Advanced Microeconomics III: Syllabus

Instructor: Xiang Sun

Wuhan University, Economics and Management School
Academic Year 2021–2022, Semester 2

Chinese title:　高级微观经济学（第三部分）.

Prerequisite:　Calculus, Probability, Intermediate Microeconomics, Basic Game Theory.

Course description:　In this course, we mainly talk about the information economics. The first part is the theory of incentives (or the contract theory), including adverse selection, moral hazard, and nonverifiability. The second part is the information transmission, including signaling, cheap talk, Blackwell experiment, and Bayesian persuasion.

We try to provide a systematic understanding of the form and the consequences of these economic interactions by describing and analyzing them with the use of a theoretical framework. These models will help us gain insights in understanding how individuals interact in certain novel situations, and allow us to draw conclusions on what outcomes to expect from their interactions.

Modular credit:　1.5 modular credits.

Modular number:

Time:　Week 7–11, Tuesday and Friday 09:00–11:30.

Venue:　B251 for onsite teaching, and Tencent Meeting 381 473 0039 (password 123456) for online teaching.

Module website:　https://www.xiangsun.org/teaching, for announcements and lecture notes downloading.

Instructor:　孙祥
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  - Before asking questions, please briefly read 提问的智慧.
  - Before sending e-mails, please read Topic 7 in WISE 学生礼仪指南.
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- Office: Room C291 or A501-2, Liangsheng Building.
- Telephone: +86 027 6875 5072.
- Mailbox: 4-29.

Office hours: By e-mail appointment.

Teaching assistants: Not applicable.

Main references:

[LM]   Jean-Jacques Laffont and David Martimort, *The Theory of Incentives: The Principal-Agent Model*, Princeton University Press, 2002.

[MWG]   Andreu Mas-Colell, Michael D. Whinston, and Jerry R. Green, *Microeconomic Theory*, Oxford University Press, 1995.

[Sun]   Xiang Sun, *Lecture Notes on Game Theory: Theory and Examples*, 2018.
Electronic version is available at Sun's homepage. The latest version is on March 5, 2018.

Language:

	Lecture notes	Lectures	Homework sets	Mid-term test	Final examination
Chinese		✓			
English	✓	✓	✓	✓	✓

Supplementary readings:

[陈]   陈钊, 信息与激励经济学, 第三版, 格致出版社, 2018.

[田]   田国强, 高级微观经济学, 中国人民大学出版社, 2016.

[聂]   聂辉华, 一切皆契约, 上海三联书店, 2021.

[S]   Bernard Salanié, *The Economics of Contracts*, 2ed., The MIT Press, 2005.

[BD]   Patrick Bolton and Mathias Dewatripont, *Contract Theory*, The MIT Press, 2005.

Grading:

- In-class quiz: 20%.
- Homework: 30%.
    - Complete the homework as a single PDF file.
    - Upload PDF homework to 坚果云收件箱 within 7 days of posting.
- Closed-book final examination: 50%.
    - Date and time: 13 May 2022, 14:00–16:30.
    - Venue: 枫园 203/204.
    - Scope: All lectures.

Examination policy:

- Each student should bring the student card with clear photo ID.
- Cheating = 0 mark.
- No permission is ever given to a student to write the mid-term test or final examination in advance of its date.
- There is no make-up for the mid-term test or the final examination.
- The student who misses the mid-term test can have the weight of the missed mid-term test shifted to the final examination, if both of the following conditions are met:

- The student notifies the instructor via e-mail and in advance of the date and time that the mid-term test will be missed.
- The student submits an official medical certificate to the instructor within 3 working days of final examination.

Students who do not write the mid-term test, and fail to meet both criteria receive a 0 mark.
- For the student who misses the final examination, the University policy applies.

Course outline:

- Part 1: Theory of incentives/Contract theory:
  - adverse selection,
  - moral hazard,
  - nonverifiability and incomplete contract.
- Part 2: Information transmission:
  - job market signaling,
  - cheap talk,
  - Bayesian persuasion.

Tentative time table:

Week	Lecture	Date		Topics	Remarks
7	1	Mar. 29	[LM] 1, 2.1–2.5	Introduction, Adverse selection: Model	
7	2	Apr. 1	[LM] 2.6	Adverse selection: Analysis	
8		Apr. 5		Holiday	
8	3	Apr. 8	[LM] 2.10–3.6	Adverse selection: Applications, Extensions	Hw1
9	4	Apr. 12	[LM] 4.1–4.4	Moral hazard	
9	5	Apr. 15	[LM] 4.5, 4.8	Moral hazard: Applications	Hw2
10	6	Apr. 19		Introduction to incomplete contract	
10	7	Apr. 22	[MWG] 13.C	Signaling	
11	8	Apr. 26	[Sun] 14.4	Cheap talk	
11	9	Apr. 29	[Sun] 14.5	Bayesian persuasion	Hw3
		May 13		Final examination	