UNIVERSITY OF COLORADO
Department of Economics

Economics 7010-001

Microeconomic Theory 1

Fall 2010

Professor Jennifer Lamping
Office: Economics 103
Email: jennifer.lamping@colorado.edu
Lectures: MW 12:00pm - 1:15pm, Economics 119
Office Hours: W 10:15am - 11:45am, Economics 103

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Course Website: http://spot.colorado.edu/~lamping/7010.html

Course Description

This course is the first of three semester courses that develop the basic tools and results of modern microeconomic analysis. The first semester course covers individual decision making and optimization theory.

The course is highly technical. Although mathematical tools will be taught as needed, it is assumed that you are well-versed in the material covered in Math Camp and comfortable with mathematical notation.

Course Structure

The course will consist of lectures, readings, assignments, and exams. Readings will be primarily from the required textbooks, *Microeconomic Theory* by Mas-Colell, Whinston, and Green and *A First Course in Optimization Theory* by Sundaram. Additional readings will be made available on the course website.

Assignments will take the form of problem sets. In general, assignments will be made available every Wednesday on the course website and due in lecture one week later. Solutions will be posted on the course website shortly thereafter. Assignments are to be completed in groups of three to four students. Groups will be assigned on the first day of class.

There will be one midterm exam and one final exam. Exams will be held in class and completed individually.

Textbooks

The required textbooks are

- *Microeconomic Theory* by Andreu Mas-Colell, Michael D. Whinston, and Jerry R. Green
- *A First Course in Optimization Theory* by Rangarajan K. Sundaram

The following four texts offer different presentations of the material in Mas-Colell, Whinston, and Green. If you find that you are having trouble with Mas-Colell, I urge you to obtain one or more of these texts to assist you in understanding Mas-Colell.

- *Advanced Microeconomic Theory* by Geoffrey A. Jehle and Philip J. Reny
- *A Course in Microeconomic Theory* by David M. Kreps
- *Microeconomic Analysis* by Hal R. Varian
- *Microeconomic Theory: Basic Principles and Extensions* by Walter Nicholson and Christopher Snyder

If you find that you are having trouble with the mathematics used in this course, I recommend obtaining one or more of the following texts as references:

- *Fundamental Methods of Mathematical Economics* by Alpha C. Chiang and Kevin Wainwright
- *Mathematics for Economics* by Michael Hoy, John Livernois, Chris McKenna, Ray Rees, and Thanasis Stengos
- *Real Analysis with Economic Applications* by Efe A. Ok
- *Mathematics for Economists* by Carl P. Simon and Lawrence E. Blume
- *Further Mathematics for Economic Analysis* by Knut Sydsaeter, Peter Hammond, Atle Seierstad, and Arne Strom
- *Mathematical Tools for Economics* by Darrell A. Turkington

Grading

The various components of the course will be weighted as follows to determine your final grade:

Assignments	10%
Midterm Exam	35%
Final Exam	55%

The midterm and final exams will each be graded on a 100 point scale with points allotted on the basis of the accuracy of your answers. In contrast, assignments will be graded on a scale from 0 to 2: 0 points for not handing it in, 1 point for a below average performance, and 2 points for an above average performance.

Missed Assignments & Exams

Late assignments will not be accepted since solutions are posted online shortly after the assignment is due. You may not miss an exam. No makeup exams will be given.

