Course Syllabus
2025 YONSEI INTERNATIONAL SUMMER SCHOOL
6-WEEK PROGRAM

연세대학교 YONSEI UNIVERSITY

ECO3101-11 GAME THEORY AND APPLICATIONS

COURSE TITLE	GAME THEORY AND APPLICATIONS	**COURSE CODE-SECTION**	ECO3101-11
CREDIT	3	**CLASS PERIOD**	P2(11:00~12:40)
OFFICE		**OFFICE HOURS**	
INSTRUCTOR	Tai-Yeong Chung	**EMAIL**	tchung8@gmail.com

[COURSE INFORMATION]

COURSE DESCRIPTION & BRIEF INTRODUCTION OF THE COURSE	Explore the intricate dynamics of strategic decision-making with our introductory Game Theory course. This course delves into the study of interactions among rational agents, examining how their decisions influence each other's welfare. Game Theory is not merely theoretical; it is a robust analytical tool widely applied across various social sciences, particularly in economics, business, political science, and international relations.
COURSE GOALS	Students will gain a thorough grounding in Game Theory, with a particular emphasis on its practical applications in economics and business. The course aims to equip students with a deep understanding of core concepts and the analytical skills necessary to interpret and influence economic, social, and political phenomena.

COURSE METHODS (100% TOTAL)

LECTURE	PRACTICE TRAINING	PRESENTATION	DEBATE	TEAM PROJECT
80	20			

GRADING POLICY (100% TOTAL)

MIDTERM	FINAL EXAM	QUIZ	INDIVIDUAL ASSIGNMENT	TEAM ASSIGNMENT	ATTENDANCE	OTHERS
30	40		20		10	

PREREQUISITE	No specific prerequisite, except high school level math. Principles of economics or business would be helpful, but not necessary.
COURSE REQUIREMENTS	Students learn how to model a strategic situation as a game and how to solve it. This course has three objectives: 1) learn some game theory; 2) acquire some insight into strategic situations; and 3) have an intellectually stimulating and enjoyable time.
TEXTS & REFERENCES	Games, Strategies, and Decision Making Second Edition, 2015 Joseph Harrington

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[WEEKLY SCHEDULE]

WEEK (PERIOD)	WEEKLY TOPIC & CONTENTS	COURSE MATERIAL & ASSIGNMENTS	NOTES
1	Introduction 1) Strategic reasoning 2) Building a model of a strategic situation	Ch. 1, 2	
2	Solving a game: 1) Eliminating the impossible 2) Nash equilibrium	Ch. 3, 4, 5	Problem set 1
3	Solving a game: 3) Nash equilibrium in continuous game 4) Randomized strategies	Ch. 6, 7	midterm
4	Sequential games with perfect information	Ch. 8	
5	Sequential games with imperfect Information	Ch. 9, 10	Problem set 2
6	Repeated games	Ch. 13, 14	Final