

**NEW YORK UNIVERSITY
Stern School of Business**

Department of Finance

Fall 2008



**REAL ESTATE FINANCE
C15.0039**

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REAL ESTATE FINANCE
C15.0039

SYLLABUS

Course Number: C15.0039
Days: Tuesday and Thursday
Times: 2:00 – 3:15 PM
Dates: 9/2 – 12/11/2008
No Classes: October 14 and November 27
Teaching Assistant: Adam Rosenberg aer321@stern.nyu.edu

All classes are held at KMC 5-90, except the ARGUS tutorials, which are held in the computer lab.

Course Objective:

From the catalog description http://w4.stern.nyu.edu/finance/docs/pdfs/Bulletin_UG.pdf :

Real Estate Finance

Prerequisite: C15.0002. Corequisite: C15.0007.

Covers theory and measurement of return and risk on real estate financial decisions. Topics include loan valuation theory, determination of future costs, discounting procedures for cash flows of income-producing properties, and utilization of negative cash flows. Finance theory is applied to real estate decisions regarding land subdivision, property development, lender strategies, and the role of government agencies in real estate.

This is the first of two tightly focused courses intended for finance students specializing in real estate, in particular commercial real estate. The second course, **‘Real Estate and Capital Markets’**, C15.0038, next taught in Spring 2009, covers equity and debt instruments that finance the underlying ‘real asset’ - the commercial (income producing) property – and the valuation and trading in capital markets of these instruments, from the perspective of the participants in these ‘secondary markets’.

An important **prerequisite** of this course is **‘Foundations of Financial Markets’**, C15.0002, that develops the basic concepts and tools of modern finance, in particular risk and return, as well as a solid understanding how financial markets work and how different kinds of financial instruments are valued.

Ideally, the **corequisite ‘Financial Management’**, C15.0007, required for finance majors, has been successfully completed by the student prior to attending this class.

‘Real Estate Finance’, C15.0039, rigorously applies topics from corporate finance/financial management, such as techniques for analyzing and selecting capital projects, financial planning and cash flow forecasting, the role and consequences of leverage, valuation of financial instruments such as a variety of mortgages, the cost of capital and additional topics associated with raising capital in the ‘primary markets’. While commercial real estate is the main focus of this course, we will however also cover pertinent topics of residential real estate finance.

In this course, students refine their understanding of analytical valuation techniques and risk measures; and they apply this knowledge by structuring appropriate financing requirements for income-producing real estate development projects and investments in existing properties. Students will deepen their mastery of cash flow and NPV analysis, apply scenario and simulation techniques, and learn the basics of real

options as applied to development projects. The study of traditional commercial leases and mortgages includes an examination of default risk and underwriting criteria, as well as financial structures such as partnerships with split returns, all within a rigorous capital structure framework.

Students collaborate in small teams on real estate-specific cases and present them at the end of the course.

As real estate finance and corporate finance / project investment analysis are two of the most complex and sophisticated aspects of applied finance, it is increasingly important – in addition to analytical dexterity and spreadsheet modeling skills – that financial practitioners know how to communicate their analysis. In order to hone professional writing and speaking skills, this course requires students

- to interact with their peers during the preparation of case studies and
- to demonstrate their ‘persuasive communication’ abilities in speaking and writing

All NYU students can readily ask for help with writing skills from ‘The Writing Center’ at NYU's Expository Writing Program in the College of Arts and Science. For further details, please visit http://www.nyu.edu/cas/ewp/html/writing_center.html

Required Book:

(BF): Brueggeman and Fischer: “Real Estate Finance and Investments”, 13th edition, 2007, ISBN: 0-07-352471-9

Recommended Books:

(D): Damodaran: “Applied Corporate Finance: A User’s Manual”, 2nd edition, 2006, ISBN: 978-0-471-66093-4

(B): Benninga: “Financial Modeling”, 3rd edition, 2008, ISBN: 978-0-262-02628-4

(PC): Poorvu and Fisher: “The Real Estate Game: The Intelligent Guide to Decision-Making and Investment”, 1999, ISBN: 0-684-85550-X

Case Studies: Students collaborate in small teams (maximum three individuals) on real estate specific cases and present them at the end of the course. The applied case studies are designed to emulate key issues encountered in practice, and - by requiring students to make judgments - they complement the conceptual command of the analytical material in a unique and realistic manner.

