

**MICROECONOMICS 204C**  
**SPRING**  
**2017**

**LECTURE NOTES**  
**COPYRIGHT**

**DONALD WITTMAN**

**0.1 MONOTONE COMPARATIVE STATICS EXTENSIONS**  
**0.2 SUPERMODULAR GAMES**  
**1.0 SOCIAL CHOICE**  
**2.0 WELFARE AND UTILITY**  
**3.0 MECHANISM DESIGN**  
**4.0 EXTERNALITIES\***  
**5.0 THE GEOMETRY OF GENERAL EQUILIBRIUM**  
**6.0 GENERAL EQUILIBRIUM**  
**7.0 INTERNAL ORGANIZATION OF THE FIRM**

**\* Probably not covered**

## SYLLABUS

The syllabus is ambitious and I will probably cut out parts as we go along. I believe that it is better to know a few things very well than be acquainted with many poorly understood ideas.

### A. Monotone Comparative Statics (2 days). Pages 16-56

1. When there are restrictions on possible actions (1)
2. Expected Value (1)
3. Affiliated Values (1)

### B. Supermodular and Submodular Games (3 days)

3. Equilibria (1)
4. Supermodular (Bertrand competition) (1)
5. Diamond matching model) (1)
6. Strategic Substitutes (Cournot) (1)
- #. Lattices (not covered)
- #. Single-Crossing Property and quasi-supermodularity (not covered)

### C. Social Welfare Functionals (2 days)

- #. May's theorem (not covered)
7. Aggregating Preferences (1)
8. Arrow Theorem (1)
9. Single-peakedness and voting theorems (1)
10. Envy-free allocations (1/2)

## **D. Social Welfare Functions (1/2 day)**

- #. Desirable Characteristics
- #. Nash-Bargaining Solution

## **EXAM 1 covering A, B and C)**

### **E. Mechanism Design and the VCG Mechanism (3 days)**

- 11. Revelation Principle (1)
- 12. Equilibrium Concepts and the VCG Mechanism (1)
- 13. Bridge and 2<sup>nd</sup> Price Auction examples (1)
- 14. First Price Auctions, Bargaining (1)
- 15. Majority Rule and Social Choice (.5)

### **F. Bayesian Nash Equilibria (3 days)**

- 16. Hotelling's Lemma (.5)
- 17. Necessary and sufficient conditions for a truthful Bayesian Equilibrium
- 18. Revenue Equivalence (1)
- 19. Examples using the uniform distribution (1)
- 20. Common Values; Examples using the uniform distribution (2)
- 21. Japanese auction; contracts (1)

## **EXAM 2 covering E and F**

### **G. Externalities (only covered if all other topics covered)**

- #. Symmetry
- #. Comparing Externality Solutions
- #. Public Goods and Clubs (not covered)

## **H. The Geometry of General Equilibrium (1.5 days)**

- 22. Edgeworth-Bowley Box (1)
- 23. Existence of an Equilibrium (.5)
- #. Trade Theorems (not covered)

## **I. General Equilibrium (2 days)**

- 24. The Market for Contingent Claims and the Arrow-Debreu Framework (1)
- 25. First and Second Welfare Theorems (1)
- 26. Uncertainty (1)
- 27. Asymmetric Information (1)

## **J. The Organization of Firms (2 days)**

- 28. Governance of Organization (1)
- 29. Corporate Law and Agency Problems (1)
- 30. Opportunism
- 31. Insider Trading

## **EXAM 3 covering G-J**



# **ECON-204C-01**

**2**

**Wittman**

**UCSC  
Spring  
2017**

**25.55**

The Bay Tree Bookstore is a self-funded unit of the University established to serve the students, faculty and staff of the Santa Cruz campus. To keep prices as low as possible, each custom textbook is printed quarterly, based on demand from enrollment estimates and student requirements. Unlike regular textbooks overstock cannot be returned to a publisher for credit. Please take the time before making your purchase to be certain you have selected the correct book for your class because there will be

**NO RETURNS, EXCHANGES, REFUNDS OR USED BUYBACK**