



Real Estate and Infrastructure Finance
2 Credits

BU.234.610.53
Day & Time / ex: Thursday, 6pm-9pm
Start & End Date: 1/26/2017-3/16/2017

Semester: Spring 2017.
Location: Washington DC.
Room 113.

Instructor

Luis Quintero

Contact Information

Phone Number, (412) 304-4389
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Office Hours

[Thurs/4pm-6pm]

Textbook & Reading Materials

(C): "Real Estate Finance: Theory and Practice", 7th edition, OnCourse Learning, Terrence M. Clauretie and G. Stacy Sirmans, 2014. This book surveys the basic issues in real estate finance, as such, it serves as a very good reference material for this class. My lectures will follow the book very closely. Examination questions will be closely related to the textbook and the lectures and assignments. I still suggest that students purchase the textbook because it provides very good background information for class discussions.

I will make some spreadsheets available for you but it is important that you learn how to do your own calculations and how to manipulate and understand the equations covered in class.

Course Description

This course examines selected techniques and issues in the area of real estate finance. Special emphasis will be placed on the design and valuation of mortgage instruments. This class will be conducted using a lecture format. While lectures will follow the textbook to some extent, supplemental readings may be required. Students are assumed to have some knowledge of finance. Before taking this class, it is important for students to have a clear understanding of the time value of money concept and knowledge of how to use spreadsheets to solve time value of money problems. Knowing how to use a calculator to solve present value problems (but without a clear understanding of the underlying concept) is not sufficient for tackling the course material of this class. Use of calculators or spreadsheets will not be taught in this class. This course was previously titled Real Estate Finance I.

Prerequisite(s)

None

Learning Objectives

By the end of this course, students will be able to:

- Understand the techniques used for mortgage designs.
- Analyze the risk-return tradeoff of mortgage instruments.
- Design a suitable mortgage instrument given a client's special need.

- Evaluate mortgage alternatives for your clients.
- Understand the operations of the mortgage market.

To view the complete list of Carey Business School’s general learning goals and objectives, visit the Teaching & Learning@Carey [website](#).

Attendance Policy

Attendance and class participation are part of each student’s course grade. Students are expected to attend all scheduled class sessions. Failure to attend class will result in an inability to achieve the objectives of the course. Regular attendance and active participation are required for students to successfully complete the course.

Assignments

Your final grade will be weighted as follows:

Assignment	Weight
Mid-term Exam	40%
Final Exam	40%
Class Participation & Assignments	20%
Total	100%

The final class grade will be based on a relative frequency distribution (percentile ranking) of the total points accumulated over the entire semester. This approach implies that your final grade will be determined by the relative performance of the students in the class, as well as the overall performance of the entire class. While I normally do not take roll, class attendance is mandatory. Each student should read the assigned materials and give careful thought to background information prior to each class session. Having done so will not only facilitate class discussions, it will also lighten your workload because the lectures are much easier to follow after you have digested the reading materials.

There will be one mid-term exam and one final exam. The 2-hour mid-term exam will be held during regular class hours after one hour of regular class. The 2-hour final exam will be comprehensive. The in-class exam will be a combination of problems and conceptual questions. The take-home project will be problems that require intensive calculations, and students are expected to use spreadsheets to solve the problems (see appendix A for sample questions).

The evaluation of class participation consists of assignments, class discussions and quizzes. There are no specific rules on how to score points for the class discussions. A student’s grade in this category is solely based on the instructor’s objective judgement. However, a meaningful question to the instructor as well as the ability and willingness to answer the instructor’s questions will definitely improve your performance. The quizzes will be very simple. The grade of the quiz will be counted as a part of Class Participation. Class participation will play an important role in your final grade if you are at the borderline between two grades.

Grading

The grade of **A** is reserved for those who demonstrate **extraordinarily excellent** performance. The grade of **A-** is awarded only for **excellent** performance. The grade for **good** performance in this course is a **B+/B**. The grades of D+, D, and D- are not awarded at the graduate level.

Please refer to the [Carey Business School’s Student Handbook](#) for grade appeal information.

Tentative Course Calendar*

*The instructors reserve the right to alter course content and/or adjust the pace to accommodate class progress. Students are responsible for keeping up with all adjustments to the course calendar.

