Apec 8001
Microeconomic Analysis of Consumer Choice and Consumer Demand

Syllabus

Fall, 2014

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Lecture Hours: Tuesday & Thursday, 3:00-4:15 p.m. Recitation: Thursday, 4:30-5:45 p.m.
Where: MaGrath Library, Room 8 Where: Ruttan Hall B36

Description: Applied Economics 8001 is the first of four half-semester courses in the Applied Economics 8001-2-3-4 sequence that is designed to provide first year Ph.D. students in Applied Economics, Carlson School of Management, Health Policy & Management and other programs with a rigorous and mathematical treatment of fundamental microeconomic concepts. The focus of this course will be consumer behavior and consumer demand (with an introduction to welfare analysis), and choice under uncertainty.

Recommended Texts: This course will be based on the instructor’s notes that will be posted on the class website. These notes and many homework problems will borrow extensively from MasColell, Winston, and Green, Microeconomic Theory, Oxford, 1995.

Prerequisites: The economics and mathematical background needed for students enrolling in this class includes intermediate or M.S. level microeconomic theory (e.g. ECON 3101, ECON 5151, or APEC 5151); linear algebra (e.g. MATH 2243); and multivariate calculus (e.g. MATH 2263).

Homework: There will be weekly homework assignments. All homework assignments will be handed out in class on Tuesday and must be turned in on the following Tuesday at the beginning of class. Homework assignments and their solutions will be posted on the class website. Late homework will not be accepted. Turn in whatever you have been able to complete.

You are encouraged to work together on homework assignments, but you must submit your own assignment. If you work with other students, please list their names at the end of your assignment.

Exams: There will be one closed book exam on October 16, 2014.

Grades: A-F grades will be based on homework (50%) and the exam (50%). Those taking the course on an S-N basis must obtain at least a C- to earn an S. No incompletes will be offered.
**Student Mental Health and Stress Management**

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student’s ability to participate in daily activities. University of Minnesota services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via [http://www.mentalhealth.umn.edu/](http://www.mentalhealth.umn.edu/).

**Lectures and Readings**

1. Preference and Choice (September 2)
   Readings: Mas-Colell et al., Chapter 1

2. Consumer Choice (September 4 and 9)
   Readings: Mas-Colell et al., Chapter 2

3. Classical Demand Theory (September 11, 16, 18 and 23)
   Readings: Mas-Colell et al., Chapter 3

4. Aggregate Demand (September 25)
   Readings: Mas-Colell et al., Chapter 4

5. Commonly Used Functional Forms for Static Demand Systems (September 30)

6. Choice Under Uncertainty (October 2, 7 and 9)
   Readings: Mas-Colell et al., Chapter 6

6. Introduction to General Equilibrium: The Edgeworth Box (October 14)
   Readings: Mas-Colell et al., Chapter 15, Sections A and B

**Final Exam:** October 16, 2014.
1. Preferences and Consumer Choice (Mas-Colell chs. 1-2)
   A. Preference relations (axioms for rationality)
   B. From preferences to utility functions (including properties, e.g. convexity)
   C. Choice rules (revealed preferences) and preference relations/utility functions
   D. Commodities, consumption sets and budget constraints/sets
   E. Demand functions and comparative statics (Walras’ law, normal, inferior and Giffen goods, luxuries and necessities, substitutes and compliments, elasticities, homogeneity, and Engel & Cournot aggregation conditions)
   F. Revealed preferences and (compensated) law of demand, compensated and uncompensated demand, Slutsky equation/matrix.

2. Classical Demand and Aggregate Demand (Mas-Colell chs. 3-4)
   A. More on preference relations (add monotonicity, local nonsatiation, homotheticity)
   B. More on relationship between preferences and utility (continuity, quasiconcavity)
   C. Utility maximization (properties of Walrasian/Marshallian demand, Lagrange multiplier, Kuhn-Tucker conditions, marginal rate of substitution, indirect util. fn.)
   D. Expenditure minimization/function (Hicksian demand, Shephard’s lemma, Roy’s identity, compensated law of demand again)
   E. Duality (relationships between Walrasian & Hicksian demand functions, indirect utility function and expenditure function, Slutsky symmetry, Slutsky equation)
   F. Integrability (this could be optional)
   G. Welfare analysis (money metric utility, equivalent and compensating variation, deadweight loss of commodity taxes)
   H. Strong axiom of revealed preference (optional?)

3. General Equilibrium Analysis of a Pure Exchange Economy (Mas-Colell chs. 15 & 17)
   A. Edgeworth Box / Pure Exchange (offer curve, excess demand and supply, Walrasian equilibrium, uniqueness vs. multiple equilibria, introduction to welfare properties of Walrasian equilibria, including Pareto optimality/efficiency)
   B. Definition and Existence of Walrasian Equilibrium (use of fixed point theorem)
   C. Comparative Statics Analysis
Standard Statement on Course Requirements

http://www.sos.umn.edu/stafffaculty/supplement.php

1. The two major grading systems used are the A-F and S-N. Departmental majors must take major courses on the A-F system; non-majors may use either system. The instructor will specify criteria and achievement levels required for each grade. All students, regardless of the system used, will be expected to do all work assigned in the course, or its equivalent as determined by the instructor. Any changes you wish to make in the grading base must be done in the first two weeks of the semester.

2. The instructor will specify the conditions, if any, under which an "Incomplete" will be assigned instead of a grade. The instructor may set dates and conditions for makeup work, if it is to be allowed. "I" grades will automatically lapse to "F"s at the end of the next semester of a student's registration, unless an instructor agrees to submit a change of grade for a student during a subsequent semester to maintain the grade as an "I".

3. Inquiries regarding any changes of grade should be directed to the instructor of the course; you may wish to contact the Student Conflict Resolution Center (SCRC) in 211 Eddy Hall (624-7272) for assistance.

4. Students are responsible for all information disseminated in class and all course requirements, including deadlines and examinations. The instructor will specify whether class attendance is required or counted in the grade for a class.

5. A student is not permitted to submit extra work in an attempt to raise his or her grade, unless the instructor has specified at the outset of the class such opportunities will be afforded to all students.

6. Scholastic misconduct is broadly defined as "any act that violates the right of another student in academic work or that involves misrepresentation of your own work. Scholastic dishonesty includes, (but is not necessarily limited to): cheating on assignments or examinations; plagiarizing, which means misrepresenting as your own work any part of work done by another; submitting the same paper, or substantially similar papers, to meet the requirements of more than one course without the approval and consent of all instructors concerned; depriving another student of necessary course materials; or interfering with another student's work."

7. Students with disabilities that affect their ability to participate fully in class or to meet all course requirements are encouraged to bring this to the attention of the instructor so that appropriate accommodations can be arranged. Further information is available from Disabilities Services (230 McNamara).

8. University policy prohibits sexual harassment as defined in the December 1998 policy statement, available at the Office of Equal Opportunity and Affirmative Action. Questions or concerns about sexual harassment should be directed to this office, located in 419 Morrill Hall.