

# FIN2005: MICROECONOMICS

Fall 2023

National Taiwan University

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<b>Instructor</b>	Joonkyo Hong
<b>Office</b>	Rm 729, Social Science Building
<b>Contact</b>	TBD
<b>Office Hours</b>	Monday 09:00 AM – 10:00 AM
<b>Time</b>	Tuesday 2, 3, 4 (09:10 AM – 12:10 PM)
<b>Venue</b>	Rm 101, Building No. 2, College of Management
<b>T.A.</b>	TBD

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**Description** This course aims to establish a rigorous foundation for the concepts covered in the Principle of Microeconomics. We will begin by analyzing how market participants (consumers and firms) make their choices within given constraints. Our initial focus will be on understanding a crucial mathematical concept called *constraint optimization*, which will help us gain insights into their decision-making behaviors. Moving forward, we will delve into the economic analysis of market participants' interactions. Specifically, we will first examine the notion of *market structure*, which influences firms' decisions. With a clear understanding of market structure, we will proceed to characterize the interaction between consumers and firms as *market equilibrium* and study the resulting market outcomes.

## Textbook and Reference

**Textbook:** Hal R. Varian, *Intermediate Microeconomics: A Modern Approach*, Ninth Edition, W. W. Norton & Company

**Reference:** Jeffrey M. Perloff, *Microeconomics with Calculus*, Fourth Edition, Pearson.

**Mathematics** All students are expected to be knowledgeable about basic calculus (differentiation and integration). Microeconomics essentially involves a series of constraint optimization problems. In light of this, I will heavily rely on calculus to present the concepts of Microeconomics throughout this course.

**Grading Policy** Three components determine your grade: Exams, Case Homeworks and Case Presentation. The relative weights are as follows:

Exams .....	80%
■ Midterm	35%.
■ Final	45%.
Homework .....	20%
■ Four homework assignments, each accounting for 5%.	

Grades will be assigned based on *a curve fitted to the cumulative final score*.

## Course Outline

The schedule below is tentative. Any unexpected changes to the schedule will be announced in-class (as the course proceeds).

Digression ..... Chapter 1

█ Demand, Supply, Equilibrium

*Consumer Theory I* - Individual Optimization ..... Chapters 2, 3, 4, 5

█ Budget constraint, Preference, Utility, Marginal Rate of Substitution

*Consumer Theory II* - Demand and Consumer Surplus ..... Chapters 6, 8, 14

█ Slutsky equation, Compensating Variation, Equivalent Variation

*Consumer Theory III* - Intertemporal Demand, Demand under Uncertainty Chapters 10, 12

█ Saving, Present value, Contingent consumption, Risk Averseness

*Theory of Production I* - Production Function ..... Chapter 19

█ Marginal product, Technical Rate of Substitution

**Midterm** ..... October 24, 2023

*Theory of Production II* - Cost Minimization ..... Chapters 21, 22

█ Short-run and Long-run costs, Marginal Cost

Profit Maximization ..... Chapter 20

█ Market Structure, Firm Conduct

*Market Structure I* - Monopoly ..... Chapters 25, 26

█ Markup pricing, Price discrimination

*Game Theory* - A tool for Oligopolistic competition ..... Chapter 29

█ The Payoff matrix, Best response, Nash equilibria

*Market Structure II* - Oligopolistic Market ..... Chapter 28

█ Cournot-Nash equilibrium, Stackelberg-Nash equilibrium, Collusive behaviors

**Final** ..... December 19, 2023