ECON 5010: Microeconomic Theory I

Sambuddha Ghosh

CUHK, Autumn 2024

1 Course information

1.1 Location and timing

The class will span 13 lectures, one of these being reserved for an in-class exam.

- Date and time: 3:30pm - 6:15pm on every Thursday starting Sept 5 (except Nov 14 – class suspension due to the 94th Congregation of the University)

- Venue: Room 403, Yasumoto International Academic Park

1.2 Instructor

Dr Sambuddha (Som) Ghosh

- E-mail: sghosh@cuhk.edu.hk, microtheorist@gmail.com

  You are encouraged to e-mail all your questions to sghosh@cuhk.edu.hk and cc to microtheorist@gmail.com. Please use Econ 5010 in the subject line for all e-mails.

- Office: Esther Lee Building, 10th floor

- Office phone: 3943 9273

- Office hours: Thursday 1 AM - 3 PM

1.3 Evaluation

The course evaluation will comprise exams (about 80%), class participation inclusive of homework (about 20%). The midterm date will be announced at least two weeks in advance. The final exam date and location will be announced by the University.

1.4 Academic honesty and plagiarism

Attention is drawn to University policy and regulations on honesty in academic work, and to the disciplinary guidelines and procedures applicable to breaches of such policy and regulations. Details may be found at: `http://www.cuhk.edu.hk/policy/academichonesty/`.

With each assignment, students will be required to submit a signed declaration that they are aware of these policies, regulations, guidelines and procedures. For group projects, all students of the same group should be asked to sign the declaration.

For assignments in the form of a computer-generated document that is principally text-based and submitted via VeriGuide, the statement, in the form of a receipt, will be issued by the system upon students' uploading of the soft copy of the assignment. Assignments without the receipt will not be graded by teachers. Only the final version of the assignment should be submitted via VeriGuide.

2 Goals and prerequisites of the course

This course attempts to provide you with a solid grounding in the fundamentals of microeconomic theory at the MPhil and PhD levels. About 75% is what every PhD should know in order to be able to reason about microeconomics. The other topics such as social choice are less common, but useful in special settings. If you want to specialise in micro theory you should have separate conversations with me, so I can suggest additional readings.

One of the things I hope to teach you is formal economic reasoning. Accordingly, proofs are emphasised. You should have a good command of real analysis and some of linear algebra. I will remind you of the appropriate theorems, but this is not a substitute for proper background. Ultimately, the most important prerequisite is mathematical maturity — it's hard to define this; some have this even without many formal courses.

3 References

The **textbook** is Varian, *Microeconomic Analysis*.

One difference with the textbook that you should be aware of is that Varian starts with producer theory. I will start with consumer theory, but you can easily follow Varian.

Additional references:

1. *Advanced Microeconomic Theory* [JR], 3rd edition, 2011, Jehiel and Reny, Essex: Pearson Education Limited.

2. *Lecture Notes in Microeconomic Theory* [R], 2006, Ariel Rubinstein, Princeton University Press

3. *Microeconomic Theory* [MWG], 1995, Mas-Colell, Whinston, and Green, Oxford University Press

4. *Microeconomic Foundations 1: Choice and Competitive Markets* [K], 2013, David Kreps, Princeton University Press

4 Course outline with readings

This course attempts to provide you with a solid grounding in the fundamentals of microeconomic theory at the MPhil and PhD levels. Proofs are emphasised. The course consists of five components:

1. Choice theory

2. Producer theory

3. Choice under uncertainty

4. General equilibrium theory

5. Social choice theory

I provide below a detailed list of topics, with references for further study; numbers in square brackets refer to readings at the end. References to JR will be given in class. Topics may be adjusted slightly depending on the pace of coverage and whether exams are in-class or take-home.

1. Choice, preferences, and utility (Lectures 1-3 [R], Ch. 3A-C [MWG])

2. The consumer problem: convex preferences, Marshallian demand, (Ch. 2 A-E, Ch. 3 D [MWG], lecture 4 [R], Ch 3 [K])

3. Expenditure minimization, Hicksian demand, duality, and Slutsky decomposition (Ch. 3. E, F, G [MGW], lecture 6 [R], Ch 10.1-6 [K])

4. Revealed preferences, Welfare economics (Ch. 3 I [MWG], [2], [3], [4], [5], [14])

5. Neoclassical producer theory (Ch. 5 [MWG], Ch. 9 [K])

6. Alternative forms of market structure

7. Choice under uncertainty: the independence axiom, expected utility, and the Allais paradox (lecture 8 [R], Ch. 6 A-C [MWG], Ch. 5 [K])

8. Utility for money and risk aversion (Lecture 9 [R], Ch. 6 [K])

9. Other theories of choice point and loss aversion ([1], [12], [13], [10]. [11])

10. Introduction to general equilibrium (Ch. 15 [MWG], Ch 14 1-3 [K])

11. First and second welfare theorems, relation to the core (Ch. 16 A-D, Ch 18 A,B [MWG], Ch. 15 [K])

12. Social choice theory (Ch. 21 [MWG], Ch. 8 [K])