



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Game Theory							
Course Code		İKT453		Couse Level		First Cycle (Bachelor's Degree)			
ECTS Credit	5	Workload	125 (Hours)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		To gain information about gaming theory and techniques and to gain experience in application							
Course Content		Domination, Nash Equilibrium, Dynamic Games, Under-Game Perfect Equilibrium, Repetitive Games, Dynamic Games with Incomplete Knowledge, Auctions, Bargaining							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Case Study					
Name of Lecturer(s)									

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

### Recommended or Required Reading

1	Game Theory (Ensar Yilmaz)
2	Game Theory for Applied Economists (Robert Gibbons)
3	Games and Information (Eric Rasmusen)
4	Martin J. Osborne (2004), An Introduction to Game Theory

Week	Weekly Detailed Course Contents	
1	Theoretical	Full knowledgeable games. - Dominant Strategy Balance
2	Theoretical	Nash Equilibrium, presence and features
3	Theoretical	Mixed Strategies
4	Theoretical	Full Knowledgeable Dynamic Games, Expanding Form Games
5	Theoretical	Backward Inferencing and Sub-game Balance and Multi-stage Games
6	Theoretical	Repetitive games (limited repetition games)
7	Theoretical	Repeated games (unlimited repetition games, incomplete repetitive games)
8	Intermediate Exam	mid-term exam
9	Theoretical	Incomplete knowledgeable static games (bayesian games and balancing the bayesian)
10	Theoretical	Auctions
11	Theoretical	Incomplete knowledgeable dynamic games (excellent Bayesian games)
12	Theoretical	Signal Games
13	Theoretical	Bargaining Games
14	Final Exam	Final exam

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	3	70
Lecture - Practice	3	5	5	30
Midterm Examination	1	9	1	10
Final Examination	1	14	1	15
Total Workload (Hours)				125
[Total Workload (Hours) / 25*] = ECTS				5

\*25 hour workload is accepted as 1 ECTS

### Learning Outcomes

1	Student will be able to do microeconomic analysis with game theoretical tools.
2	Student will be able to discuss the applications of game theory in economics and other social sciences.



3	Apply game theoretical tools to practical situations
4	relate real-life situations to the formal games seen in class
5	propose simple modifications in the rules of a game to achieve desirable social outcomes

#### Programme Outcomes (Economics)

1	To be able to understand and interpret the concepts, theories and methods of basic economics
2	To be able to apply mathematical, statistical and econometric analysis tools to economic problems
3	To be able to interpret the structure and characteristics of the markets in the economy by understanding the current economic events
4	To be able to define the role of innovation, creativity and technology concepts in the dynamic global economy.
5	To be able to prepare projects and to gain creativity skills
6	To be able to analyze macro and micro economic activities.
7	To be able to adapt the philosophy of lifelong learning

#### Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P1	4	3	4	3	4
P2	3	3	3	3	3
P3	4	3	4	3	4
P4	3	3	4	3	4
P5	3	3	4	3	4
P6	3	3	4	3	4
P7	3	3	4	3	4

