Game Theory and Applications – Spring 2023

The course will build on the material discussed in EC 2102 and then discuss how game theoretic tools can be applied in various contexts taken from Economics, Computer Science, Law and Biology. Much of the course will focus on the applications rather than on learning more Advanced Game Theory. **EC2101 and 2102 are prerequisites for the course.**

A rough outline of the course structure is the following.

1. Review of Game Theory. **1 week.**

2. Economics and Game Theory : Auction, Bargaining and markets, introduction to mechanism design. **4 weeks.**

3. Evolutionary Game Theory and Biological interactions **2 weeks**

4 Game Theory and Computer Science. **2 weeks.**

5. Game Theory and Law . **2 weeks**.

6. Game Theory and Political Science. **2 weeks.**

There is no textbook for this course. I will distribute lecture notes and also give detailed references to various papers as we go along.

**Attendance Policy** : You are allowed 5 absences during the semester. Each absence beyond 5 will entail a loss of 5 marks. The only deviation from this rule will be if any incidence of illness results in hospitalization. So, you are advised to not use up your quota of 5 permitted absences until the last few weeks of the semester.

**Grading :** There will be one midterm test (40% weight), one final exam (40% weight) and 2 assignments (each 10% weight).