Supplementary Readings: Handouts, articles, additional exercises, review material and all other relevant communication will be posted on the Blackboard website for this course.

Course Structure: This course gives you the opportunity to meld previously gained knowledge in realistic and sophisticated real estate applications with important new analytical tools, and the course structure reflects the variety and depth of subject material covered:

Preparation time involves review, background reading, and problem solving using EXCEL, ARGUS, and WORD for the write-ups. Preparation and presentation of case studies require teams (of no more than three individuals).

Classroom time consists primarily of discussions of concepts and occasional review of assignments. Students will be regularly called upon to present their analysis in-class and to relate it to previously studied materials.

Grading, Exercises and Examinations: Throughout the semester, you can check your understanding of the material by doing the weekly exercises. This weekly assessment is complemented by a midterm exam and short, unannounced, in-class quizzes. The case studies at the end of the course are the equivalent of a final exam; so make sure you cover all relevant topics we studied throughout the semester.

Grade Distribution: Grading is based on the class curve rather than the total number of points and adheres to the grading curve set by the Finance department. The professor has no control over this curve, which is distributed approximately as follows:

A:	(A, A-)	25%
B:	(B+, B, B-)	45%
C:	(C+, C, C-)	25%
D and F:		5% (earned by the student who has not handed in assignments nor taken exams)

Grading criteria are as follows:

Assignments and writing	20 points
Midterm exam	20 points
Class participation	20 points
In-class quizzes	10 points
Case studies	<u>30 points</u>
TOTAL	100 points

Attendance: Students are expected to attend each class and participate actively and knowledgeably. Constructive, courteous and active class participation is required and carries 20% of the final grade in the course. The classes will start on time, attendance will be taken at the start of each session, and if you are late or have missed a session, please inquire with other students, outside of class-time, about what you missed. During sessions, please turn off portable phones and all other electronic devices that might distract your colleagues.

Deadlines:

- each assignment (the WORD write-up as well as any supporting model) is due by e-mail 24 hours prior to class meetings, and a hardcopy of each assignment is due at the beginning of the class on each class meeting date (specified in the “SCHEDULE” below)
- the final versions of the cases are due by the Sunday prior to the week when they are presented

Assignments: All students are expected to pursue and meet the highest standards of academic excellence by adhering to the norms of a serious intellectual community. If you are unclear about the rules and styles of citation, please read the section “Bibliography and Footnote Style Guide” and follow the resources listed at <http://library.nyu.edu/research/bibliographies>.

Each assignment must take the form of a professional communication: a document in WORD that conforms to formatting standards, that is easy to read (double-spaced), and that includes bibliographic references and all supporting models.

The structure of a professional communication opens with an executive summary, followed by a succinct description of the project/assignment, then the body of your analysis with a clearly articulated commentary, accompanied by excerpts and graphs imported from the supporting analytical models, which you may have to create and which you must append to the assignment.

If you are asked to ‘replicate’ a table or results presented in a textbook, for example, you cannot merely ‘copy the numbers’ from the source, but you must first create the underlying EXCEL model.

Compelling narrative, neatness, organization, logic, clarity, grammar, punctuation, and spelling of each assignment are important elements to impress me, your colleagues, your bosses and your clients...

Consider that this course is an opportunity to network with other sophisticated real estate finance professionals, to enhance your analytical prowess to new heights, to polish your written and verbal presentation and communication skills, and to have fun in a polite atmosphere. In this class, you are rewarded for asking intelligent questions - - and you will not lose your client (or your job) if you make a mistake...

My goal is to provide you with the chance to demonstrate your ‘mastery and/or proficiency of core and ancillary material comprising the course’, by submitting work ‘in a condition that could be used confidently in a professional setting with virtually no modification’.

I hope this characterization, quoted from NYU’s “Qualitative Standards for Grades”, and which constitutes the requirement to earn an “A” - the highest grade possible, is a truthful portrayal of your performance ahead...

