=3.33, B=3.0, B-=2.67, C+=2.33, C=2.0, C-=1.67, D+=1.33, D=1.0, D-=0.67, E=0.0.

Problem sets

Problem sets will be turned in by 5 pm on Fridays. They are due via the Canvas course site and will be graded either full credit or zero credit. Credit is given for your hand-written or computer spreadsheet (for advanced problem sets) attempts to solve the problems; not for getting the right answer. You should show all your work. Answers-only copies will receive no credit. If you cannot work a problem, at least give it your best "college try." **The only way to learn this material is by struggling with the problems yourself. You should plan on 2-4 hours of problem sets each week. Be advised that you have a problem set due almost every week.**

Mortgage quiz

Financial analysis and skills learned in this class are cumulative. Therefore, it is critical that all students have a solid grasp of mortgages before advancing. The mortgage quiz will be taken in class on **Monday, September 23.**

Appraisal exercise

This is a team exercise. The purpose is for you to practice the art of appraising property – determining its market value. The assignment is to estimate the value of five buildings – office, industrial, houses, mixed-use – of your choosing. They should be the same property type (for example, five industrial or five apartment buildings). **The appraisal exercise is due Friday, October 18.**

Midterm

The midterm will be worth approximately 140 points. The mid-term exam will be given during regular class on **Wednesday, November 6.** It is required. **No make-ups will be given for the mid-term exam.**

Final project

The final project is a team project (2 people per team). The purpose is to do an analysis of a real estate acquisition or new development project. The project may be located in any city. The project will be worth approximately 140 points. It is due on **Monday, December 9. Like the midterm, it is required and expected to be turned in on the due date.** A paragraph describing your final project or paper is due on **Friday, November 8.**

Participation

Class participation is a critical element of this course. Students will be graded on the quality of their questions and comments, not the quantity. This course assumes students have zero experience working with finance. For that reason, I highly encourage students to ask questions. I consider it a plus that a student is intellectually curious enough to try to clarify their understanding of the material. The quality of a student's questions is frequently the best indicator of superior work.

Course policies and information

Class format

This class is a combination of learning and doing. It meets twice weekly for lectures, technical instruction, case study discussions, and guest speakers. Graded assignments and case studies are hands-on, analyzing real-world examples and applying lessons to create deliverables related to housing finance and real estate development, such as pro formas. Students should always come to class prepared, bringing their textbook, case studies, notes, financial calculator, and/or Excel. Students are responsible for any classes they miss. Please consult the schedule for content; do not email the professor and ask, "what did I miss?"

Lectures and notes will often be uploaded to Canvas *before* the in-class meeting. This ensures students can follow along, take relevant notes for their learning, and prepare questions in advance.

Group work is a vital component of this class. At various junctures, students will find themselves in groups (i.e., appraisal project and final project). Forming study groups is encouraged but not mandatory.

“Help desk”

This class moves quickly and builds on the skills previously learned. It is important to not fall behind if things are confusing. To give everyone a chance to seek additional clarification, students can anonymously post a term, concept, or problem set solution that they have a question to on Canvas. These must be posted by Monday at 10:00 am. They will be addressed a few hours later in Monday's class. Of course, students are encouraged to engage and ask questions throughout the week, but this serves as an extra check-in to clear up any lingering doubts before we move forward.

Attendance policy

Attendance during class time is required. Absence can be waived for UF-excused reasons with prompt communication and documentation. If you miss a class, check the syllabus and inquire with classmates.

Two missed classes are allowed with acceptable, documented, and prompt reasons for absence, with communication to the instructor as early as possible: <https://gradcatalog.ufl.edu/graduate/regulations/>.

Email

Please use your University of Florida account to email me and use "DCP 6931" in the subject line. I will do my best to respond promptly, though please do not expect an immediate response. I will respond to your email within 1-2 business days. Please do not ask questions over email that require a lengthy response. You should see me during office hours to ask any in-depth questions.

