

Intensive Lecture Series: Game Theory I

Date and Time: February 6, 2014, period 1, 2, 3, and 4

February 7, 2014, period 1, 2, 3, and 4

February 10, 2014, period 1, 2, 3, and 4

February 11, 2014, period 1, 2, and 3

Venue: Room 3302, Mercury Tower 3F, East Campus, Hitotsubashi University

Lecturer: Professor Takuro Yamashita, Toulouse School of Economics

Course Overview

To achieve desirable economic outcomes, rules of economic activities (called “mechanisms”) need to be carefully designed, so that economic agents are “incentivized” to behave in a desirable way, even if they are only concerned about their own interest. In this course, we cover introductory/intermediate mechanism design theory, which provides a theoretical framework to understand important incentive issues in designing a mechanism, and how (if possible) a good mechanism can overcome those issues.

Attendance Regulations

No restriction. Some knowledge in microeconomics would be highly recommended. Knowledge in game theory would be very helpful.

Objectives and Methodology

The aim of this course is to provide necessary mathematical tools to analyze mechanism design problems. Lectures will be based on lecture notes.

Topics/Schedule

We will cover some of the following topics based on time constraints:

- (i) Single-agent model, with applications to monopoly pricing, delegation, contracting
- (ii) Multi-agent model with monetary transfer, with applications to auction, bilateral trade, public goods provision
- (iii) (if time permits) Multi-agent model without monetary transfer, with applications to assignment, matching, voting

References

Drew Fudenberg and Jean Tirole, *Game Theory*, 1991, MIT Press (Chapter 7).

Paul Milgrom, *Putting Auction Theory to Work*, 2004, Cambridge University Press.

伊藤秀史「契約の経済理論」, 2003, 有斐閣.

Course Requirements and Grading Allocation

Grades will be based on (multiple) take-home problem sets.