

## Extended Syllabus (2023 1<sup>ST</sup> Semester)

Course Title	Industrial Economics (산업경제학)	Course Number	ECO3001
Credit	3	Enrollment Eligibility	
Class Time	MON & WED 16:30 – 17:45	Classroom	TBA

Instructor's Photo	Name: 주하연 (Hailey Hayeon Joo)	Homepage: <a href="http://cyber.sogang.ac.kr">http://cyber.sogang.ac.kr</a>
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### I. Course Overview

1. Course Overview

1. Description							
This is a theoretical course in modern industrial economics. Many real-world firms are trying to manipulate their rivals or consumers. We will study the functioning of the markets by analyzing behavior of non-competitive firms. We will learn the tools of microeconomics and game theory to understand how firms make their decisions based on strategic thinking. We will use these theoretical insights to explain observed features of particular markets and industries.							
2. Prerequisites							
Students need to have taken or waived <b>Microeconomics I</b> . Students must also be familiar with derivatives, which – believe it or not – make this course much easier. Don't worry if your math is rusty, because we'll spend a session reviewing relevant math.							
3. Course Format (%)							
Lecture	Discussion	Experiment/Practicum	Field study	Presentations	Other		
80 %	20 %	%	%	%	%		
4. Evaluation (%)							
mid-term Exam	Final exam	Quizzes	Presentations	Projects	Assignments	Participation	Other
35 %	45 %	%	%	%	5 %	15 %	%

## II. Course Objectives

Industrial economics is the study of industry and firm behavior. Using the basic tools of microeconomic theory and game theory, this course explores the relationships among firms in an industry or across industries by examining the nature of strategic interaction among firms.

We will study theoretical models and empirical evidence for a wide variety of market phenomena such as price wars, mergers, and advertising campaigns. We focus attention on the structure and performance of markets that are imperfectly competitive. For this purpose we employ game theoretic models to discuss recent articles covering the following issues: 1) entry deterrence strategies and barriers to entry; 2) price and non-price competition; 3) vertical control; and 4) market segmentation and price discrimination.

## III. Course Format

(\* In detail)

Lecture notes will be posted on Cyber Campus. This will be a conventional lecture using PowerPoint slides. Students, however, are strongly encouraged to ask questions and listen to others when they speak. As the course covers basic microeconomic modeling, the most efficient learning style is the traditional lecture setting with open questions and discussions.

## IV. Course Requirements and Grading Criteria

### Tests:

There will be a midterm and a final exam, **both of which are closed-book exams**. Students who request make-up exams due to emergencies must be prepared to submit written documentation of the reason for their absence. The tests will not be cumulative. **If a student fails to take an exam, she/he will receive an F.**

### Group Discussion and Assignment:

There will be a couple of group discussions about real world examples in class. The group size is 4. You can find group members by yourselves or request me to create a group for you. Before the final week, you have to write up a Korean case related to the IO issues covered in class with your group members and submit it.

### Grades:

Grades will be weighted as follows:

Class Participation / Group Discussion	15 %
Group Assignment	5 %
Midterm	35 %
Final	40 %
Total	100 %

Final grades for this course will be assigned according to the curve.

## V. Course Policies

### **FA System:**

The FA system will be followed, as clearly stated by Sogang University rule.

### **Class Attendance and Participation:**

Class attendance and participation is critical to your success in this course because lectures, discussions, and tests are a significant portion of the learning experience. Thus, students are expected to attend each class.

### **No Photos or Video Allowed:**

You cannot take a photo or record a video without advance permission from the lecturer.

## VI. Materials and References

The textbook for this course is Industrial Organization: Contemporary Theory and Empirical Applications, by Lynn Pepall, Dan Richards, and George Norman, fifth edition. (The early editions are acceptable substitutes.)

