



# THE OHIO STATE UNIVERSITY

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## FISHER COLLEGE OF BUSINESS

**BUSINESS FINANCE #: 7241**

**COURSE NAME: Real Estate Finance**

**Spring 2024**

### **COURSE DESCRIPTION:**

This graduate course will examine real estate as an asset class and reinforce the position that real estate is an important component of well-diversified portfolio. The course's goal is to provide students with a solid foundation in the building blocks of real estate finance. The abbreviated course will step through a review the major real estate sectors – Multifamily, Retail, Office, Industrial plus Hotel. It will move with an overview of Modern Portfolio Theory (MPT) and Capital Asset Pricing Model (CAPM) and discuss the real estate finance concepts such as Capitalization Rate (Cap Rate), Discounted Cash Flow (DCF) and Mortgage Amortization. The class will review the real estate capital stack and discuss the use of equity and debt in the financing of real estate. The course will touch on the various types of real estate debt from construction to permanent financing along with the current underwriting metrics used by today's practitioners. The course will then move into real estate due diligence, financial modeling and real estate valuation. The course will conclude with the underwriting of an industrial acquisition and the completion of Investment Committee Memorandum (IC Memo).

At the completion of the class, students should be able to demonstrate a fundamental understanding of:

- Real estate as an asset class in a well-diversified portfolio.
- Real estate capital stack – equity and debt financing
- Various real estate debt structures along with current underwriting metrics.
- Alternative financing structures including sale-leasebacks, participating debt and ground leases.
- Real estate due diligence, financial modeling (DCF) and real estate valuation

### **CLASS MEETINGS:**

Gerlach Hall; Room 355

Th. 6:15-9:30 p.m.

### **CLASS MATERIALS:**

- Real Estate Finance and Investments – Risk and Opportunities, Peter Linneman, Ph.D. and Bruce Kirsch – Fifth Edition. The Fifth Edition has an on-line companion that students may find helpful.
- Book is available at [www.linnemanassociates.com](http://www.linnemanassociates.com).
- Business calculator – HP12C or TI BA II Plus. You will need to become acquainted quickly with these calculators. These will be used in class and for Worksheet Assignment.
- Microsoft Excel.
- Course readings/presentations and worksheet assignments will be posted on Carmen (<http://carmen.osu.edu>).
- Any additional course material will also be posted to Carmen prior to class. It is expected that student be ready to actively participate in class discussion. The link and information to access the material will be posted on the content section of the course website. Please check this regularly

- Supplemental readings related to current events may be added to the course website and/or distributed in class. I am planning on taking the first 10-15 minutes of class to discuss any interesting current real estate market news. Students are encouraged to bring articles for discussion. Good resources are the WSJ, Heartland News, JLL, Colliers and CBRE.

### **PRINCIPAL INSTRUCTOR:**

Stephen Stuckwisch, MBA, CFA, CAIA

Fisher College of Business

614-292-5085

[stuckwisch.1@osu.edu](mailto:stuckwisch.1@osu.edu)

### **OFFICE HOURS**

Fisher Hall, Room 314

- T, Th 4:00 – 5:00 p.m.
- By Appointment

### **GRADING:**

| IC Memo/Worksheets/Participation                    | Date           | % of Grade |
|---|----------------|------------|
| Group Project - IC Memorandum                       | April 19, 2024 | 40         |
| - IC Memorandum Presentation                        | April 18, 2024 |            |
| Worksheet Assignments                               |                | 30         |
| - Amortization Worksheet                            | March 7, 2024  |            |
| - Cap Rate Worksheet                                | March 21, 2024 |            |
| - Real Estate Capital Stack Worksheet               | March 28, 2024 |            |
| - Waterfall and Impact of Sponsor Promote Worksheet | April 4, 2024  |            |
| - Development Feasibility Worksheet                 | April 11, 2024 |            |
| Participation                                       |                | 30         |
| Total   |                | 100        |

### Worksheets Assignments:

The class will have five worksheet assignments that cover various parts of real estate finance. These will be due the following class after the material has been covered. These are open book assignments and need to be completed independently by each student.

### IC Memorandum and Presentation:

Students will form five-member IC Project Groups using Carmen. Project groups will need to be formed by Sunday, March 2, 2024. Each Project Group will appoint one member to be group Lead. I will communicate with each Lead on the project. The Lead is responsible to keep the Project Group on pace with the IC Memo. Each group will be responsible for evaluating an actual broker Offering Memorandum (OM) for Medical Office Building (MOB) portfolio that was offered for sale. Over the term, each group will research the market, analyze the comparable properties and prepare an IC Memo. Examples of IC Memos will be available on Carmen. The IC Memo will be due by 11:59 p.m. Friday, April 19, 2024. Each team will present its IC Memo at the final class on Thursday, April 18, 2024 during a Mock Investment Committee of industry practitioners. The OM for the MOB portfolio that will be analyzed will be posted to Carmen by February 28, 2024.

### Class Participation/Three Questions:

Participation during class is a vital part of this class. It is expected that you have read the material prior to class and come prepared to discuss in class. Each student is expected to prepare three questions for each of the two broader topic areas (a total of six questions per week) that we will be covering each week and be ready to discuss if called upon. I will be tracking attendance and participation and expect each one to contribute to the class on a regular basis. In addition to attendance, we will be discussing current real estate events at the beginning of class. These may come from the Wall Street Journal (WSJ) or other real estate publications. I highly encourage students to read the WSJ on a daily basis. The participation grade will include thoughtful questions, respect for your fellow students and prohibition of electronic devices in class, except for laptops/iPads and business calculators.

