ÇANKAYA UNIVERSITY
Faculty of Economics and Administrative Sciences
Course Definition Form

Part I. Basic Course Information

Department Name	ECONOMICS					**Dept. Numeric Code**	3 1
Course Code	E C O N 4 2 6	**Number of Weekly Lecture Hours**	3	**Number of Weekly Lab/Tutorial Hours**	0	**Number of Credit Hours**	3
Course Web Site	http:// econ426.cankaya.edu.tr					**ECTS Credit**	0 5

Course Name and Other Course Information *This information will appear in the printed catalogs and on the web online catalog.*	
English Name	Introduction to Game Theory
Turkish Name	Oyun Teorisine Giriş
Mode of Delivery	Face to face
Language of Instruction	English

Course Description
Provide a brief overview of what is covered during the semester. This information will appear in the printed catalogs and on the web online catalog.
Maximum 60 words.

Introduction to basic concepts and techniques of game theory covering formulation and solution of games, Nash equilibrium, Prisoners' dilemma, strategic decision-making, and applications to law, government, politics, trade, management, and economic behavior.

Prerequisites (if any) *Give course codes and check all that are applicable.*	1st	2nd	3rd	4th
	☐ Consent of the Instructor	☐ Senior Standing	☐ Give others, if an	
Co-requisites (if any)	1st	2nd	3rd	4th
Course Type *Check all that are applicable*	☐ Must course for dept ☐ Must course for other dept.(s) ☒ Elective course for dept. ☐ Elective course for other dept.(s)			

Part II. Detailed Course Information

Course Objectives
Maximum 100 words.

This course will enable students to gain an understanding of the basic concepts and tools of game theory in both static and dynamic game settings, apply them to real life strategic consumer and firm level decision making, and formulate/evaluate policy in strategic situations.

Learning Outcomes
Explain the learning outcomes of the course. Maximum 10 items.

Upon successful completion of this course, students will be able to:
1. Understand the static normal form games, domination and Nash equilibria.
2. Understand extensive form games and subgame perfect equilibria.
3. Understand Bayesian games, repeated games and Bayesian equilibria.
4. Model and solve strategic interactions using tools of game theory
5. Apply game theoretic approaches to real world cases and evaluate mechanisms and policies.

Textbook(s)
List the textbook(s), if any, and other related main course material.

Author(s)	Title	Publisher	Publication Year	ISBN
Robert Gibbons	Game Theory for Applied Economists	Princeton University Press	1992	9780691003955
Martin J. Osborne	An Introduction to Game Theory	Oxford University Press	2003	9780195128956

Reference Books
List, if any, other reference books to be used as supplementary material.

Author(s)	Title	Publisher	Publication Year	ISBN
Drew Fudenberg and Jean Tirole	Game Theory	ANE Books	2005	9788180520822
Avinash Dixit	The Art of Strategy	W.W. Norton & Company	2010	9780393337174

Teaching Policy
Explain how you will organize the course (lectures, laboratories, tutorials, studio work, seminars, etc.)

The course will be taught through three-hour lectures on weekly basis. Problem sets will be assigned to students, then solved in class.

Laboratory/Studio Work
Give the number of laboratory/studio hours required per week, if any, to do supervised laboratory/studio work and list the names of the laboratories/studios in which these sessions will be conducted.

NA

Computer Usage
Briefly describe the computer usage and the hardware/software requirements for the course.

NA

Course Outline
List the weekly topics to be covered.

Week	Topic(s)
1	Introduction: What is Game Theory? What is a Game? Representation of Games
2	Static Games of Complete Information: Normal Form Games and Nash Equilibrium
3	Applications
4	Mixed Strategies and Existence of Equilibrium
5	Dynamic Games of Complete and Perfect Information
6	Two-Stage Games of Complete bu Imperfect Information
7	Midterm Exam
8	Repeated Games
9	Dynamic Games of Complete but Imperfect Information
10	Static Games of Incomplete Information: Bayesian Games and Bayesian Nash Equilibrium
11	Applications
12	Dynamic Games of Incomplete Information: Perfect Bayesian Equilibrium
13	Signaling Games
14	Other Applications of Perfect Bayesian Equilibrium

Grading Policy
List the assessment tools and their percentages that may give an idea about their relative importance to the end-of-semester grade.

Assessment Tool	Quantity	Percentage	Assessment Tool	Quantity	Percentage	Assessment Tool	Quantity	Percentage
Problem Sets	3	15						
Midterm	1	35						
Final	1	40						
Class Participation	1	10						

ECTS Workload
List all the activities considered under the ECTS.

Activity	Quantity	Duration (hours)	Total Workload (hours)
Attending Lectures (*weekly basis*)	14	3	42
Attending Labs/Recitations (*weekly basis*)	-	-	-
Compilation and finalization of course/lecture notes (*weekly basis*)	14	1	14
Collection and selection of relevant material (*once*)	1	1	1
Self study of relevant material (*weekly basis*)	14	2	28
Take-home assignments	3	5	15
Preparation for quizzes	-	-	-
Preparation for mid-term exams (*including the duration of the exams*)	1	10	10
Preparation of term paper/case-study report (*including oral presentation*)	-	-	-
Preparation of term project/field study report (*including oral presentation*)	-	-	-
Preparation for final exam (*including the duration of the exam*)	1	20	15
TOTAL WORKLOAD **/** 25			125/25
ECTS Credit			**5**

Program Qualifications vs. Learning Outcomes *Consider the program qualifications given below as determined in terms of learning outcomes and acquisition of capabilities for all the courses in the curriculum. Look at the learning outcomes of this course given above. Relate these two using the Likert Scale by marking with X in one of the five choices at the right.*

No	Program Qualifications	Contribution				
		0	1	2	3	4
1	To know the fundamental concepts in economics and associated social sciences, and relate these concepts to each other.					x
2	To know the quantitative and qualitative methods and computer skills necessary for testing hypotheses derived from economic theories for the purpose of contributing towards the solution of economic problems.			x		
3	To acquire the necessary knowledge for gathering and processing data, and for building up the scientific research capacity to guide economic policy.	x				
4	To specialize in some of the sub-disciplines of economics, and to gain interdisciplinary analytical skills by making connections between those sub-disciplines and other social sciences.					x
5	To have the ability to question, interpret, and analyze the findings of economic studies.				x	
6	To develop the ability to present in writing as a report and verbally as a presentation the knowledge acquired through education.		x			
7	To be able to work in teams, and when necessary to rise up to the challenge individually.		x			
8	To gain life-long learning and critical-thinking skills.					x
9	To be able to assess one's need for advanced study and to make plans accordingly by using the critical and analytical thinking skills gained during undergraduate studies.		x			
10	To gain the ability to use a language at least at the Level B1 of the European Language Portfolio to follow economic news and developments, and to communicate with colleagues.	x				
11	To maintain scientific, social, and ethical standards when collecting, interpreting, and disseminating economic information, and in application of economic ideas.	x				
12	To be conscious of social and environmental needs.	x				
13	To develop an open-minded attitude towards new ideas and developments.			x		
14	To relate the knowledge gained through education to the cultural and historical characteristics of the society.	x				

Scale for contribution to a qualification: **0**-none, **1**-little, **2**-moderate, **3**-considerable, **4**-highest