



THE OHIO STATE UNIVERSITY

FISHER COLLEGE OF BUSINESS

BUSINESS FINANCE #: 7241

COURSE NAME: Real Estate Finance

Summer 2022

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 on 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).

LEARNING OUTCOMES:

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:

Distance Learning:

CarmenZoom (www.osu.zoom.us)

Sunday, May 14, 2022 9:30-1:00 p.m.

Sunday, May 22, 2022 9:30-1:00 p.m.

Sunday, June 5, 2022 9:30-1:00 p.m.

Saturday, June 11, 2022 9:30-1:00 p.m.

Saturday, June 18, 2022 9:30-1:00 p.m.

Saturday, June 25, 2022 9:30-1:00 p.m.

Monday, July 27, 2021 6:00-9:15 p.m.

COURSE MATERIALS AND TECHNOLOGIES:

Book, Readings and Lectures:

- Real Estate Finance and Investments – Risk and Opportunities, Peter Linneman, Ph.D. and Bruce Kirsch – 5.1 Edition. The 5.1 Edition has an on-line companion that students may find helpful.

- Book is available at Linnenman Associates (www.linnenmanassociates.com), The Ohio State University Bookstore (www.ohiostate.bncollege.com) and Amazon (www.amazon.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>).
- Lectures will be via CarmenZoom (www.osu.zoom.us).
- 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.

Required Equipment:

- Computer: Current Mac (MacOS) or PC Windows (Windows 10) with high-speed internet connection.
- Webcam: Built-in or external webcam, fully installed and tested.
- Microphone: Built-in laptop or tablet mic or external microphone
- Other: A mobile device (smartphone or tablet) to use for BuckeyePass authentication.

Software:

Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365. Visit the installing Office 365 (www.go.osu.edu/office365help).

If you do not have access to the technology you need to succeed in this class, review options for technology and internet access at <http://www.go.osu.edu/student-tech-access>.

CarmenCanvas Access:

You will need to use [BuckeyePass](http://buckeyepass.osu.edu) (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you do each of the following:

- Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](http://go.osu.edu/add-device) (go.osu.edu/add-device) help article for step-by-step instructions.
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- [Install the Duo Mobile application](http://go.osu.edu/install-duo) (go.osu.edu/install-duo) on all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at [614-688-4357 \(HELP\)](tel:614-688-4357) and IT support staff will work out a solution with you.

Technology Skills Needed for this Course:

- Basic computer and web-browsing skills
- Excel skills

- [Navigating CarmenCanvas](https://go.osu.edu/canvasstudent) (go.osu.edu/canvasstudent)
- [CarmenZoom virtual meetings](https://go.osu.edu/zoom-meetings) (go.osu.edu/zoom-meetings)

Technology Support:

For help with your password, university email, CarmenCanvas, or any other technology issues, questions or requests, contact the IT Service Desk, which offers 24-hour support, seven days a week.

- **Self Service and Chat:** go.osu.edu/it
- **Phone:** [614-688-4357 \(HELP\)](tel:614-688-4357)
- **Email:** servicedesk@osu.edu

PRINCIPAL INSTRUCTOR:

Stephen Stuckwisch, MBA, CFA, CAIA

Fisher College of Business

614-537-4887 (cell)

stuckwisch.1@osu.edu

sestuck@gmail.com

OFFICE HOURS

By Appointment; available by telephone or CarmenZoom.

GRADING:

IC Memo/Worksheets/Participation	Date	% of Grade
Group Project - IC Memorandum	June 28, 2022	40
- IC Memorandum Presentation	June 27, 2022	
Worksheet Assignments		30
- Amortization Worksheet	June 5, 2022	
- Cap Rate Worksheet	June 11, 2022	
- Real Estate Capital Stack Worksheet	June 18, 2022	
- Waterfall and Impact of Sponsor Promote Worksheet	June 25, 2022	
- Development Feasibility Worksheet	June 27, 2022	
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 three to five-member IC Project Groups using Carmen. Project groups will need to be formed by Saturday, May 21, 2022. Each group will be responsible for evaluating an actual broker Offering Memorandum (OM) for a newly constructed core industrial building 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. Tuesday, June 28, 2022. Each team will present its IC Memo as the final exam on Monday, June 27, 2022 between 6:00-9:15 p.m. during a Mock Investment Committee comprised of industry experts. The Mock IC will be conducted via Zoom. The OM for the industrial property that will be analyzed will be posted to Carmen by May 15, 2022.