### Wall Street Journal:

WSJ offers a discounted Student on-line subscription at  
<https://store.wsj.com/shop/us/us/wsstudentinterns23>

### The New York Times:

OSU offers free subscriptions to The New York Times at  
<https://usq.osu.edu/resources/initiatives/new-york-times-subscription>

### Grading Scheme:

This class will follow the OSU standard Grade Scheme. The OSU Standard Grade Scheme is:

| The OSU Standard Grade Scheme |    |
|-------------------------------|----|
| 93-100                        | A  |
| 90-92.9                       | A- |
| 87-89.9                       | B+ |
| 83-86.9                       | B  |
| 80-82.9                       | B- |
| 77-79.9                       | C+ |
| 73-76.9                       | C  |
| 70-72.9                       | C- |
| 67-69.9                       | D+ |
| 60-66.9                       | D  |
| Below 60                      | E  |

### **EXPECTATIONS:**

#### Electronic Devices:

The absence of unnecessary distractions and interruptions is essential for positive and effective learning environment. Therefore, students **may only** use a laptop or iPad to access the presentations during class or take notes. Except for business calculators, any other electronic device **may not** be used in class without submitting a prior written request and receiving explicit permission from the instructor. All non-approved electronic devices must be turned off and put away prior to the start of the class. The instructor reserves the right to disallow laptops and iPads if they are used for other purposes other than accessing the current class material or taking notes.

### Exam Policy:

The IC Memo will serve as the final exam in the course. **All students must be present for the IC Memo Presentation on Thursday, April 18, 2024 from 5:45 – 9:45 p.m. There will be no excused absences for this date.**

### Extra Credit

Extra credit will not be offered unless it is available to the entire class.

### Office Hours and Communication

In addition to the set office hours, but will be available to speak to any student by appointment. Please e-mail at both my OSU ([stuckwish.1@osu.edu](mailto:stuckwish.1@osu.edu)) to make an appointment. In the e-mail, please give me a general idea of the topic you wish to discuss so I may be better prepared before our appointment. I will respond as soon as I am able, but no later than 48 hours.

### Course Website

I will maintain communication through Carmen (<http://carmen.osu.edu>). I will use this website post course material, readings and assignments. Please check this regularly.

### **SAFETY AND HEALTH REQUIREMENTS:**

All teaching staff and students are required to comply with and stay up to date on all [University safety and health guidance](#),

### **DISENROLLMENT:**

University Rule 3335-8-3 provides that a student may be dis-enrolled after the third instructional day of the semester, the first Friday of the semester, or the student's second class session of the course, whichever occurs first, if the student fails to attend the scheduled course without giving prior notification to the instructor.

### **ACADEMIC MISCONDUCT:**

Academic misconduct will not be tolerated. According to University Rule 3335-1-31-02, all suspected cases of academic misconduct will be reported to the Committee on Academic Misconduct.

### **DISABILITY SERVICES:**

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic,-or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are isolating while waiting for a COVID-19 test result, please let me know immediately. Those testing positive for COVID-19 should refer to the [Safe and Healthy Buckeyes site](#) for resources. Beyond five days of the required COVID-19 isolation period, I may rely on Student Life Disability Services to establish further reasonable accommodations. You can connect with them at [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; or [slds.osu.edu](http://slds.osu.edu).

## CLASS SCHEDULE:

| Week   | Date              | Topic  |
|--|-------------------|--|
| <b><u>Section 1 - CAPM and the RE Financial Foundation</u></b>                   |                   |  |
| WEEK 1   | February 29, 2024 | Review of the Major Property Types+Hotels/Risk and Returns                 |
|  |                   | MPT - Real Estate as an Asset Class and Capital Asset Pricing Model (CAPM) |
| WEEK 2   | March 7, 2024     | Annuities, Present Value and Amortization                                  |
|  |                   | Perpetuities, Gordon Model and Capitalization Rate (Cap Rate)              |
|  |                   | Amortization Worksheet   |
| WEEK 3   | March 14, 2024    | Spring Break - No Classes  |
| WEEK 4   | March 21, 2024    | Real Estate Capital Stack (Equity versus Debt)                             |
|  |                   | Real Estate Equity/Use of Debt and Mortgages - Underwriting Metrics        |
|  |                   | Cap Rate Worksheet   |
| WEEK 5   | March 28, 2024    | Construction, Transitional and Permanent Debt Financing                    |
|  |                   | Sale Leaseback, Participating Debt and Ground Leases                       |
|  |                   | Real Estate Capital Stack Worksheet  |
| <b><u>SECTION 2: Due Diligence, Financial Modeling and Real Estate Value</u></b> |                   |  |
| WEEK 6   | April 4, 2024     | Real Estate Cycles and Analyzing Metropolitan Long-term Growth Patterns    |
|  |                   | Real Estate Due Diligence and Commercial Lease Analysis                    |
|  |                   | Waterfall and Impact of Sponsor Promote Worksheet                          |
| WEEK 7   | April 11, 2024    | Real Estate Owners Exit Strategies and Return Profiles                     |
|  |                   | Development Feasibility and Real Estate Proforma (DCF)                     |
|  |                   | Development Feasibility Worksheet  |
| <b><u>SECTION 3: Investment Committee Memorandum</u></b>                         |                   |  |
| WEEK 7   | April 18, 2024    | IC Memorandum Presentation   |
|  | April 19, 2024    | Group Project Due - IC Memorandum due by 11:59 p.m.                        |

(Note: This syllabus is subject to change)