

## ECON 706 Microeconomic Theory II

Fall 2011

Instructor: Dr. Anita Alves Pena

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Class Meetings: TR 12:30-1:45pm, Clark C217

Office Hours: times TBD and announced in class and on RamCT, also by appointment

Textbooks:

(Required) A. Mas-Colell, M.D. Whinston, and J.R. Green: Microeconomic Theory, 1995 (MWG)

(Required) R. Gibbons: Game Theory for Applied Economists, 1992 (G)

(Recommended) G.A. Jehle and P.J. Reny: Advanced Microeconomic Theory, 2nd ed., 2001 (JR)

Course website: login at <http://ramct.colostate.edu>

### **Course Objective (*Please Read!*):**

The course is concerned with advanced topics in neoclassical microeconomic theory including game theory, adverse selection, principal agent problems, general equilibrium, social choice theory, social welfare functions, incentives, and mechanism design. You can expect therefore that we will continue with neoclassical assumptions as in your ECON 506 course. Presentation will be theory-based backed by example when possible. Theory in microeconomics necessarily incorporates mathematical proofs, and it is assumed that you possess (or will quickly accumulate) basic understanding of this methodology from your previous classes and personal study. A goal of the class is to finish preparing you for the graduate comprehensive qualifying exam in microeconomics, dissertation work, and reading and understanding mathematical proof-based microeconomics in economic literature. Problem sets and exams are meant to be difficult, to extend beyond what is done in lectures, and to help you to continue to develop skills as independent scholars of economics. You are encouraged to form study groups for the purposes of problem sets, though exams will be completed individually. Please note that not all the material that you will need to be successful on problem sets, exams, and the comprehensive exam will be presented formally in class. Allocate your time accordingly and make sure that you are completing readings in addition to simply working on what you will turn in for credit.

**Prerequisites:**

As we will be building upon foundations and extending material, I will assume that you are already familiar with the theory and tools from ECON 506, or equivalent, and that you have sufficient mathematical background including enough real analysis and set theory to understand and construct formal proofs. (Note that if you are unsure whether you have enough math background, MWG and JR's Mathematical Appendices are good places to start.)

**Grading:**

2 In-class Midterm Exams, dates on attached schedule (25% each)

Cumulative Final Exam, date scheduled by university (30%)

4 Problem Sets, tentative dates on attached schedule (5% each)

Final grades will be based on the following grade scale based on final percentage (rounded to the nearest full point) of total course points incorporating weights as indicated above. (Note that the scale is similar, but different, from that used in ECON 506.)

95-100 A+    77-82 B+    <65 C range or lower

89-94 A        71-76 B

83-88 A-       65-70 B-

The course will adhere to the Academic Integrity Policy of the Colorado State University General Catalog and the Student Conduct Code.

**Syllabus and Reading List:**

(This schedule is subject to change and will be revised later in the semester if necessary.)

*Game Theory*, Weeks of August 22 and 29 and of September 5, 12, 19, and 26

- *Static Games of Complete Information*; G Chapter 1; for further intuition: JR Chapter 4
- *Dynamic Games of Complete Information*; G Chapter 2; for further intuition: JR Chapter 7

THURSDAY, SEPTEMBER 8: PROBLEM SET #1 DUE AT START OF CLASS

- *Static Games of Incomplete Information*; G Chapter 3; for review and extension: MWG Chapters 7-9
- *Dynamic Games of Incomplete Information*; G Chapter 4

TUESDAY, SEPTEMBER 27: PROBLEM SET #2 DUE AT START OF CLASS

TUESDAY, OCTOBER 4: MIDTERM EXAM #1 IN CLASS

*Adverse Selection and Principal Agent Problems*, Weeks of October 3 and 10

- MWG Chapters 13-14; for further intuition: JR Chapter 8

*General Equilibrium*, Weeks of October 17, 24, and 31

- MWG Chapter 15-17; for further intuition: JR Chapter 5

TUESDAY, NOVEMBER 1: PROBLEM SET #3 DUE AT START OF CLASS

TUESDAY, NOVEMBER 8: MIDTERM EXAM #2 IN CLASS

*Social Choice Theory and Social Welfare Functions*, Weeks of November 7 and 14

- MWG Chapters 21-22; for further intuition: JR Chapter 6

Week of November 21: THANKSGIVING BREAK, NO CLASS

*Incentives and Mechanism Design*, Weeks of November 28 and of December 5

- MWG Chapter 23; for further intuition: JR Chapter 9

THURSDAY, DECEMBER 8: PROBLEM SET #4 DUE AT START OF CLASS

FRIDAY, DECEMBER 16, 9:40-11:40am\*: FINAL EXAM

\*The final exam will take place in our regular classroom. The final exam is cumulative.