ECO2020 Fall 2010

Micro Theory I Ph.D

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Time and Location. T 9-11 (MP 137), R 9-11, (WW 126).

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Course Objective. This course will introduce students to some of the most fundamental results of General Equilibrium Analysis and Welfare Economics.

**Textbooks.** The textbook for this class is Mas-Colell, Whinston and Green *Microeconomic Theory*. Some material from Chapter 15 of Stokey and Lucas *Recursive Methods in Economic Dynamics* (SL) will also be covered.

Course Requirements. I will hand out practice problems during the term. You do not have to turn them in and they will not count toward you final grade, but you are strongly encouraged to work on them. The TA for the class, Kevin Fawcett, will hold 3 or 4 tutorial sections (date, time and location TBD) in which he will cover some of the assigned problems. A final exam to be held during the December exam period will determine your grade for the class.

## Course Content

- A. Introduction and Generalities
  - 1. Description of a private ownership economy: (commodity space, endowment, production sets, preferences, price system)
  - 2. Welfare Criterion: Pareto Efficiency
  - 3. Equilibrium Concept: Walrasian Equilibrium
- B. First Welfare Theorem
- C. Second Welfare Theorem
- D. Existence of Walrasian Equilibrium (for exchange economies)
- E. Cooperative Foundation of Walrasian Equilibrium
  - 1. Cooperative Games and the Core

- 2. Equal treatment property
- 3. Core Equivalence Theorem

## F. General Equilibrium Under Uncertainty

- 1. Arrow-Debreu equilibrium
- 2. Sequential trading and Radner Equilibrium
- 3. Equivalence of AD and Radner Equilibrium

## G. Models of Price Formation

- 1. Gross-substitutability and Price Tatonnement stability
- 2. Indivisible good economies with quasi-linear preferences (description, allocations, definition of WE): linear prices in WE
- 3. Unit demand preferences: convergence of the clock auction to a Walrasian equilibrium price and allocation