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. The title also suggests that it has 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.

Toward the beginning of the course, much of our attention will be focused on learning this economic methodology. 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:

I. Economies Grow
II. Macroeconomic Growth is Erratic
III. Macroeconomic Fluctuations Persist
IV. Employment Fluctuates
V. Consumption Fluctuates Less than Output
VI. 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 an empirical exercise or two that must be executed on a computer. Some basic knowledge of the econometric time series program RATS will be required. I do not expect you to have prior experience with this program. There is a TA assigned to the course who will lead a session in the lab to explain the rudiments. He will also have office hours to help answer your computing questions. 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 Monday, December 16th from 7:30 to 10:30. In determining your final grade, each midterm is worth 20 points, the final exam is worth 40 points, and the problem sets are collectively worth an additional 20 points.

Macro on the Web

The U.S. macroeconomic time-series data set necessary to execute the empirical exercises 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 6080 and follow the instructions for downloading the data. You will need a diskette.
Course Outline and Reading List

I. Macroeconomic Time-Series and Some Stylized Facts
   Barro; Ch. 1.
   Kydland, F. and Prescott E., "Business Cycles: Real Facts and a Monetary Myth," 
   FRM, Summer, 1990.

II. The Basic Market Clearing Model
   Barro; Chs. 2, 3, 4, 5.

III. Business Cycles and Growth
   Barro; Chs. 6, 9, 10, 11.

IV. Money, Inflation and Interest Rates
   Barro; Chs. 7, 8.

V. The Government and Fiscal Policy
   Barro; Chs. 12-14.

VI. Monetary Linkages to Economic Activity
   Barro; Chs. 18, 19.