

*Course Syllabus*

**Economics of Information and Uncertainty**

Spring 2020

**Instructor**

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**Class Day/Time:** TBA

**Course website:** portal course community

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**Course Description and Objectives:**

The objective of this course is to explore the implications of interactions among rational players. The course will be two folded. In the first half of the course, we will study (i) economic agents' choice problems under uncertainty (expected utility, risk aversion and contingent commodity markets), (ii) hidden information problems (screening problems) with applications of price discrimination and regulations, and (iii) hidden action problems (moral hazard problems) with applications of insurance markets and contracts. In the second half of the course, we will discuss various issues in game theory focusing on (i) extensive form games and their applications (including ultimate game, repeated prisoners' dilemma, dynamic monopoly), (ii) Bayesian games and their applications. Students are expected to know intermediate microeconomics and game theory (at the level of the standard, intermediate microeconomics course).

The first half of the class is delivered by video clips. The instruction to access the video clips will be provided in due course. The midterm examination is to test how well students understand the material in the video clips. The second half is the lectures.

**Textbook:** Osborne, Martin J., *An Introduction to Game Theory*, 6<sup>th</sup> Edition, Oxford University Press.

**Prerequisite:** Intermediate microeconomics, Game theory, and its applications

**Course Outline:**

**First Half. Flip learning**

1. Choice under Uncertainty
2. Hidden Information: Screening
3. Hidden Action: Moral Hazard
4. Auctions
5. Mechanism design problem

**Second Half. Lecture**

We will go over the topics studied through videos in the first half of the class.

**Grading and Evaluation:**

Attendance (5%), Midterm Exam (40%), Final Exam (55%)

1. Midterm is scheduled at 1:00-2:20PM on April 22 (Wed) in the class. This examination will test how students understand the material presented by video clips.
2. The schedule for the final examination will be announced after April 27, which covers all material in the class.

**Administrative Details:**

1. Attendance will be checked occasionally. Being late will be counted as an absence.
2. The midterm and final exams will take place in-class
3. Do not use a cell phone in the class. Please turn it off before class begins.  
Students will be asked to leave the class if the behavior turns out to be disruptive.