University of Colorado at Boulder  
Department of Economics  

ECON 3080 - INTERMEDIATE MACROECONOMIC THEORY  
FALL 1996  

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Office: 14A Economics, 2-2651  
Office Hours: M, Tu & W: 10:30 - 11:30  


Overview  

This course studies the aggregate equilibrium allocation of resources over time. To facilitate this study, we will develop a highly stylized macroeconomic environment which is built on the principles of economic theory. Our goal is to use this simplistic setting to understand a certain set of macroeconomic facts. Examples include economic growth, fluctuations in output and employment (i.e. the business “cycle”), and inflation.  

As the title of the course suggests, the emphasis here is on theory. Theory has at its roots, however, application. All theory is applied in that it is imagined and created to explain experience, or facts. Economists (unlike some other scientists, but not unlike geologists and atmospheric scientists), rarely have an opportunity to study the world through experimentation. To my knowledge there are no identical worlds available as an experimental “control” to study the response of the price of a cheeseburger to a doubling in the rate of growth of the money supply. Instead, we must create models, or artificial economies, to serve as laboratories for “thought experiments.” A model - to an economist at least - is the mathematical formalization of a theory. The artificial economy is useful. It allows us to conduct experiments that are otherwise impossible (and free from the moral hazards of creating hyperinflations in parallel worlds). By conducting such experiments, one can ask whether or not the model delivers the facts it was created to explain. If not, we question our assumptions and have at it again. My point is this: theory is not optional, it is a requirement. Fortunately, modeling it is a lot more fun than eating vegetables and taking out the garbage. Your primary objective in this course is to learn this art. Interesting insights into the world flow from its practice. That is your reward.  

An inescapable fact: the language of economic theory is mathematics. You are expected to know algebra. If basic algebraic concepts -- e.g. function, slope, rate of change, or solving a small set of equations -- have escaped you, plan to replenish this stock of ideas. I will not use calculus. (You may be tricked into doing calculus since it is simply the algebra of things tiny or things very large.) Toward the beginning of the course, much of our attention will be focused on learning the economic methodology described above. As part of that endeavor, I will review these concepts and demonstrate how they are used to build an artificial world and conduct a thought experiment. Also in the early stages, you will learn some simple techniques for analyzing U.S. macroeconomic time-series data to explore the facts, as I present them, for yourselves. In plain English, the facts that we wish to illuminate with the light of theory are as follows:  

Economies Grow  
Macroeconomic Growth is Erratic  
Macroeconomic Fluctuations Persist  
Employment Fluctuates with Output  
Consumption Fluctuates Less than Output  
Inflation Approximates Money Growth
Requirements

The requirements for the course include two midterms and a comprehensive final exam. Problem sets will be assigned throughout the term. Most problem sets will include a data exercise or two that must be executed on a computer. Some basic knowledge of a spreadsheet program will be required. I do not expect you to have prior experience using a spreadsheet. I will reserve some time in a campus lab so that a TA, or myself, can explain the basics. Since the campus labs currently use the Quattro Pro program, I will write an example solution or two using that program. Collaboration on the problem sets is encouraged, but everyone must hand in their own solution set. Take note: your performance in the class will be directly proportional to your effort expended on the problem sets.

The midterms will be held in class on Friday, October 4th and Friday, November 8th. The final exam is scheduled by the College of Arts and Sciences for Wednesday, December 18th from 3:30 to 6:30. In determining your final grade, each midterm is worth 20 percent, the final exam is worth 40 percent, and the problem sets are collectively worth the remaining 20 percent.

Macro on the Web

The U.S. macroeconomic time-series data set necessary to your fact-finding missions is available on the web. Using Netscape, go to the Department of Economics homepage and click on the “Courses with Web Sites” icon. Then choose ECON 3080 and follow the instructions for downloading the data. You will need a diskette. There is also a mailbox at this site. Please feel free to write me about administrative issues. Use it as an alternative to my physical mailbox or the telephone. Do not ask questions pertaining to the course material or hints for executing the problem sets correctly. Please reserve these discussions for the classroom or my office hours.
Course Outline and Itinerary

Week 1-3 (8/26 - 9/13):

Introduction; Methodology; Macroeconomic Measurement and Data Analysis; Some Macroeconomic Facts.

Barro; Ch. 1.

Week 4 (9/16-9/20):

The Economics of Robinson Crusoe; Intratemporal Choice.

Barro; Ch. 2.

Week 5, 6 (9/23-10/4):

The Saving Decision; Intertemporal Choice.

Barro; Ch. 3.

Week 7, 8 (10/7-10/18):

Money Demand and the Basic Market Clearing Model.

Barro; Chs. 4-6.

Week 9, 10 (10/21-11/1):

Business Cycles and Growth.

Barro; Chs. 9-11.

Week 11 (11/4-11/8):

Money and Inflation.

Barro; Chs. 7,8.

Week 12-15 (11/11-12/6):

The Government and Fiscal Policy; Monetary Linkages to Economic Activity.

Barro; Chs. 12-14, 18, 19.