# **UNIVERSITY OF COLORADO Department of Economics**

**Economics 7010-001 Microeconomic Theory 1** Fall 2007

Professor Jennifer Lamping Office: Economics 103

Email: <a href="mailto:jennifer.lamping@colorado.edu">jennifer.lamping@colorado.edu</a>
Lectures: TR 9:30am - 10:45am, Economics 205 Office Hours: T 2:30pm - 4:00pm, Economics 103

Teaching Assistant: Nune Hovhannisyan

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Course Website: CULearn

## **Course Description**

This course is the first of three semester courses that develop the basic tools and results of making and optimiza

#### **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 two 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 both 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

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:

# **Tentative Course Schedule**

Aug 28Mathematical PreliminariesHLMRS 2.1; R 1.1, 1.2, & 2.1, S 1.1 - 1.4Aug 30Preference RelationsMWG 1.A & 1.BSep 04Choice Rules and WARPMWG 1.C & 1.DSep 06Homogeneous Functions and ConvexityMWG M.B & M.G; HLMRS 11.5PSet 1 Due MWG 2.A - 2.ESep 11The Consumer's ProblemMWG M.A & M.D; S 1.3 & 1.5PSet 2 Due S 1.3 & 1.5Sep 18Implications of WARP for DemandMWG M.C & M.F; S 1.2.7 - 1.2.9, 1.4.1 - 1.4.2, 7.1 - 7.2, & 8.1 - 8.3PSet 3 Due S 1.2.7 - 1.2.9, 1.4.1 - 1.4.2, 7.1 - 7.2, & 8.1 - 8.3	3
Sep 04 Choice Rules and WARP MWG 1.C & 1.D  Sep 06 Homogeneous Functions and Convexity HLMRS 11.5  Sep 11 The Consumer's Problem MWG 2.A - 2.E  Sep 13 Properties of Matrices MWG M.A & M.D; PSet 2 Due S 1.3 & 1.5  Sep 18 Implications of WARP for Demand  Sep 20 Convexity, Quasi-Convexity, and Continuity MWG M.C & M.F; PSet 3 Due S 1.2.7 - 1.2.9, 1.4.1 - 1.4.2,	
Sep 06 Homogeneous Functions and Convexity  Sep 11 The Consumer's Problem  Sep 13 Properties of Matrices  Sep 18 Implications of WARP for Demand  Sep 20 Convexity, Quasi-Convexity, and Continuity  MWG M.B & M.G; HLMRS 11.5  MWG 2.A - 2.E  MWG M.A & M.D; S 1.3 & 1.5  MWG 2.F  MWG 2.F  MWG M.C & M.F; S 1.2.7 - 1.2.9, 1.4.1 - 1.4.2,	
Convexity  HLMRS 11.5  Sep 11 The Consumer's Problem  MWG 2.A - 2.E  Sep 13 Properties of Matrices  Sep 18 Implications of WARP for Demand  Sep 20 Convexity, Quasi-Convexity, and Continuity  HLMRS 11.5  MWG M.A & M.D;  S 1.3 & 1.5  MWG 2.F  MWG 2.F  MWG M.C & M.F;  S 1.2.7 - 1.2.9, 1.4.1 - 1.4.2,	
Sep 13 Properties of Matrices MWG M.A & M.D; PSet 2 Due S 1.3 & 1.5  Sep 18 Implications of WARP for Demand  Sep 20 Convexity, Quasi-Convexity, and Continuity MWG M.C & M.F; PSet 3 Due S 1.2.7 - 1.2.9, 1.4.1 - 1.4.2,	
Sep 18 Implications of WARP for Demand  Sep 20 Convexity, Quasi-Convexity, and Continuity  Sep 20 Sep 20 Convexity, Quasi-Convexity, Sep 20 Se	
Demand  Sep 20 Convexity, Quasi-Convexity, and Continuity  MWG M.C & M.F; PSet 3 Due S 1.2.7 - 1.2.9, 1.4.1 - 1.4.2,	
and Continuity S 1.2.7 - 1.2.9, 1.4.1 - 1.4.2,	
Sep 25 Convexity, Quasi-Convexity, and Continuity (Cont'd) 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	
Sep 27 Preferences and Utility MWG 3.A - 3.C PSet 4 Due	
Oct 02 Preferences and Utility (Cont'd) MWG 3.A - 3.C	
Oct 04 The Weierstrass Theorem and MWG M.J; S 2 - 4 PSet 5 Due Unconstrained Maximization	
Oct 09 Constrained Maximization: MWG M.K; S 5 The Theorem of Lagrange	
Oct 11 Constrained Maximization: MWG M.K; S 6 PSet 6 Due The Theorem of Kuhn and Tucker	
Oct 16 Convexity and Quasi-Convexity MWG M.K; in Optimization Theory S 7. 3 - 7.7 & 8.4 - 8.8	
Oct 18 The Envelope Theorem and Correspondences MWG M.H & M.L; PSet 7 Due S 9.1	
Oct 23 Correspondences and the MWG M.H & M.L; Theorem of the Maximum S 9.1 - 9.2	
Oct 25 The Utility Maximization MWG 3.D PSet 8 Due Problem	
Oct 30 Midterm Exam	

### **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 13<sup>th</sup>** so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. University policies regarding disabilities are available at <a href="https://www.colorado.edu/disabilityservices">www.colorado.edu/disabilityservices</a>. 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 reasonably and fairly deal 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 practice are available at <a href="https://www.colorado.edu/policies/fac relig.html">www.colorado.edu/policies/fac relig.html</a>.

#### **Classroom Behavior**

Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to such behavioral standards may be subject to discipline. Faculty have the professional responsibility to treat all students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which they and their students express opinions. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, 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 <a href="http://www.colorado.edu/policies/classbehavior.html">http://www.colorado.edu/policies/classbehavior.html</a> and at <a href="http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student\_code">httml#student\_code</a>.

#### Discrimination and Harassment

The University of Colorado Policy on Sexual Harassment and the University of Colorado Policy on Amorous Relationships applies to all students, staff, and faculty. Any student, staff or faculty member who believes s/he has been the subject of discrimination or harassment based upon race, color, national origin, sex, age, disability, 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 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) 725 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 <a href="www.colorado.edu/policies/honor.html">www.colorado.edu/policies/honor.html</a> and at <a href="www.colorado.edu/academics/honorcode">www.colorado.edu/academics/honorcode</a>.