Tentative Course Schedule

Date	Topic	Required Readings	Assignments
Aug 23	Mathematical Preliminaries	HLMRS 2.1; R 1.1, 1.2, & 2.1, S 1.1 - 1.4	
Aug 25	Preference Relations	MWG 1.A & 1.B	
Aug 30	Choice Rules and WARP	MWG 1.C & 1.D	
Sep 01	Homogeneous Functions and Convex Sets	MWG M.B & M.G; HLMRS 11.5	PSet 1 Due
Sep 06	**No Classes (Labor Day)**		
Sep 08	The Consumer's Problem	MWG 2.A - 2.E	
Sep 10	**Time and Location TBD** Properties of Matrices	MWG M.A & M.D; S 1.3 & 1.5; Definiteness Check	PSet 2 Due
Sep 13	Implications of WARP for Demand	MWG 2.F	
Sep 15	Convexity, Quasi-Convexity, and Continuity	MWG M.C & M.F; S 1.2.7 - 1.2.9, 1.4.1 - 1.4.2, 7.1 - 7.2, & 8.1 - 8.3	PSet 3 Due
Sep 20	Preferences and Utility	MWG 3.A - 3.C	
Sep 22	Preferences and Utility (Cont'd)	MWG 3.A - 3.C	PSet 4 Due
Sep 27	The Weierstrass Theorem and Unconstrained Maximization	MWG M.J; S 2 - 4	
Sep 29	Constrained Maximization: The Theorem of Lagrange	MWG M.K; S 5; SB 18; SB 19	PSet 5 Due
Oct 01	**Time and Location TBD** Constrained Maximization: The Theorem of Kuhn and Tucker	MWG M.K; S 6	
Oct 04	Convexity and Quasi-Convexity in Optimization Theory	MWG M.K; S 7. 3 - 7.7 & 8.4 - 8.8	
Oct 06	The Envelope Theorem and Correspondences	MWG M.H & M.L; S 9.1	PSet 6 Due

Date	Topic	Required Readings	Assignments
Oct 11	Correspondences and the Theorem of the Maximum	MWG M.H & M.L; S 9.1 - 9.2	
Oct 13	The Utility Maximization Problem	MWG 3.D	
Oct 15	**Midterm Examination**	**Time and Location TBD**	
Oct 18	The Utility Maximization Problem (Cont'd)	MWG 3.D	
Oct 20	The Expenditure Minimization Problem	MWG 3.E	PSet 7 Due
Oct 25	Relationships between Demand, Indirect Utility, and Expenditure Functions	MWG 3.G; Consumer Road Map	
Oct 27	Welfare Considerations	MWG 3.I	PSet 8 Due
Nov 01	Welfare Considerations and SARP	MWG 3.I	
Nov 03	Introduction to Aggregate Demand	MWG 3.J & 4.A - 4.B	PSet 9 Due
Nov 08	Aggregate Demand and WARP	MWG 4.C	
Nov 10	Aggregate Demand and the Representative Consumer	MWG 4.D	PSet 10 Due
Nov 15	Production Sets	MWG 5.A - 5.B	
Nov 17	The Profit Maximization Problem	MWG 5.C; Nicholson 8	PSet 11 Due
Nov 22	**No Classes (Fall Break)**		
Nov 24	**No Classes (Fall Break)**		
Nov 29	The Cost Minimization Problem	MWG 5.C	
Dec 01	The Single-Output Case	MWG 5.D; Producer Road Map	PSet 12 Due
Dec 06	Aggregation and Efficient Production	MWG 5.E - 5.G	
Dec 08	**Office Hours**		PSet 13 Due
Dec 15	**Final Examination (Cumulative)**	**1:30pm - 4:00pm Economics 119**	

University Policies

Students with Disabilities

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services **by September 8th** so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. University policies regarding disabilities are available at www.colorado.edu/disabilityservices. Disability Services can be contacted by telephone at (303) 492 8671 or in person at Willard 322.

Religious Observances

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments, or required attendance. If you have a conflict due to a religious obligation, please see me **at least one full week in advance** so that alternate arrangements can be made. Policies regarding religious observances are available at www.colorado.edu/policies/fac_relig.html.

Classroom Behavior

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. Polices regarding classroom behavior are available at http://www.colorado.edu/policies/classbehavior.html and at http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code.

Discrimination and Harassment

The University of Colorado at Boulder policy on Discrimination and Harassment, the University of Colorado policy on Sexual Harassment, and the University of Colorado policy on Amorous Relationships apply to all students, staff, and faculty. Any student, staff, or faculty member who believes s/he has been the subject of sexual harassment or discrimination or harassment based upon race, color, national origin, sex, age, disability, creed, religion, sexual orientation, or veteran status should contact the Office of Discrimination and Harassment (ODH) at (303) 492 2127 or the Office of Judicial Affairs at (303) 492 5550. Information about the ODH, the above referenced policies, and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at http://www.colorado.edu/odh.

Academic Misconduct

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu, (303) 735 2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at www.colorado.edu/policies/honor.html and at www.colorado.edu/academics/honorcode.