Canvas

It is your responsibility to check this course's Canvas site regularly (at least once a week). Course materials (e.g., assignment instructions, problem set solutions, lecture notes) and announcements will be provided via Canvas. All written work must be submitted via Canvas unless otherwise specified during class.

Students requiring accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should contact the Disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs as early as possible in the semester.

Course evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback professionally and respectfully is available at gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at gatorevals.aa.ufl.edu/public-results/

Recording

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the University, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or guest lecturer during a class session.

Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

University honesty policy

All UF students are **required** to follow the University's Honor Code, which includes issues of cheating, plagiarism, and honesty. Any violation of the academic integrity expected of you will result in a minimum academic sanction of a **failing grade on the assignment or assessment. Be advised that** assignments may be screened for plagiarism using Turnitin's text-matching tool and AI detecting tools GPTZero, GPT-2 Dector, and AI Content Dector. Any alleged violations of the Student Honor Code will result in a referral to Student Conduct and Conflict Resolution. Please review the Student Honor Code and Student Conduct Code at <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>.

Student privacy

Federal laws protect your privacy concerning grades earned in courses and on individual assignments. For more information, please see <https://registrar.ufl.edu/ferpa/>.

Campus resources

Health and Wellness

U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can contact the student.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

Some basic concepts

For-sale versus income property

There are two main classes of property-type. *For-sale* property which includes houses, condominiums, and land, and *Income-property* which includes apartments, industrial, office, retail, and hotels. The distinction is fundamental to real estate finance because the analytical approach is different, and the methods of financing are different. The market value of *for-sale* property is determined primarily from comparable sales of similar properties. The market value of *income property* is determined by capitalizing the income stream (dividing the Net Operating Income by the capitalization rate). This course deals primarily with *income property* analysis but we will cover *for-sale* single-family housing.

Debt versus equity

When you purchase a property, you pay for it usually with a combination of debt and equity. Debt includes long term and short term mortgages which may have multiple positions or *liens* if you have more than one mortgage. Equity refers to the cash you put into the purchase, often referred to as the *down payment*. In larger transactions the equity may be put up by a group of investors or form a joint venture or limited partnership to own the real estate. To understand real estate, you must understand both debt and equity. The course begins with debt – mortgage computations and the *effective cost of borrowing* from the borrower's and the lender's perspectives. The 'meat' of the course is determining the ultimate value to the owner (the equity investor). We measure the value using Discounted Cash Flow (DCF) techniques – primarily Net Present Value (NPV) and Internal Rates of Return (IRRs).

Public versus private equities

A revolution in the ownership of real estate has occurred in the United States during the 1990s. For the first time, significant amounts of property are owned by public companies, primarily Real Estate Investment Trusts (REITs). REITs and other publicly-traded real estate companies allow many investors to buy shares of stock in a portfolio of properties. This course will introduce you to REITs, securitized mortgages, and other publicly traded real estate instruments. However, its primary focus is the analysis of the real estate itself at the project level– called 'direct ownership,' usually in the form of *private* ownership through limited partnerships. Portfolio analysis and investment through funds and publicly-owned vehicles are topics primarily discussed in advanced real estate analysis courses.

5 stages of analysis

The analytical methodology for income property is organized into five stages of analysis. You should memorize these stages as they will be frequently referred to in class.

The 5 stages of analysis for income-producing property in real estate are:

- Stage 1 - Simple Capitalization methods
- Stage 2 - Discounted Cash Flows during Operating Period (Investment Analysis for income properties)
- Stage 3 - Combined Cash Flows of Development and Operating Periods
- Stage 4 - Monthly Cash Flows during Development Period
- Stage 5 - Joint Venture and Syndication Analysis

This course emphasizes Stages 1,2, and 5. Stages 3 and 4, but they are described in detail in the book, *Professional Real Estate Development*. Analysis of *for-sale* property (land, single-family homes, condominiums) uses a different methodology from that used for *income property*. The methodology referred to in-class as "Land Development analysis" is appropriate for all for-sale property types.