## VII. Course Schedule

(\* Subject to change)

Week 1	Learning Objectives	Learn the basic tools of IO
	Topics	Introduction to IO; Mathematics of Optimization; Lightning Review of Microeconomics
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Ch. 1 & 2
	Assignments	Question bank #1 will cover week 1 – week 7.
Week 2	Learning Objectives	Learn the market structure and market power
	Topics	Perfect Competition; Monopoly; Efficiency; and Lerner Index
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Ch. 2 & 3

	<b>Assignments</b>	Question bank #1 will cover week 1 – week 7.
<b>Week 3</b>	<b>Learning Objectives</b>	Learn costs
	<b>Topics</b>	Various Cost Functions
	<b>Class Work (Methods)</b>	Lecture
	<b>Materials (Required Readings)</b>	Ch. 4
	<b>Assignments</b>	Question bank #1 will cover week 1 – week 7.
<b>Week 4</b>	<b>Learning Objectives</b>	Learn price discriminations
	<b>Topics</b>	Price Elasticity of Demand; Price Discrimination
	<b>Class Work (Methods)</b>	Lecture
	<b>Materials (Required Readings)</b>	Ch. 5 & 6
	<b>Assignments</b>	Question bank #1 will cover week 1 – week 7.
<b>Week 5</b>	<b>Learning Objectives</b>	Learn about the monopoly further
	<b>Topics</b>	Product Variety; Bundling; Tie-ins
	<b>Class Work (Methods)</b>	Lecture
	<b>Materials (Required Readings)</b>	Ch. 7 & 8
	<b>Assignments</b>	Question bank #1 will cover week 1 – week 7.
<b>Week 6</b>	<b>Learning Objectives</b>	Apply the static game to oligopoly
	<b>Topics</b>	Nash Equilibrium; Cournot Equilibrium; Bertrand Equilibrium

	<b>Class Work (Methods)</b>	Lecture and group work
	<b>Materials (Required Readings)</b>	Ch. 9 & 10
	<b>Assignments</b>	Question bank #1 will cover week 1 – week 7.
<b>Week 7</b>	<b>Learning Objectives</b>	Review of perfect competition, monopoly, and oligopoly
	<b>Topics</b>	Analytic questions in perfect competition, monopoly, and oligopoly
	<b>Class Work (Methods)</b>	Review session
	<b>Materials (Required Readings)</b>	All chapters covered in class
	<b>Assignments</b>	Question bank #1 will cover week 1 – week 7.
<b>Week 8</b>	<b>MIDTERM WEEK: NO CLASS</b>	
<b>Week 9</b>	<b>Learning Objectives</b>	Apply the dynamic game to oligopoly
	<b>Topics</b>	Dynamic Game, First and Second Mover; Stackelberg Equilibrium
	<b>Class Work (Methods)</b>	Lecture
	<b>Materials (Required Readings)</b>	Ch. 11
	<b>Assignments</b>	Question bank #2 will cover week 9 – week 15.

Week 10	Learning Objectives	Learn the entry deterrence
	Topics	Limit Pricing; Entry Deterrence
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Ch. 12
	Assignments	Question bank #2 will cover week 9 – week 15.
Week 11	Learning Objectives	Learn the collusive behaviors – Part 1
	Topics	Predatory Conduct; Collusion; Cartel
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Ch. 13
	Assignments	Question bank #2 will cover week 9 – week 15.
Week 12	Learning Objectives	Learn the collusive behaviors – Part 2
	Topics	Pricing Fixing; Collusion; Cartel
	Class Work (Methods)	Lecture
	Materials (Required Readings)	Ch. 14
	Assignments	Question bank #2 will cover week 9 – week 15.
Week 13	Learning Objectives	Learn the collusive behavior – Part 3
	Topics	Collusion; Antitrust Laws
	Class Work (Methods)	Lecture

	<b>Materials (Required Readings)</b>	Ch. 15
	<b>Assignments</b>	Question bank #2 will cover week 9 – week 15.
<b>Week 14</b>	<b>Learning Objectives</b>	Learn auctions
	<b>Topics</b>	Various Types of Auctions; Auction Markets
	<b>Class Work (Methods)</b>	Lecture and group work
	<b>Materials (Required Readings)</b>	Ch. 25
	<b>Assignments</b>	Question bank #2 will cover week 9 – week 15.
<b>Week 15</b>	<b>Learning Objectives</b>	Review of several topics
	<b>Topics</b>	Analytic questions
	<b>Class Work (Methods)</b>	Review session
	<b>Materials (Required Readings)</b>	All chapters covered after the midterm
	<b>Assignments</b>	Question bank #2 will cover week 9 – week 15.
<b>Week 16</b>	<b>FINAL WEEK: NO CLASS</b>	

### VIII. Special Accommodations

#### **Supporting Disabled Students:**

Those who need special arrangements such as seating and note-taking should contact the instructor before the first class meeting.