

National Tsing Hua University
QF2146: Corporate Finance
Spring 2021 Syllabus

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Lecture time and location: W7W8W9, R104 TSMC Building

Teaching Assistant: TBA

Course Description

This course provides an introduction to the theory and practice of corporate finance and develops a set of analytical tools to address major questions related to firms' investment and financing decisions. The first major topic we will cover is the theory of capital structure, which seeks to address the fundamental question of the optimal mix of debt vs. equity in financing a firm's projects. We will start with Modigliani-Miller irrelevance under perfect capital markets, and we will study how taxes, costs of financial distress, asymmetric information, the contractual structure of securities, and managerial compensation affect firm valuations, financing decisions, and investment incentives. The second major topic we will cover is option valuations. We will discuss the basic idea of portfolio replication, risk-neutral pricing, and the Black-Scholes formula for European options. These results will be applied to value real options and assess irreversible corporate decisions. If time permits, we will discuss leasing, collateral, liquidity, and risk management.

Prerequisite: QF2141 Financial Management.

Performance Evaluation

- Assignments: 20%
- Mid-Term Exam: 40%
- Final Exam: 40%

There will be 4-5 assignments, one mid-term exam, and one final exam. Evaluation does not base on class attendance but you are expected to attend all the classes and participate in discussions. Letter grades will be curved.

Required Textbook

- Berk, Jonathan, and Peter DeMarzo, 2019, *Corporate Finance*, 5th edition, Pearson.

The book provides a thorough introduction to finance theory and practice, and it contains a systematic treatment of capital structure (chapter 14-17) and options (chapter 20-22) suitable at the introductory level. Most of the course materials will be based on the textbook.

Policy

Lecture and course materials will be posted on the course website. For questions, you can always email me for an appointment. Exams are closed-book and you can bring your own calculator. But calculators with built-in text memory and smartphone calculators are not allowed. No make-up exams will be provided if you miss any of the exams without advance permission or not due to a serious medical condition. Also, no late assignment will be accepted. Any academic dishonesty will automatically result in failing the class.

Course Outline by Topic

Topic	Chapter
Introduction and Review	
1. Introduction to Corporate Finance	1
2. Cash-flow Discounting, Investment Decisions, CAPM	3,4,11,12
Capital Structure, Payout, and Investment	
3. Perfect Capital Markets: Modigliani-Miller Theorem	14
4. Taxes and Distress: The Trade-off Theory	15 - 16.4
5. Asymmetric Information: The Pecking Order Theory	16.8
6. Debt-Equity Conflicts and Managerial Incentives	16.5-16.7
7. Dividend and Payout Policy	17
8. Capital Budgeting with Leverage	18
Option Valuations	
9. Financial Options and Risk-Neutral Valuations	20,21
10. Real Options and Dynamic Investment	22
Additional Topics	
11. Long-Term Financing	23-25
12. Risk Management	30

Note: the schedule is subject to change at instructor's discretion