	Topic	Reading Assignments
Session 1	Introductory Remarks Finance and Real Estate Money, Credit, and Interest Rate	Chp. 1, 2.
Session 2	Money, Credit, and Interest Rate (Cont) Finance Theory and Real Estate Residential Real Estate	Chp. 2, 3, 4, Appendix 4-A.
Session 3	Fixed Interest Rate Mortgage	Chp. 5, Appendix 5-A, Appendix 5-B, Appendix 1.
Session 4	Fixed Interest Rate Mortgage Alternative Mortgage Instruments	Chp. 5, Appendix 5-A, Appendix 5-B, Appendix 1. Chp. 6.
Session 5	(Mid-Term Exam) Alternative Mortgage Instruments	Chp. 6.
Session 6	Alternative Mortgage Instruments	Chp. 6.
Session 7	Alternative Mortgage Instruments Development and Construction Loan	Chp. 6. Chp. 18
Section 8	(Final Exam)	

Appendix A: Sample Questions

In-class exam:

1. A borrower can obtain a lower first year interest rate (as compared to the first year interest rate of a standard fixed-rate mortgage) when she/he selects an adjustable rate mortgage. Why (5 points)?
Note: I will only read your first 30 words.

2. Given the following information,
 - (1) Fixed-rate mortgage,
 - (2) Annual interest rate = 12%,
 - (3) Monthly payment, (or monthly interest rate = 1%),
 - (4) Amortization period = 30 years (or 360 months),
 - (5) Original loan amount = \$100,000.

Please calculate the annual debt service, annual interest payment, annual principal payment, and the ending loan balance at end of each year for the next three years. Specifically, please complete the following amortization table (10 points).

Year	Beginning Balance	Debt Service	Interest Payment	Principal Payment	Ending Balance
0	\$100,000	NA	NA	NA	NA
1	?	?	?	?	?
2	?	?	?	?	?
3	?	?	?	?	?

Note: This mortgage assumes monthly payments. The amortization table is different from the one using annual payments.

3. Please re-construct the amortization tables of one of the five ARMs discussed in class. In addition, please extend the period from 37 months (as shown in my hand-outs) to 61 months. Please calculate the monthly IRR and MIRR (FMRR) for each of the 5 ARMs listed in problem 1 (20 points).
4. Please re-construct the amortization table of a graduated payment mortgage (\$100,000 at 12 percent for 30 years, monthly payment, graduating in payments through the first 10 years) using 10% annual payment growth rate. Please report the amortization table of the first 181 months (10 points).

Carey Business School Policies and General Information

Blackboard Site

A Blackboard course site is set up for this course. Each student is expected to check the site throughout the semester as Blackboard will be the primary venue for outside classroom communications between the instructors and the students. Students can access the course site at <https://blackboard.jhu.edu>. Support for Blackboard is available at 1-866-669-6138.

Course Evaluation

As a research and learning community, the Carey Business School is committed to continuous improvement. The faculty strongly encourages students to provide complete and honest feedback for this course. Please take this activity seriously; we depend on your feedback to help us improve. Information on how to complete the evaluation will be provided toward the end of the course.

Disability Services

Johns Hopkins University and the Carey Business School are committed to making all academic programs, support services, and facilities accessible. To determine eligibility for accommodations, please contact the Disability Services Office at time of admission and allow at least four weeks prior to the beginning of the first class meeting. Students should contact Priscilla Mint in the [Disability Services Office](#) by phone at 410-234-9243, by fax at 443-529-1552, or by [email](#).

Honor Code/Code of Conduct

All students are expected to view the Carey Business School Honor Code/Code of Conduct [tutorial](#) and submit their [pledge](#) online. Students who fail to complete and submit the pledge will have a registrar's hold on their account. Please contact the student services office via [email](#) if you have any questions.

Students are not allowed to use any electronic devices during in-class tests. Calculators will be provided if the instructor requires them for test taking. Students must seek permission from the instructor to leave the classroom during an in-class test. Test scripts must not be removed from the classroom during the test.

Other Important Academic Policies and Services

Students are strongly encouraged to consult the Carey Business School's [Student Handbook and Academic Catalog](#) and [Student Resources](#) for information regarding the following items:

- Statement of Diversity and Inclusion
- Student Success Center
- Inclement Weather Policy

Copyright Statement

Unless explicitly allowed by the instructor, course materials, class discussions, and examinations are created for and expected to be used by class participants only. The recording and rebroadcasting of such material, by any means, is forbidden. Violations are subject to sanctions under the Honor Code.