

**Finance**  
**Course Number: 22:390:695**  
**Course Title: Real Estate Finance**

## **COURSE DESCRIPTION**

The central objective of this course is to provide you with the background and tools necessary to analyze value, risk, and return in property markets.

We will first focus on mortgage debt; providing an overview of mortgage structure and mechanics in both residential and commercial markets. The focus then shifts to the evaluation of investment in property markets from the perspective of an institutional investor. This involves developing projections of the expected future cash flows from a given property and using them to construct measures of value, risk and return. Extensions include tax issues, the relationship between value, returns and leverage and structuring the distribution of cash flows in partnership agreements. Finally, the course provides extensive training and certification in ARGUS, a real estate industry-standard software package used for entering lease information and analyzing risk and return in property markets.

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## **COURSE MATERIALS**

There are two primary texts for the course. The first is *Real Estate Finance and Investments* by Brueggeman and Fisher, 16<sup>th</sup> edition, ISBN 9781259919688. The text can be purchased in a variety of forms from McGraw-Hill at <https://tinyurl.com/v2eqeov>. New or used hardcover copies can be purchased from Amazon, ABEBooks or other online booksellers, but please make sure that it is the 16<sup>th</sup> edition. The second is the ARGUS Enterprise Certification Manual which will be distributed in class at a later date.

Slides, announcements and supplemental materials will be posted on Canvas ([canvas.rutgers.edu](https://canvas.rutgers.edu)) which will serve as central location for all information concerning the course. It is expected that you will check the course page on Canvas on a daily basis for updated information and announcements.

In addition to the course materials listed previously, you are required to have a financial calculator, a laptop computer and familiarity with the use of a spreadsheet package such as Excel. A good, and relatively inexpensive financial calculator is the HP 10bII. On the other hand, if you plan on a career in finance or real estate you may want to spend the extra money and get the HP 12c Platinum. A scientific calculator is fine, but will not generally offer the same ease of use provided by a financial calculator.

Proficiency in Excel is a requirement for working in real estate. Examples of modeling in Excel will be presented and worked on in class on a regular basis.

Installing and running ARGUS Enterprise requires a computer with at least 2GB of memory and capable of running Windows 7, 8 or 10. Most PCs and Macs of recent vintage, 2014 or newer, will work. If you do not have access to a laptop computer meeting this requirement, you will need to purchase a laptop to be able to perform the course work relating to ARGUS. A new laptop computer capable of running Windows and ARGUS can be purchased for less than \$250. Windows 10, Word and Excel can all be acquired at no cost from Rutgers.

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## **LEARNING GOALS AND OBJECTIVES**

This course is designed to help students (1) develop skills and knowledge in applied corporate finance and (2) demonstrate their ability to use portfolio theory to analyze the risk and return associated with investment in real property.

In this course, students will:

- ...acquire a thorough understanding of both residential and commercial mortgage finance. (1)
- ...acquire a working understanding of commercial lease terms and conditions and the ability to determine the revenues and expenses corresponding to the space that is subject to the lease. (1)
- ...understand the relationship between capitalization rates and returns on investment and use capitalization rates to estimate the value of property for a given net income. (1), (2)
- ...develop projections of the future cash flows for a given property to determine the value and return generated by the property. (1), (2)
- ...quantify risks associated with an investment using investment performance ratios and understanding the sensitivity of return to changes in base assumptions. (2)
- ...understand the relationship between leverage, risk and the return to equity. (1), (2)
- ...consider the risks and incentives associated with financing alternatives to simple debt and equity. (2)
- ...become proficient in modeling cash flow projections in Excel. (1)
- ...become proficient in the use of ARGUS, an industry-standard software package. (1)

Students will develop these skills and knowledge through homework assignments, the analysis of cases and exams. Homework assignments will serve as the basis for the developing the basic skills and concepts that are at the core of applied corporate finance and exams will provide an opportunity for students to demonstrate this knowledge. Written case assignments offer an opportunity for students to use and synthesize their knowledge by assessing trade-offs between risk and return in applications taken from real world investment opportunities.

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## **PREREQUISITES**

Satisfactory completion of Financial Management (22:390:522 or 22:390:587) is a prerequisite for this course. In particular, a solid understanding of the basic tools of finance, particularly discounting cash flows, is essential. A quick review of fixed-income analysis will take place during the first lecture in order to provide a common foundation for the material that will follow.

If you have any questions regarding lecture material or the course in general, you are encouraged to attend scheduled office hours. My office hours are posted above, but if these times are not convenient, just send a quick email letting me know some days and times that work for you and I will get back to you as soon as possible.

