



Peking University HSBC Business School

北京大学
汇丰商学院
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[Microeconomics/Managerial Economics]

Block 4, 2019-2020

Course Information

Instructors: DR ARHAT VIRDI & PROFESSOR GUY LIU

Classes:

Lectures: TUESDAYS, 12PM– 4PM (8 Week Lecture Series, beginning 28 April 2020)

1. Course Description

1.1 Context

Course overview:

The course covers topics in microeconomics such as supply and demand, consumer theory, labour supply, asymmetry of information, neo-classical view of the firm, production, costs, factor demands, perfect competition, monopoly, monopolistic competition, price discrimination, oligopoly, cartels and tacit collusion.

The environment in which modern managers operate is an increasingly complex one. It cannot be navigated without a thorough understanding of how business decisions are and should be taken. Intuition and factual knowledge are not sufficient. Managers need to be able to analyse; to put their observations into perspective; and to organise their thoughts in a rigorous, logical way. The main objectives of the course are to enable you to approach managerial decision problems using economic reasoning, and to present business practice topics using an analytical approach, using equations and numerical insight.

The following topics also form part of the course syllabus:

- individual (one person) decision making under uncertainty, attitudes towards risk and the value of information
- theory of games and strategic decision making, including its applications to oligopoly, collusion among firms, product differentiation, entry deterrence and other market practices
- the effects of asymmetric information in areas such as bargaining, bidding and auctions, situations of moral hazard and adverse selection
- how to address asymmetric information in acquisition of new business will be discussed in the topic of mergers and takeover, and the effect of merger on welfare and profitability of industry.

At the end of studying this subject, you should have acquired a sufficient level of model-building skills to analyse microeconomic situations of relevance to managers.

Prerequisites:

Some knowledge of constrained maximisation and Lagrangian functions would be helpful for students taking this subject, although this is not a pre-requisite.

1.2 Textbooks and Reading Materials

Lecture notes, assignments, cases and other useful information will be posted on the course web page. The following are very good reference texts:

Reference text: Varian, H.R. *Intermediate Microeconomics: A Modern Approach*. (New York: W.W. Norton and Co., 2014) 9th edition [ISBN 9780393123968].

Reference text: Nicholson, W. and C. Snyder *Theory and Applications of Intermediate Microeconomics*. (Cengage Learning, 2010) 11th edition, international edition [ISBN 9780324599497].

2. Learning Outcomes

2.1 Intended Learning Outcomes

Learning Goals	Objectives	Assessment
1. Our graduates will be effective communicators.	1.1. Our students will produce quality and economically informed judgements	Classroom discussion
	1.2. Students are able to professionally present their ideas and also logically explain and defend their argument.	Exam and classroom discussion
2. Our graduates will be skilled in team work and leadership.	2.1. Students will be able to lead and participate in group for projects, discussion, and presentation.	Classroom discussion
	2.2. Students will be able to apply leadership theories and related skills.	Exam and classroom discussion
3. Our graduates will have a global perspective. 4. Our graduates will be skilled in problem-solving and critical thinking.	3.1. Students will have an international exposure.	Classroom discussion
	4.1. Our students will have a good understanding of fundamental theories in their fields.	Exam and classroom discussion
4. Our graduates will have a global perspective.	5.2. Our students will be prepared to face problems in various business settings and find solutions.	Exam and classroom discussion
5. Our graduates will be skilled in problem-solving and critical thinking.	5.3. Our students will demonstrate competency in critical thinking.	Exam and classroom discussion

2.3 Assessment/ Grading Details

Assessment Task	Weighting
Final Exam	100%
Total	100%

2.4 Academic Honesty and Plagiarism

It is important for a student's effort and credit to be recognized through class assessment.

Credits earned for a student work due to efforts down by others are clearly unfair.

Deliberate dishonesty is considered academic misconducts, which include plagiarism; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honours, awards, or professional endorsement; or altering, forging, or misusing a University academic record; or fabricating or falsifying of data, research procedures, or data analysis.

All assessments are subject to academic misconduct check. Misconduct check may include reproducing the assessment, providing a copy to another member of faculty, and/or communicate a copy of this assignment to the PHBS Discipline Committee. A suspected plagiarized document/assignment submitted to a plagiarism checking service may be kept in its database for future reference purpose.

Where violation is suspected, penalties will be implemented. The penalties for academic misconduct may include: deduction of honour points, a mark of zero on the assessment, a fail grade for the whole course, and reference of the matter to the Peking University Registrar.

For more information of plagiarism, please refer to PHBS Student Handbook.

3. Topics, Teaching and Assessment Schedule

Week 1

Topic: Decision Analysis

We consider:

- the concept of expected value of perfect information (EVPI) and how it can be used
- why we may want to use expected utility rather than expected value maximisation
- the concept of certainty equivalent and how it relates to expected value for a risk loving, risk neutral and risk averse decision-making
- applications of decision analysis.

Essential Reading:

Varian, H.R. *Intermediate microeconomics: a modern approach*. (New York: W.W. Norton and Co., 2014; 9th edition) Chapter 12: Uncertainty.

