

ECON 411 TOPICS IN MICROECONOMIC THEORY

There are two main ways that societies make collective decisions: through the buying and selling activities of individuals in the marketplace, and by having individuals vote in elections. What properties do existing collective decision-making methods have? What are the possibilities for improving these methods? We first analyze individual decision-making, then extend the framework to the analysis of collective decision-making, and we work up to the central results of social choice theory: Arrow's impossibility theorem and the median voter theorem. We then use game theory to analyze the strategic interests of individuals to manipulate collective decisions.

COURSE SCHEDULE (as of November 10, 1995)

Date	Homework Assigned	Homework Due	Test	Topic
9/13	.	.	.	introduction
9/15	.	.	.	logic preliminaries
9/20	o	.	.	more logic
9/22	.	.	.	logic and set theory
9/27	.	.	.	relations, preferences and functions
9/29	.	.	.	utility functions, vectors, and convexity
10/4	.	•	.	linear functions and prices
10/6	.	.	.	continuity, compactness, and demand functions
10/11	o	.	.	exchange economies, and Pareto optimality
10/13	.	.	.	more Pareto optimality
10/18	.	•	.	social welfare functions
10/20	.	.	.	(no class)
10/25	.	.	.	Walrasian equilibrium
10/27	.	.	.	welfare theorems
10/31	.	.	.	review session
11/1	.	.	★	MID-TERM

11/3	.	.	.	Walrasian equilibrium: an example
11/8	o	.	.	Brouwer's fixed point theorem and existence
11/10	.	.	.	fair allocations
11/15	.	•	.	production
11/17	.	.	.	externalities and public goods
11/22	o	.	.	Nash equilibrium and voluntary provision
11/24	.	.	.	single-peakedness and majority rule
11/29	.	•	.	dominant strategies and the GCV mechanism
12/1	.	.	.	sub-game perfection and Varian's mechanism
12/14	.	.	★	FINAL EXAM

Each student's final grade will be calculated two ways, and that yielding the highest grade being the one actually used. According to Plan *A*, the mid-term counts toward 30 % of the final grade, the final exam counts toward 50 %, and homework counts toward 20 %. In Plan *B*, the mid-term counts toward 25 % of the final grade, the final exam counts toward 60 %, and homework counts toward 15 %.