

COURSE SYLLABUS (Second Half)
Spring, 2016

Course: ECON 689-600: Microeconomic Theory II – Second Half

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Lectures: MW 8:00 am – 9:15 am
ALLN 1006

Office Hours: *MW 11:25 am - 12:25 pm or by appointment*
ALLN 3090

TA: Piruz Saboury
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Review Session: Friday 2:30 pm - 3:45 pm, ALLN1006
Office Hours: *TR 10:15 am - 11:15 am*, ALLN 3006

Text: The textbooks are *Microeconomic Theory* by A. Mas-Colell, M. D. Whinston, and J. Green, and *the Theory of Incentives* by J. Laffont and D. Martimort. The lectures, however, will be mainly based on my lecture notes. The lecture notes can be downloaded from my website. Some materials in the lecture notes are drawn from the references in the end of each chapter, especially from the textbooks.

Grade for Second Half: You will be evaluated on the basis of a series of homework problems and one exam. Homework will be handed out periodically. Your grade will be calculated using the method listed below.

Homework:	25%
Exam:	75%

Course Objectives: The second half of the course covers topics mainly in general equilibrium theory, welfare economics, social choice theory, public goods, externalities, and principal-agent theory (optimal contract theory). The purpose of the course is to introduce advanced theories and analytical tools as well as the

types of questions that are used and answered in each area. The topics covered in this course are important since they are either basic analytical tools that are used in many fields of economics or basic economic theories that will be needed in your future study and bring you to the frontier of theoretical research.

ADA Policy Statement: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit <http://disability.tamu.edu>.

Academic Integrity Statements: “An Aggie does not lie, cheat, or steal or tolerate those who do.”

Prerequisites: ECON 629

Class Outline:

3/21:

Review of modern economics and mathematics: nature and role of modern economics, the standard analytical framework of modern economics, key assumptions commonly adopted in microeconomics, roles of mathematics, language and methods of mathematics, continuity and concavity of functions, separating hyperplane theorem, unconstrained and constrained optimization, correspondences (point to set mappings), fixed point theorems, KKM lemma, and maximum theorem. (Readings: Mathematical Appendix of Mas-Colell, Whinston, and Green, and Chapters 1 and 6 of my lecture notes.)

3/23:

General equilibrium theory: introduction, general equilibrium model, and perfectly competitive markets, exchange economies, general equilibrium with production, and some examples. (Readings: Chapters 10 and 15 of Mas-Colell, Whinston, and Green, and Chapter 7 of my lecture notes.)

3/28:

The positive theory of equilibrium: the existence of competitive equilibrium for single-valued excess demand function. (Readings: Chapter 17 of Mas-Colell, Whinston, and

Green, and Chapter 7 of my lecture notes.)

3/30:

The positive theory of equilibrium: the existence of competitive equilibrium for excess demand correspondence, and computation of competitive equilibrium. (Readings: Chapter 17 of Mas-Colell, Whinston, and Green, and Chapter 7 of my lecture notes.)

4/04

The positive theory of equilibrium: uniqueness, stability of general equilibrium, existence of equilibrium of abstract economy, (Readings: Chapter 15 of Mas-Colell, Whinston, and Green, and Chapter 7 of my lecture notes.)

4/06:

The normative theory of equilibrium: basic welfare properties, Pareto efficiency, the First Theorems of Welfare Economics, equilibrium with transfer payments. (Readings: Chapters 10 and 16 of Mas-Colell, Whinston, and Green, and Chapter 8 of my lecture notes.)

4/11:

The normative theory of equilibrium: Second Theorems of Welfare Economics, welfare functions, characterizations of efficient social outcomes. (Readings: Chapters 10 and 16 of Mas-Colell, Whinston, and Green, and Chapter 8 of my lecture notes.)

4/13:

Foundations for competitive equilibrium: economic core, fairness of allocations, and social choice theory. (Readings: Chapters 18 and 21 of Mas-Colell, Whinston, and Green, and Chapters 9 of my lecture notes.)

4/18:

Externalities: Consumption externalities (preference externalities), production externality, competitive equilibrium with externalities, social preferences, and happiness of economics. (Readings: Chapter 11 in Mas-Colell, Whinston, and Green, and Chapter 11 in my lecture notes.)

4/20:

Externalities: Solutions to externalities, pigovian taxes, voluntary negotiation a la Coase, compensatory tax/subsidy, creating a missing market with property right. (Readings: Chapter 11 in Mas-Colell, Whinston, and Green, and Chapter 11 in my lecture notes.)

4/25:

Public Goods: public goods, efficient provision of public goods, Lindahl equilibrium, and free-rider problem. (Readings: Chapter 11 in Mas-Colell, Whinston, and Green, Chapter 12 in my lecture notes.)

4/27:

The Optimal Contract Theory and Mechanism Design: Principal-agent model, hidden action, adverse selection, optimal contract, incentive-compatibility, and the revelation principle. (Readings: Chapters 1-2 of Laffont and Martimort, Chapters 13-14 of Mas-Colell, Whinston, and Green, and Chapter 13 of my lecture notes.)

5/02:

The Optimal Contract Theory and Mechanism Design: moral hazard, hidden information, and economic mechanism design. (Readings: Chapters 4 of Laffont and Martimort, Chapters 13-14 of Mas-Colell, Whinston, and Green, and Chapter 14 of my lecture notes.)

5/05:

Final exam for the second half of ECON 689-600

10:00 a.m. – 12:00 p.m. (noon)