ECO 305: Intermediate Macroeconomics
Instructor: James Murray
Homework: Measuring Business Cycles and the Macroeconomy
Due Thursday, February 5, by 12:40pm

Answer the following questions using the Federal Reserve Bank of St. Louis's FRED database (http://research.stlouisfed.org/fred2/). Type your answers, include graphs with your answers when appropriate, convert your document to a PDF, and upload to the appropriate D2L dropbox folder. For all the graphs you create, use a date range from January 1970 through the most recent data available. Use seasonally adjusted variables whenever available.

1. For each of the expenditure components of real GDP, do the following:

   (a) Create a graph that includes the growth rate (percentage rate of change from one year ago) of the expenditure component along with the growth rate of real GDP.

   (b) Determine which is more volatile, the expenditure component or real GDP, and explain some reasoning why this might be so.

2. Answer the following questions regarding the following components of consumption: consumption of durable goods, consumption of nondurable goods, and consumption of services.

   (a) Define durable goods, nondurable goods, and services.

   (b) Create a graph that includes the growth rate (percentage rate of change from one year ago) of each of the consumption components along with the growth rate of total consumption.

   (c) For each component of consumption, determine which is more volatile, the given component or total consumption. Explain some reasoning why this might be so.

3. Make separate graphs of each of the following:

   (a) Growth rate of real GDP

   (b) Unemployment rate

   (c) Growth rate of employee compensation (wages and salaries)

   (d) Inflation using the GDP deflator (percentage rate of change from one year ago)

   (e) Federal funds rate

   Comment on how the variables above behaved at the onset of the most recent recession and the twin recessions that occurred in the early 1980s. How did these variables behave after the recession ended?