Class Participation/Three Questions:

Research shows regular participation is one of the highest predictors of success. While this class is 100% on-line, active participation during class is seen as a vital part of the 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 keep their webcam on and be prepared to discuss the material during class time. Students are 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 call 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, the participation grade will include thoughtful questions, respect for your fellow students, especially in the on-line format.

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:

Webcam:

This is class in 100% on-line, but is structured for active participation. It is expected for students to keep their webcam on during class and be ready to participate with questions and discussion.

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 Monday, June 27, 2022 from 6:00 to 9:15 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

I will not have 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) and my personal (sestuck@gmail.com) 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 the Announcement tool in Carmen (<http://carmen.osu.edu>). I will use this website to post course material, readings and assignments. Please check this regularly.

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 INTEGRITY POLICY:

[See Descriptions of Major Course Assignments](#) for specific guidelines about collaboration and academic integrity in the context of this online class.

Ohio State's Academic Integrity Policy:

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the university's [Code of Student Conduct](#) (studentconduct.osu.edu), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the university's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the university or subvert the educational process." Examples of academic misconduct include (but not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the university's *Code of Student Conduct* is never considered an excuse for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- [Committee on Academic Misconduct](http://go.osu.edu/coam) (go.osu.edu/coam)
- [Ten Suggestions for Preserving Academic Integrity](http://go.osu.edu/ten-suggestions) (go.osu.edu/ten-suggestions)
- [Eight Cardinal Rules of Academic Integrity](http://go.osu.edu/cardinal-rules) (go.osu.edu/cardinal-rules)

Copyright for Instructional Materials:

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct:

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at equity.osu.edu,
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately. The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

Your Mental Health:

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. No matter where you are engaged in distance learning, The Ohio State University's Student Life Counseling and Consultation

Service (CCS) is here to support you. If you find yourself feeling isolated, anxious or overwhelmed, [on-demand mental health resources](https://go.osu.edu/ccsondemand) (go.osu.edu/ccsondemand) are available. You can reach an on-call counselor when CCS is closed at [614- 292-5766](tel:614-292-5766). **24-hour emergency help** is available through the [National Suicide Prevention Lifeline website](https://suicidepreventionlifeline.org) (suicidepreventionlifeline.org) or by calling [1-800-273-8255\(TALK\)](tel:1-800-273-8255). [The Ohio State Wellness app](https://go.osu.edu/wellnessapp) (go.osu.edu/wellnessapp) is also a great resource.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES:

Requesting Accommodations:

The university strives to make all learning experiences as accessible as possible. 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 \(SLDS\)](#). After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services.

Disability Services Contact Information

- Phone: [614-292-3307](tel:614-292-3307)
- Website: slds.osu.edu
- Email: slds@osu.edu
- In person: [Baker Hall 098, 113 W. 12th Avenue](#)

Accessibility of Course Technology:

This online course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations as early as possible.

- CarmenCanvas accessibility (go.osu.edu/canvas-accessibility)
- Streaming audio and video
- CarmenZoom accessibility (go.osu.edu/zoom-accessibility)

CLASS SCHEDULE:

Week	Date	Topic
<u>Section 1 - CAPM and the RE Financial Foundation</u>		
WEEK 1	May 15, 2022	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	May 22, 2022	Annuities, Present Value and Amortization
		Perpetuities, Gordon Model and Capitalization Rate (Cap Rate)
WEEK 3	June 5, 2022	Real Estate Capital Stack (Equity versus Debt)
		Real Estate Equity/Use of Debt and Mortgages - Underwriting Metrics
		Amortization Worksheet
WEEK 4	June 11, 2022	Construction, Transitional and Permanent Debt Financing
		Sale Leaseback, Participating Debt and Ground Leases
		Cap Rate Worksheet
<u>SECTION 2: Due Diligence, Financial Modeling and Real Estate Value</u>		
WEEK 5	June 18, 2022	Real Estate Cycles and Analyzing Metropolitan Long-term Growth Patterns
		Real Estate Due Diligence and Commercial Lease Analysis
		Real Estate Capital Stack Worksheet
WEEK 6	June 25, 2022	Real Estate Owners Exit Strategies and Return Profiles
		Development Feasibility and Real Estate Proforma (DCF)
		Waterfall and Impact of Sponsor Promote Worksheet
<u>SECTION 3: Investment Committee Memorandum</u>		
FINAL EXAM	June 27, 2022	IC Memorandum Presentation
		Development Feasibility Worksheet
	June 28, 2022	Group Project Due - IC Memorandum due by 11:59 p.m.

(Note: This syllabus is subject to change)