Economics 8433
Topics in Empirical International Trade
Fall 2007, MW 9:00-10:15

Professor Jim Markusen
Econ 216
303-492-0748
james.markusen@colorado.edu
Hours: MW 1-3

Course Objectives

The objective is for students to master the essential aspects of numerical general equilibrium modeling as it is applied to problems in public economics, labor economics, international trade, environmental economics, and in other applied micro fields. Students will be expected to master techniques for constructing applied (numerical) general-equilibrium models and using them for policy simulations.

There is no textbook for the course. All course materials will be available on the course website. Readings will be available on the department web site under "econ8433"

I will not provide a detailed tutorial on GAMS notation and syntax. For these you can consult the GAMS web site: www.gams.com. Click on documentation, and then on GAMS - A User's Guide. This will give you a lot of the basics you need to know. Unfortunately, this guide is badly out of date and focuses entirely on optimization problems, whereas applied GE modeling generally involves solving square systems of equations and inequalities. But the user's guide will give you the syntax and notation as I indicated. Try going through chapters 2 and 3 before continuing with this tutorial. Hopefully, sometime soon we will try to rewrite the user's guide.

I will provide a disk for those who have a laptop. GAMS is also available on the computers in the grad lab.

Assessment for the class will be (A) in the form of exercises, (B) each student will do a project, in which an economic problem is calibrated to a numerical model and simulated.

The following gives an approximate schedule of the course. Week of

August 27, September 3 (no class on Monday September 3)

> Installation of GAMS on laptops, accessing and running GAMS in the grad computer lab.

The nature of numerical modeling
Economic equilibrium problems and complementary problems
Introduction to GAMS part1 (found on web site)
Introduction to GAMS part 2 (found on web site)

September 10 No Class, Markusen in Europe

Exercises

September 17

Chapter 1: General-Equilibrium Modeling using GAMS and MPS/GE: Some Basics (found on web site)

September 24, October 1

Chapter 2: Extensions of the Simple Model (found on web site)

October 8, October 15

Chapter 3: Taxes, Tax Reform, Public Goods, and Steady-State Models; Introduces Auxiliary Variables, Constraints, and Rationing (found on web site)

Students must hand in a project outline not later than October 15

October 22, October 29

Chapter 4: Open Economy models(found on web site)

November 5, November 12

Chapter 5: Monopoly, Oligopoly and Increasing Returns (found on web site)

November 26, December 3

Chapter 6: External Economies and Monopolistic Competition(found on web site)

December 10

Calibrating GE models to real input output data

December 12

Projects due

Special Accommodations Policy
If you have specific physical, psychiatric, or learning disabilities and require accommodations, let me know early in the semester so that your needs may be appropriately met. You will need to provide documentation of your disability to the Disability Services Office in Willard 322 (telephone 303-492-8671)