**Antalya Bilim University**

**Department of Economics**

**ECON 1414: Game Theory**

**Fall 2020**

Class time& Place: Online, TBA

Office hours: Online, TBA

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Game Theory is the study of mathematical models of strategic decision making with interacting decision makers. This theory has become a fundamental tool in the study of social interaction in economics, political science, anthropology, sociology, animal behaviour, biology, computer science and other disciplines. In this course we introduce basic concepts and tools of game theory and explore a variety of applications. The course focusses more on concepts and illustrative examples rather than on mathematical theory.

**Textbook:**

J. Harrington (2015). Games, Strategies and Decision Making, Second Edition. Palgrave MacMillan.

Students are responsible to get a **copy** of the textbook.

**Learning Outcomes**

The aim of this course is to introduce you to the world of game theory and its application in a wide range of disciplines. After completing this course, you will be able to:

* demonstrate an understanding of a variety of game theoretic methods of analysing behaviour in strategic situations;
* apply that understanding to predict behaviour and evaluate business and policy options;
* reflect on game theoretical methods from a multi-disciplinary perspective;
* appreciate the impact that game theory has made, and continues to make, in a variety of contexts.

**Academic Honesty and Plagiarism**

Plagiarism is using the words or ideas of others and presenting them as your own. Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. Although plagiarism is well established in Turkish educational system, you will be punished heavily if you are caught do it.

**Assessment Criteria:**

1. **Hand-in exercises (40%)**: There will be four sets of problems that you need to work on and hand in your solutions. You are encouraged to discuss hand-in exercises with other students in small groups and to hand in solutions as a group, in which case all individuals in a group receive the same grade. Precise deadlines for handing in, and the precise details on the scoring system, will be communicated later.
2. **Final exam (60%):** The exam will cover all the topics studied throughout the course.

**Course Schedule**

**WEEKS 1-2 Introduction to game theory**

Chapters 1-2

**WEEKS 3-5 Strategic form games**

Chapters 3-7

**WEEKS 6-7 Extensive form games**

Chapters 8-9

**WEEKS 8-10 Games of incomplete information**

Chapters 10-12

**WEEKS 11-12 Repeated games**

Chapters 13-14

**WEEKS 13-14 Evolutionary game theory**

Chapters 16-17