COURSE SCHEDULE

| Class | Day | Month | Date | Topic | B&F readings | Assignments | Case | Case source | Guest lecture |
|-------|-----|-----------|------|--|----------------------------------|---|----------------------------------|-------------|---------------|
| 1 | M | August | 26 | Introduction | | | | | |
| 2 | W | | 28 | Time value of money; 6 functions of \$1 | Ch. 3 | Watch lecture video | | | |
| 3 | M | September | 2 | | | | | | |
| 4 | W | | 4 | Mortgage fundamentals | Ch. 3 | | | | |
| | F | | 6 | | | Problem set 1 due (problems 3.1-3.16) | | | |
| 5 | M | | 9 | Standard fixed-rate mortgages | Ch. 4 | | | | |
| 6 | W | | 11 | Standard fixed-rate mortgages | | | | | |
| | F | | 13 | | | Problem set 2 due (problems 4.1-4.13) | | | |
| 7 | M | | 16 | Valuation and appraisal; NOI and cap rate | Ch. 10 | | | | |
| 8 | W | | 18 | Valuation and appraisal | | Appraisal project begins | | | |
| | F | | 20 | | | Problem set 3 due (problems 10.1-10.7) | | | |
| 9 | M | | 23 | Renting vs. owning | Ch. 7 (skim—focus on case study) | Mortgage quiz | To buy or what to buy? | HBS | |
| 10 | W | | 25 | Single-family housing | | | To buy or what to buy? continued | HBS | LF |
| | F | | 27 | | | To buy or what to buy models due | | | |
| 11 | M | | 30 | Multifamily development; stages of development | Ch.16 p.521-545 | | Liberty Square | HBS | |

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| 12 | W | October | 2 | Nonprofit housing development | | | | | FW |
| | F | | 4 | | | Liberty Square due | | | |
| 13 | M | | 7 | Alternative mortgage instruments; adjustable rate mortgages | Ch. 5 | | | | |
| 14 | W | | 9 | Alternative mortgage instruments; adjustable rate mortgages | | | | | |
| | F | | 11 | | | Problem set 4 due (problems 5.1, 5.2, and 5.6) | | | |
| 15 | M | | 14 | Cap rates; simple return measures | Ch. 12 | | | | |
| 16 | W | | 16 | Leverage & 9 relationships | | | | | |
| | F | | 18 | | | Appraisal project due | | | |
| 17 | M | | 21 | DCF and leverage investment analysis | Ch. 9 | | Angus Cartwright III | HBS | |
| 18 | W | | 23 | Multiperiod DCF analysis | | | Angus Cartwright III | HBS | |
| | F | | 25 | | | Angus Cartwright III DCF due | | | |
| 19 | M | | 28 | Large-scale land development and sale analysis | | | Kitson & Partners (Babcock Ranch) | HBS | |
| 20 | W | | 30 | Land development and climate change | | | Kitson & Partners (Babcock Ranch) | HBS | |
| | F | November | 1 | | | Babcock Ranch due | | | |
| 21 | M | | 4 | Midterm review | | | | | |
| 22 | W | | 6 | Midterm exam | | | | | |

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| | F | | 8 | | | Final project proposal due | | | |
| 23 | M | | 11 | | | | | | |
| 24 | W | | 13 | Legal interests | Ch.1 | | Notes on forms of real estate ownership | HBS | |
| 25 | M | | 18 | Financing affordable housing | | | LIHTC | HBS | |
| 26 | W | | 20 | Capital stacks | | | Via Verde | HBS | |
| | F | | 22 | | | Via Verde pro forma due | | | |
| 27 | M | | 25 | <i>Thanksgiving break</i> | | | | | |
| 28 | W | | 27 | <i>Thanksgiving break</i> | | | | | |
| 29 | M | December | 2 | REITs and Secondary Mortgage Markets | Ch.20-21 (skim) | | How institutional investors think about real estate | HBS | CD |
| 30 | W | | 4 | Real estate funds | Ch.22 (skim) | | Buying a property in a hot market | HBS | |
| | M | | 9 | | | Final project due by 5pm | | | |