

Course Outline

Course Code : RE2706
Course Title : Real Estate and Infrastructure Finance
Semester : Semester 2, Academic Year 2023/2024
Faculty : A/P Qin Yu, Dr Fan Mingxuan & Ms Cao Jinze (PhD student, Tutorials)
Department : Real Estate
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Overview

This course examines real estate and infrastructure finance institutions and instruments that focus on debt. It equips students with the essential skills to analyse and evaluate real estate and infrastructure financing decisions. The topics include: institutional landscape of real estate and infrastructure financing; mortgage mechanics; different mortgage instruments; residential financing analysis and borrower choices; residential underwriting and lending policies; development, project and infrastructure financing; and housing financing innovations.

Learning Outcomes

Through this course, student will be able to:

- Understand basic mortgage concepts and the development of housing financing institutions
- Ability to use a financial calculator and Excel financial functions to solve mortgage calculation problems.
- Understand the features of ARMs
- Ability to evaluate the effective borrowing cost of alternative loans
- Understand the pros and cons of alternative mortgage loan products
- The students will understand how to make important mortgage decisions, such as refinancing.
- In addition, the students will understand how to calculate effective cost of multiple loans. This lecture will also cover a brief introduction of CPF scheme in Singapore.
- Understand the mortgage loan underwriting process
- Understand the use of CPF for home purchase
- Understand the macroeconomic trends and housing finance risks

Course Prerequisite(s)

Nil

Course Preclusion(s)

Nil

General Guide & Reading

- Brueggeman and Fisher (2019) **Real Estate Finance and Investments, 16th edition**, McGraw Hill
- Infrastructure Finance - <https://www.managementstudyguide.com/infrastructure-finance-articles.htm>

Tentative Schedule & Outline

| Week | Date | Topic | Activity |
|------|--|---|------------|
| 1 | 15 – 19 Jan | Review of Mathematics for Real Estate Finance | |
| 2 | 22 – 26 Jan | Alternative Mortgage Products (I) | |
| 3 | 29 Jan – 2 Feb | Alternative Mortgage Products (II) | Tutorial 1 |
| 4 | 5 – 9 Feb <i>CNY: 10 – 11 Feb. Following Monday is a PH.</i> | Alternative Mortgage Products (III) + CPF Financing | Tutorial 1 |
| 5 | 12 – 16 Feb <i>12 Feb PH (see above)</i> | CPF Financing, Institutional Landscape | Tutorial 2 |
| 6 | 19 – 23 Feb | Quiz and feedback | Tutorial 2 |
| | 24 Feb – 3 Mar | RECESS WEEK | |
| 7 | 4 – 9 Mar | Income-producing real estate | |
| 8 | 11 – 15 Mar | Income-producing real estate | Tutorial 3 |
| 9 | 18 – 22 Mar | Income-producing real estate | Tutorial 3 |
| 10 | 25 – 29 Mar <i>28 Mar: NUS Well-Being Day 29 Mar: Good Friday</i> | No class on Friday | Tutorial 4 |
| 11 | 1 – 5 Apr | Real estate development financing | Tutorial 4 |
| 12 | 8 – 12 Apr <i>10 Apr: Hari Raya Puasa</i> | Infrastructure and Project financing | Tutorial 5 |
| 13 | 15 – 19 Apr | Quiz and final review | Tutorial 5 |
| | 20 – 26 Apr | READING WEEK | |
| | 27 Apr – 11 May <i>1 May: Labour Day</i> | EXAMINATION (2 WEEKS) | |

Assessment

| Assessment Components | Weightage (%) |
|------------------------------|---------------|
| • Participation in Lectures | 10 |
| • Participation in Tutorials | 10 |
| • Quizzes | 20 |
| • E-exam (Open Book) | 60 |
| Total | 100 |

Academic Honesty & Plagiarism

Academic integrity and honesty is essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of

information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources.

Plagiarism is “the practice of taking someone else’s work or ideas and passing them off as one’ own” (The New Oxford Dictionary of English). The University and School will not condone plagiarism. Students should adopt this rule - You have the obligation to make clear to the assessor which is your own work, and which is the work of others. Otherwise, your assessor is entitled to assume that everything being presented for assessment is being presented as entirely your own work. This is a minimum standard. In case of any doubt, you should consult your instructor.

Additional guidance is available at:

- <http://www.nus.edu.sg/registrar/administrative-policies-procedures/acceptance-record#NUSCodeofStudentConduct>
- <http://nus.edu.sg/osa/resources/code-of-student-conduct>

About me

Mingxuan Fan is an assistant professor in the Department of Real Estate at the NUS business school. She holds a PhD in Applied Economics from the University of Wisconsin-Madison. She teaches Real Estate Finance, Urban Economics, Economics of Sustainability, and Sustainable Real Estate Development. Her research interest lies in the field of environmental and urban economics.

Yu Qin is an associate professor in the Department of Real Estate at the NUS business school. She holds a PhD in Applied Economics from Cornell University. She teaches Real Estate Finance and Real Estate Economics. Her research interest lies in the field of environmental and urban economics.