

SS 205B: FOUNDATIONS OF ECONOMICS

WINTER 2019

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Lectures: Mondays, Wednesdays and Fridays, 9-9:55am,

Course webpage: www.hss.caltech.edu/~fede/ss205/

TEXTS

“Microeconomic Theory” by Mas-Colell, Whinston & Green is the required text for most of the material. For part of the course, Bewley’s “General Equilibrium, Overlapping Generations and Optimal Growth Theory” may be useful. Two other books you may find useful (for different reasons) are Varian’s “Microeconomic Analysis,” and Debreu’s “Theory of Value.”

COURSE EVALUATION

There will be (roughly) bi-weekly homework assignments and a final exam. I would like you to work in groups for the homework assignments, so form groups of three or four students for the duration of the course. To make the most of the course, I suggest that you work on the problems on your own at first, then meet to discuss the problems with your groupmates. The homework counts for 40% of the grade and the final for 60%.

SYLLABUS

1. GENERAL EQUILIBRIUM IN THE EDGEWORTH BOX. Walrasian equilibrium and the welfare theorems. The core and the cooperative foundation of walrasian equilibrium. Mas-Colell, Whinston & Green (MWG) 15.B. and 18.B.
2. EQUILIBRIUM AND OPTIMALITY. Private ownership economies. The welfare theorems. The role of convexity of preferences and technologies. Aggregation and Welfare (Scitovsky contours and Samuelsonian representative consumer). MWG Ch. 16; Bewley Ch. 3 and 5.
3. THE POSITIVE THEORY OF GENERAL EQUILIBRIUM - I. Existence by the excess demand approach and the Negishi approach. Uniqueness

of Walrasian equilibrium. The Index Theorem. Determinacy. MWG Ch. 17, Bewley Ch. 4.

4. THE POSITIVE THEORY OF GENERAL EQUILIBRIUM - II. Aggregation problems and the representative agent in general-equilibrium models. Observable consequences of equilibrium: the Sonnenschein-Mantel-Debreu Theorem. MWG Ch. 4, MWG Ch. 17.
5. PARTIAL EQUILIBRIUM. Welfare under quasilinear preferences. MWG Ch. 10 and 15.E; Bewley Ch. 8.
6. COOPERATIVE FOUNDATIONS OF EQUILIBRIUM Debreu-Scarf's Core convergence Theorem in replica economies. Kim Border's notes on Debreu-Scarf. (See also MWG Ch. 18.)
7. GENERAL EQUILIBRIUM UNDER UNCERTAINTY Arrow-Debreu Equilibrium. Radner Equilibrium. Rational Expectations Hypothesis. No-arbitrage pricing and Farkas Lemma. Complete markets. Consumption CAPM. MWG Ch. 19; Bewley Ch. 7.
8. OVERLAPPING GENERATIONS AND EQUILIBRIUM MODELS OF GROWTH. Samuelson's model. Monetary Equilibrium. Optimality. MWG Ch. 20; Bewley Ch. 9 and 10.