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## ACADEMIC INTEGRITY

*I do NOT tolerate cheating.* Students are responsible for understanding the RU Academic Integrity Policy (<http://academicintegrity.rutgers.edu/>)

I will strongly enforce this Policy and pursue *all* violations. On all examinations and assignments, students must sign the RU Honor Pledge, which states, “On my honor, I have neither received nor given any unauthorized assistance on this examination or assignment.” I will screen all written assignments through *SafeAssign* or *Turnitin*, plagiarism detection services that compare the work against a large database of past work. Don’t let cheating destroy your hard-earned opportunity to learn. See [business.rutgers.edu/ai](http://business.rutgers.edu/ai) for more details.

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## ATTENDANCE AND CLASSROOM POLICY

Regular attendance is vital to success in this course. If you must miss a class, it is your responsibility to find out what material was covered in class during which you were absent and to understand that material prior to the next lecture.

The use of cellphones and laptops are not allowed in class at any time except when students are instructed to work on a specific problem or case requiring a computer. Students may leave the room to take an emergency phone call. Otherwise, students observed to be texting or looking at their phone will receive a 0 for class participation for the day.

If I am to be absent, my department chair or I will send you notice via email and Canvas as far in advance as possible. For weather emergencies, consult the campus home page.

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## EXAM DATES AND POLICIES

There are 2 exams in this course:

Midterm exam: (), in-class, closed book.

Final exam: Scheduled date/time of final exam, based on ARGUS software, open book, open notes, laptop computer.

The following rules apply to these exams:

- If you must miss the exam, notify me as soon as possible by phone or email. Anyone missing an exam without such notification will receive no credit for the exam and will not be given a make-up.
- If you have a disability that influences testing procedures, please provide an official letter from the Office of Disability Services at the start of the semester.
- No cell phones or other electronics are allowed in the testing room unless stated otherwise.
- Your exam will not be accepted unless you sign the Honor Pledge.

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## GRADING POLICY

The letter grade you receive in the course will be based on a curve relative to the rest of the students in your section and determined by your performance on graded homework assignments, exams and case assignment as a function of the weights below. If you believe that your exam or case has been graded incorrectly, please bring it to my attention as soon as possible. Finally, in the interest of fairness, please do not ask for opportunities or exceptions that have not been granted to all others in the class.

- **Homework assignments:** There will be five (5) homework assignments during the course of the semester which will, in total, make up 25% of your grade. Solutions to homework assignments will be submitted through Canvas. Homework assignments that are submitted late will be penalized.
- **Case analysis:** There will be one case assigned during the semester and will account for 25% of your grade. Case assignments that are submitted late will be penalized.
- **Midterm exam:** The midterm exam will correspond to the material covered from the beginning of the course through week 6, and will account for 30% of your final grade.
- **Final exam:** The final exam will take place during the last class meeting and will account for 10% of your course grade. The exam involves entering property, market and lease information into ARGUS and answering 15 multiple choice questions based on your output.
- **Excel in-class project:** There will be regular in-class assignments devoted to modeling in Excel. Each assignment will build on the prior and, in the end, result in a collection of linked spreadsheets. This accumulated work is due at some point prior to the final exam and will account for 10% of your course grade.

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## COURSE SCHEDULE

BF – Brueggeman & Fisher

AM – ARGUS Manual

Week 1	Introduction and course overview Review		BF Ch. 3 Notes
Week 2	Legal concepts, notes and mortgages Mortgage markets	HW #1 assigned	BF Ch. 1, 2, 19
Week 3	Fixed-rate mortgages Markets for real estate	HW #1 due HW #2 assigned	BF Ch. 4, 9
Week 4	Fixed-rate mortgages Commercial leasing and effective rent	HW #2 due HW #3 assigned	BF Ch. 4, 9
Week 5	Guest speaker (TBD)	HW #3 due	
Week 6	Adjustable-rate mortgages Net operating income (NOI) Capitalization rates	HW #4 assigned	BF Ch. 5, 10
Week 7	Cash flow before debt service Market analysis	HW #4 due ARGUS installation	BF Ch. 11
Week 8		Midterm exam	BF Ch. 11
Week 9	<i>No class</i>		
Week 10	Commercial debt and before-tax cash flow Taxes and after-tax cash flows Introduction to ARGUS		BF Ch. 11
Week 11	Leverage, value and return ARGUS	Case assigned	BF Ch. 12 AM Ch. 1 - 3
Week 12	Investment and risk analysis ARGUS	HW #5 assigned	BF Ch. 13 AM Ch. 4 - 7
Week 13	Disposition, scenario analysis and option value ARGUS	HW #5 due	BF Ch. 14 Notes AM Ch. 8 - 9
Week 14	Joint ventures and private equity structures ARGUS	Case due	BF Ch. 18
Week 15		ARGUS exam	

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## SUPPORT SERVICES

If you need accommodation for a *disability*, obtain a Letter of Accommodation from the Office of Disability Services. The Office of Disability Services at Rutgers, The State University of New Jersey, provides student-centered and student-inclusive programming in compliance with the Americans with Disabilities Act of 1990, the Americans with Disabilities Act Amendments of 2008, Section 504 of the Rehabilitation Act of 1973, Section 508 of the Rehabilitation Act of 1998, and the New Jersey Law Against Discrimination. More information can be found at [ods.rutgers.edu](http://ods.rutgers.edu).