New York University promotes an ethical learning environment and ensures that all students understand the concepts of academic integrity. This is an extremely important issue for the students' time at NYU, but also for the time after graduation. Hence all students are required to familiarize themselves with the Statement of Academic Integrity and the NYU Stern Undergraduate College Student Code of Conduct: http://w4.stern.nyu.edu/uc/currentstudents/codeofconduct.cfm?doc_id=5599.

Please read this carefully and make sure that you follow it whenever you submit any work for this course. Also realize that there are a number of penalties associated with violating the Statement of Academic Integrity and the Code of Conduct; they range from failure for a paper or course to dismissal from the University.

At his url: http://w4.stern.nyu.edu/citl/articles.cfm?doc_id=3396, you find additional links to meta-teaching issues on Academic Honesty, Civility in the Classroom, Copyright/Fair Use, Diversity, and How People Learn.

Welcome again and good luck!

SCHEDULE (subject to revision)

Week # and Dates	Topic	Background readings (must be completed prior to class session)
1 September 2&4	1) Introduction to course 2) Overview of risk and opportunities in real estate, and property level pro-forma analysis 3) Legal concepts in R E Finance	1) Chapter 1 (PC) 2) Chapter 1 (BF)
2 September 9&11	1) Leveraged financing: notes and mortgages 2) Review of TVM, IRR, NPV, and compound interest conventions for RE	1) Chapters 2 and 3 (BF)
3 September 16&18	1) Fixed rate mortgages 2) Adjustable rate and variable payment mortgages	1) Chapters 4 and 5 (BF)
4 September 23&25	1) Topics in residential financial analysis: pricing, investment and tax considerations, underwriting and financing residential properties	1) Chapters 6, 7 and 8 (BF)
5 September 30 & October 2	1) Introduction to income-producing properties: leases and market for space 2) Valuation of income properties: appraisal and the market for capital	1) Chapters 9 and 10 (BF) 2) Chapter 2, 3, 4 and 7 (PC)
6 October 7&9	1) Review of Part I of course, special topics from assignments 2) Finish valuation of income properties: further insights into cap rates and DCF	1) Chapter 10 (BF)
7 October 16		Midterm Exam
8 October 21&23	1) Impact of taxation on value of income property: investment analysis 2) Financial leverage and structuring financing alternatives	1) Chapter 11 (BF) 2) Chapter 12 (BF)
9 October 28&30	1) Risk analysis and introduction to scenario, sensitivity and simulation analysis 2) Introduction to real options	1) Chapter 13 (BF)

10 November 4&6	1) Exit strategies and reversion value 2) Refinancing and renovation as alternatives to disposition	1) Chapter 14 (BF) 2) Chapter 8 (PC)
11 November 11&13	1) ARGUS Tutorial	Class held in computer lab
12 November 18&20	1) ARGUS Tutorial	Class held in computer lab
13 November 25	1) Private equity funds, joint ventures, syndications and partnerships; distribution rules of cash flows from operations and reversion	1) Chapter 18 (BF)
14 December 2&4	1) Credit risk analysis: the cash flow and asset volatility perspectives	1) Handout
15 December 9&11	Review of Part II of course, special topics from assignments	1) Handout

The following course learning objectives are assessed: Students will demonstrate the capability to ask discussion questions that require critical thinking skills to answer. Students will demonstrate the capability to submit discussion posts that add teaching presence to the course. What do good course objectives look like? Good course objectives will be specific, measurable, and written from the learner's perspective. Here's a good formula for writing objectives: Start your course objectives with: By the end of the course, students will be able to: Choose an action verb that corresponds to the specific action you wish students to demonstrate. Explain the knowledge students are expected to acquire or construct. Course Objectives/Outline: The objective of this course is to provide students with the necessary knowledge to inspect and ensure that the Weights and Measures legislative requirements are met. Giga-fren. s Accreditation could be applied, in varying degrees, to private-sector training providers through minimum course objectives, "train the trainer" courses and other requirements that provide for the demonstration of a minimum level of experience and expertise. Giga-fren.