Week 2

Topic: Game Theory

We consider:

- the concept of information set and why it is not needed in decision analysis
- why it is useful to have both extensive form and normal form representations of a game
- the importance of the prisoners' dilemma as a paradigm for many social interactions
- the concept of dominated strategies and the rationale for eliminating them in the analysis of a game
- the concept of Nash equilibrium (this is absolutely essential!)
- the concepts of backwards induction and subgame-perfect equilibrium
- the concept of non-credible threats and its application to entry deterrence problems.

Essential Reading:

Varian, H.R. *Intermediate microeconomics: a modern approach*. (New York: W.W. Norton and Co., 2014; 9th edition) Chapter 29: Game theory and Chapter 30: Game applications.

Week 3

Topic: Bargaining and Auctions

We consider:

- the most prominent axiomatic and game-theoretic bargaining solutions used in managerial economics, as well as some of their applications
- the cooperative and conflicting aspects of bargaining situations
- the difference between private-value auctions and common-value auctions
- the main types of auction mechanisms and the optimal bidding strategies for each of them
- the IID assumption on buyers' valuations

- the effect of the number of bidders on the auction revenue and the bid's structure
- the revenue equivalence result
- the winner's curse

Essential Reading:

Varian, H.R. *Intermediate microeconomics: a modern approach*. (New York: W.W. Norton and Co., 2014); 9th edition, Chapter 30: Game Applications, Section 30.7: Bargaining. Chapter 18: Auctions.

Week 4

Topic: Consumer Theory

We consider:

- the decomposition of the price effect into income and substitution effects (Hicks and Slutsky methods)
- the concepts of equivalent variation (EV) and compensating variation (CV)
- ways to assess the change in consumer welfare as a result of changes in the price of goods
- the concept of elasticity and the relationship between price elasticity and the effect of a price change on revenue
- the relationship between price elasticity and the optimal markup.
- the role of the income effect in generating backward-bending labour supply
- setting up the intertemporal choice problem and analyse the effect of changes in the interest rate on the consumer's choice

Essential Reading:

Varian, H.R. *Intermediate microeconomics: a modern approach*. (New York: W.W. Norton and Co., 2014; 9th edition) Chapter 5: Choice, Chapter 6: Demand, Chapter 8: Slutsky equation, Chapter 14: Consumer's surplus and Chapter 15: Market demand. Chapter 10: Intertemporal choice, Chapter 12: Uncertainty,

Week 5

Topic: Production and Costs

We consider:

- how the smooth isoquants continuous production model relates to the linear production model
- the difference between conditional and unconditional input demands
- the problems involved in estimating production functions
- the $MRP = ME$ rule for determining unconditional input demands
- the cost minimisation problem
- the different types of costs that are relevant to microeconomics
- economies of scale and economies of scope
- the problems involved in estimating cost functions
- why MR should equal MC in each producing plant of a multiplant firm

Essential Reading:

Varian, H.R. *Intermediate microeconomics: a modern approach*. (New York: W.W. Norton and Co., 2014; 9th edition) Chapter 19: Technology, Chapter 20: Profit maximization. Chapter 21: Cost Minimization.

Week 6

Topic: Market Structure: Perfect Competition, Monopoly & Oligopoly

We consider:

- the importance of entry barriers as determinants of market structure and firm behaviour
- the concepts of concentration curve, CRm, HHI and Lerner index
- why in a perfectly competitive industry the supply curve is not necessarily the horizontal sum of individual firm supply curves
- the concept of monopoly
- why we may not observe $MR = MC$ in a monopoly
- the different homogenous products, oligopoly models and the conditions that characterise them
- the differences in assumptions with respect to decision variables and strategic (a)symmetry between the various oligopoly models discussed
- the (Nash) equilibrium of each oligopoly model

Essential Reading:

Varian, H.R. *Intermediate microeconomics: a modern approach*. (New York: W.W. Norton and Co., 2014; 9th edition) Chapter 23: Firm supply. Chapter 25: Monopoly. Chapter 26: Monopoly behaviour. Chapter 28: Oligopoly.

Week 7

Topic: Change Market Structure: Merger and Acquisition

We consider

- Motivation of acquiring new business
- Theory of merger and acquisition
- Assess the effect of merger and acquisition on social welfare and industrial profitability
- Regulations towards industrial merger and acquisitions
- Can merger and acquisition help improve performance of the firm?
- How asymmetric information between investors and sellers is addressed in practice?
- Case study of merger and acquisition in practice

Essential Reading:

Waldman, Don E and Elizabeth Jensen (2007), Industrial Organization – theory and practice, 3rd edition, Chapter 4

Robert Bruner (2004), Applied Mergers and Acquisitions, New York: John Wiley & Sons

Li, Shaomeng; Guy Liu, Andros Gregorious (2020), “**Do more mergers and acquisitions create value for shareholders?**”, *Review of Quantitative Finance and Accounting*, Forthcoming

Week 8

Topic: Pricing and Strategic Competition

We consider:

- Cournot Pricing and Strategic Competition
- Stackelberg Pricing and Strategic Competition
- Limited Pricing and Strategic Competition
- Cartel Pricing
- Bertrand Pricing Model
- Price Discrimination
- Vertical Competition and Strategic Competition

Essential Reading:

Dominick Salvatore (2015), **Managerial Economics**, International, the 8th edition, Chapter 8 and Chapter 9.