### Real Estate Finance, Fall 2025

REAL4000 and REAL5440 Tuesday 1:30 pm-4:20 pm, BLB 040 Office Hours: Tu 11:00 am-12:00 pm

And by appointment

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Instructor: Yingchun Liu

Teaching Assistant (TA): To be announced

TA office hours: to be announced.

# **Overview**

This course exposes students to the fundamentals of real estate finance. The primary objective is to examine real estate capital markets, both debt and equity. We will begin by looking at the primary residential mortgage market and the mathematics and finance of residential mortgage cash flows and pricing, understanding the pros and cons of various mortgage products. We will then move into the commercial real estate market. The tools and concepts are similar to residential markets, and we will focus on the unique characteristics of the commercial market. The last part of this class will study the secondary market for mortgage funds with a study of simple pass-through residential mortgage pass-through securities.

# **Course Objectives:**

After completing this course successfully, the student should be able to:

- understand the structure of the mortgage market
- understand the pros and cons of various types of mortgages
- perform basic calculations of various mortgage instruments
- understand the need and structure of the secondary mortgage market
- understand common types of mortgage-backed securities

### **Textbook and Calculator:**

Real Estate Finance & Investments, by <u>William B. Brueggeman</u>, <u>Jeffrey Fisher</u>,17<sup>th</sup>. My lectures will follow the Brueggeman book loosely in most sessions, and I will have supplemental materials during some sessions. You will also need a **calculator**. I strongly recommend a financial calculator. I will use Texas Instruments' BA II Plus during class.

This course will require considerable study outside of class. The course will be structured as a combination of lectures, discussions, and related reading assignments and problem sets. The best way to prepare for exams is to do the assigned problems. It is very important that you keep up with the assigned work so that you will not be overwhelmed at exam time.

# **Grading**

No make-up exam. Plan your schedule accordingly.

Homework	10%
Quiz	10%
2 Midterms	50%
Final	30%*
Total	100%

• \* For REAL5440 students, the final exam is 25% and 5% for a project. Details to follow.

The final grading scale is:

A: >= 90%

B: 80% - 89%

C: 70% - 79%

D: 60% - 69%

F: =<59%

#### **Grade Appeals**

All grade appeals must be made within three days after the grade is posted. I will not look into grade appeals after three days have passed the date of grade posting for any exam, homework, or quiz.

#### E-mail

I will reply to emails in a timely fashion. Sometimes your questions are important enough that they are worth bringing to the attention of the whole class, I will address them in our class.

#### **Homework, Quiz, and Guest Speaker**

You will have weekly homework questions from the book and supplementary questions throughout the semester. It is very important that you work on them. The goal of these questions is to help you understand the material and prepare for the exams. Submit your homework **in a Word file** (in Canvas) with your name. Any other form of submission will get you a zero for that assignment.

Note that questions similar to these may appear on a quiz/exam, so it is important that you understand how to work these problems. There will be weekly quizzes given throughout the semester. These quizzes will be on the material that was discussed in the previous week. Each quiz will take about 15 minutes. Students who miss a quiz will receive a zero on the quiz. No make-up quizzes. The quiz is administered through Canvas at the beginning of class. The quizzes and exams are in class.

We will have 2 guest speakers during the semester. You are required to write a report on the guest presentation. Details will follow. Attendance **is required** for both guest speakers. If you miss the presentation, you will receive a zero for this week's assignment. No exception.

### **Exams**

There will be 2 midterms and a final exam. Midterm Exams will cover the new material. The final exam is cumulative. No make-up exams. You may have a one-page cheat sheet for all the exams. All the exams are for two hours.

A laptop is required for all exams. It is your responsibility to obtain a properly functioning laptop for all the exams. All exams will be administered **in class** through Canvas using Respondus Lockdown Browser. Respondus Lockdown browser can be downloaded through your Canvas account.

#### **Tutoring Service:**

Students can access the Finance Tutor Lab for help with class materials. Current lab hours are posted on the Tutor Labs website at this link: <a href="https://cob.unt.edu/students/tutor-labs">https://cob.unt.edu/students/tutor-labs</a>

# **Student Perceptions of Teaching (SPOT)**

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available late in the semester to provide you with an opportunity to evaluate how this course is taught. You will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Please look for the email in your UNT email inbox. Simply click on the link and complete your survey. Once you complete the survey, you will receive a confirmation email that the survey has been submitted.

ADA Accommodation Statement. UNT makes reasonable academic accommodations for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time; however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information, see the ODA website at disability.unt.edu.

### **Academic Integrity**

The G. Brint Ryan College of Business takes academic honesty seriously. Ethics and integrity are important business values, essential to building trust and adhering to both professional and legal standards. Academic dishonesty destroys trust, damages the reputation and the value of the degree, and is unacceptable.

According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to, cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions from admonition (a warning) to expulsion from the University.

Some of the most common examples of academic integrity violations include plagiarism or cheating, such as unauthorized assistance on examinations, homework, and research papers. Your work must be entirely your own.

Another example of academic dishonesty relates to improper attribution. When preparing your assignments, you must cite all outside sources in the manner requested by your instructor. Copying or using material from any source prepared by or previously submitted by others, at UNT or other institutions, or downloaded from the Internet, is plagiarism. Unless directed otherwise in an assignment, large-scale "cutting and pasting" from other sources, even if properly footnoted, is not appropriate. You should synthesize this material in your own words and provide a footnote.

I will specify what materials, if any, may be used on the tests and exams. Using materials other than those permitted, talking with other individuals during the exam, individuals exchanging information about an exam when one has taken the exam and the other has not, or copying or using material from another individual's exam is academic dishonesty and will result in a meeting to discuss academic integrity violations and potentially issue sanctions mentioned above, and may result in ineligibility for academic scholarships. The use of online assistance, such as sites commonly used for finding homework solutions, group chat, cell phones, smart watches, and similar tools during exams is not allowed for any reason unless specifically permitted. No portion of an exam may be copied or photographed without permission.

Students are expected to conduct themselves in a manner consistent with the University's status as an institution of higher education. A student is responsible for responding to a request to discuss suspected academic dishonesty when issued by an instructor or other University official. If a student fails to respond after a proper attempt at notification has been made, the University may take appropriate academic actions in the absence of the student's participation.

<u>Syllabus Change Policy</u>: The instructor reserves the right to change this syllabus if needed. Announcements will be made in Canvas.

### This schedule is tentative, depending on how we progress in the class.

# Course Schedule (Tentative, we will have some flexibility with guest lecture/speaker)

Week1

INTRODUCTION TO REAL ESTATE FINANCE

Reference: Chapter 1, 2

Week 2, 3, 4, 5 MORTGAGE

Reference: Chapters 3, 4, and 5

### Week 6: Exam I, September 23 (Week 1 to Week 5 materials)

# Week 7: Guest Lecture, September 30, residential mortgage, to be announced.

Week 8

MORTGAGES: EXTENSION

Reference: Chapter 6

Week 9

RESIDENTIAL MORTGAGE CHOICE

Reference: Chapter 7

Week10

UNDERWRITING AND FINANCING RESIDENTIAL PROPERTIES

Reference: Chapter 8

#### Week 11: Exam II, October 28

#### Week 12: Guest Lecture, November 4 (commercial real estate) to be announced.

Week13

COMMERCIAL MORTGAGE

Reference: Chapter 12

Week14

VALUATION OF MORTGAGE-BACKED SECURITIES

Reference: Chapters 19 and 20

Week 15: Review

Week 16: Final Exam, December 9, during class time.