[Rutgers University-New Brunswick ODS phone (848)445-6800 or email [dsoffice@echo.rutgers.edu](mailto:dsoffice@echo.rutgers.edu)]

[Rutgers University-Newark ODS phone (973)353-5375 or email [ods@newark.rutgers.edu](mailto:ods@newark.rutgers.edu)]

If you are *pregnant*, the Office of Title IX and ADA Compliance is available to assist with any concerns or potential accommodations related to pregnancy.

[Rutgers University-New Brunswick Title IX Coordinator phone (848)932-8200 or email [jackie.moran@rutgers.edu](mailto:jackie.moran@rutgers.edu)]

[Rutgers University-Newark Office of Title IX and ADA Compliance phone (973)353-1906 or email [TitleIX@newark.rutgers.edu](mailto:TitleIX@newark.rutgers.edu)]

If you seek *religious accommodations*, the Office of the Dean of Students is available to verify absences for religious observance, as needed.

[Rutgers University-New Brunswick Dean of Students phone (848)932-2300 or email [deanofstudents@echo.rutgers.edu](mailto:deanofstudents@echo.rutgers.edu)]

[Rutgers University-Newark Dean of Students phone (973)353-5063 or email [DeanofStudents@newark.rutgers.edu](mailto:DeanofStudents@newark.rutgers.edu)]

If you have experienced any form of *gender or sex-based discrimination or harassment*, including sexual assault, sexual harassment, relationship violence, or stalking, the Office for Violence Prevention and Victim Assistance provides help and support. More information can be found at <http://vpva.rutgers.edu/>.

[Rutgers University-New Brunswick incident report link: <http://studentconduct.rutgers.edu/concern/>. You may contact the Office for Violence Prevention and Victim Assistance at (848)932-1181]

[Rutgers University-Newark incident report link: [https://cm.maxient.com/reportingform.php?RutgersUniv&layout\\_id=7](https://cm.maxient.com/reportingform.php?RutgersUniv&layout_id=7) . You may also contact the Office of Title IX and ADA Compliance at (973)353-1906 or email at [TitleIX@newark.rutgers.edu](mailto:TitleIX@newark.rutgers.edu). If you wish to speak with a staff member who is confidential and does **not** have a reporting responsibility, you may contact the Office for Violence Prevention and Victim Assistance at (973)353-1918 or email [run.vpva@rutgers.edu](mailto:run.vpva@rutgers.edu)]

If students who have experienced a temporary condition or injury that is adversely affecting their ability to fully participate, you should submit a request via <https://temporaryconditions.rutgers.edu>.

If you are a military *veteran* or are on active military duty, you can obtain support through the Office of Veteran and Military Programs and Services. <http://veterans.rutgers.edu/>

If you are in need of *mental health* services, please use our readily available services.

[Rutgers University-Newark Counseling Center: <http://counseling.newark.rutgers.edu/>]

[Rutgers Counseling and Psychological Services–New Brunswick: <http://rhscaps.rutgers.edu/>]

If you are in need of *physical health* services, please use our readily available services.

[Rutgers Health Services – Newark: <http://health.newark.rutgers.edu/>]

[Rutgers Health Services – New Brunswick: <http://health.rutgers.edu/>]

If you are in need of *legal* services, please use our readily available services: <http://rusls.rutgers.edu/>

Students experiencing difficulty in courses due to *English as a second language (ESL)* should contact the Program in American Language Studies for supports.

[Rutgers–Newark: [PALS@newark.rutgers.edu](mailto:PALS@newark.rutgers.edu)]

[Rutgers–New Brunswick: [eslpals@english.rutgers.edu](mailto:eslpals@english.rutgers.edu)]

If you are in need of additional *academic assistance*, please use our readily available services.

[Rutgers University-Newark Learning Center: <http://www.ncas.rutgers.edu/rlc>]

[Rutgers University-Newark Writing Center: <http://www.ncas.rutgers.edu/writingcenter>]

[Rutgers University-New Brunswick Learning Center: <https://rlc.rutgers.edu/>]

[Optional items that many faculty include:

- Students must sign, date, and return a statement declaring that they understand the RU Academic Integrity Policy.

- Students must sign, date, and return a statement declaring that they understand this syllabus.]