Principles of Macroeconomics
Economics 202
Fall 2010

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PURPOSE
This course uses market analysis (supply and demand at the national level) to develop an understanding of the working of the macroeconomic system. The macroeconomy is analyzed by studying five national markets: output, labor, financial (credit), foreign exchange market and the money (bank reserve) market. By understanding how these individual aggregated markets work, you will be able to analyze the effects of policy changes and changes in the international economy on a country’s economic performance.

The implementation and effectiveness of fiscal and monetary policy are important learning objectives. Fiscal policy (performed by the Treasury) refers to federal government expenditure and tax policy (the size of the federal budget deficit/tax surplus). Monetary policy (the responsibility of the central bank) refers to the changes in interest rates and the money supply. Both policies will have an effect on economic activity, interest rates and the rate of inflation. The effect of exchange rate policy changes on economic activity is also analyzed. Important historical policy changes will be employed to consider some of the significant global economic events of the past century.

PREREQUISITE
ECO 201 (or ECO 101) Principles of Microeconomics

ECO 202: LEARNING OBJECTIVES
1. Identify the measurement of macroeconomic data as: nominal and real GDP; price indices such as the CPI and the GDP price deflator; the potential and actual rate of economic growth, inflation and deflation; and the unemployment and employment rate.
2. Define a federal budget deficit and a federal tax surplus and describe how each affect the federal government national debt and how a budget deficit is financed.
3. Explain and diagram the possible stages of a business cycle in terms of the rate of economic growth, inflation and the unemployment rate.
4. Graph the effect of various macroeconomic factors that shift the aggregate demand (AD) schedule and analyze the effect using the output market.
5. Describe the role of savings and investment in terms of the rate of long-term economic growth, especially for developing countries.
6. Illustrate the economy in a state of recession or inflation using the output market diagram and explain how policy variables can correct the recession or inflationary period.
7. Understand the role of the Treasury in the implementation of fiscal policy and the effect on interest rates in the economy.
8. Recognize the role of the Federal Reserve in the implementation of monetary policy and analyze the effect on interest rates and inflation rates.
9. Define the federal funds rate, the discount rate and the prime rate, and the role of fractional reserve banking in the creation of money.

SYLLABI
A detailed syllabi is also posted on Blackboard.
REQUIRED MATERIALS
Introduction to Macroeconomics, Dolan, 3rd edition
Allen’s Macroeconomics Manuscript, available at the UNCG Bookstore.
Optional: Draft-Hafer’s macro text. Available on Blackboard. Copyright protected

WEBSITES
http://dolanecon.blogspot.com/
http://valuingeconomics.blogspot.com/
http://delong.typepad.com/

ATTENDANCE AND DROP DATE
Attendance is expected. Students who are not attending class may be dropped from the class.
Friday, October 15 is the last day to withdraw without academic penalty.

FACULTY STUDENT GUIDELINES
Can be found at http://www.uncg.edu/bae/faculty_student_guidelines.pdf

HONOR POLICY
Students are expected to comply with the UNCG Honor Policy. You may receive help on homework assignments from other students, but you cannot copy answers from other students.

GRADING POLICY
Grades are earned during the semester. Grades may be curved at the end of the course. Pluses and minuses will be awarded.

A 90-100 B 80-89 C 70-79 D 65-69 F < 65

COURSE REQUIREMENTS
20% Quizzes and Homework*
25% Test I** Between September 28 - October 7
25% Test II** Between November 9 – November 18
30% Final Exam Comprehensive Final: Tuesday Dec. 14, 12 – 3 p.m.

*Expect a quiz every class during the first six weeks. Homework assignments are due at the start of class. The two lowest grades are dropped in computing your homework and quiz average (20%).

**Missed tests earn a zero unless there is an acceptable medical excuse or death in the family. Students who miss a mid-term for such reasons will have their final exam count an extra 25%. There are no excused absences for quizzes or homework regardless of the reason except for military service. Circumstances of life will mean that you will miss class occasionally. This is the reason that the lowest two grades are dropped.

Tests may include true – false and multiple choice questions, but over 50% of the mid-term will require diagram and discussion and/or essay answers. In addition, there will be a certain amount of math related questions that require you to bring a calculator to the test and therefore to each class.

All homework, quizzes and tests that are handed in for grading and recording should have your name (legible) and your row number at the top of the page. Homework assignments will be available on Blackboard.
ECONOMICS 202: MORE SPECIFIC LEARNING OBJECTIVES

Students should be able to:
1. Define and explain the difference between macroeconomic data such as: nominal and real GDP, the CPI and the GDP price deflator, the rate of economic growth and the rate of inflation and deflation; the unemployment and employment rate; the federal budget deficit and the national debt, and the budget deficit and the trade (net export) deficit.

2. Explain and graph actual real GDP (the business cycle), and potential real GDP (long-term economic growth) and explain why there may be a change in the underlying rate of growth of potential real GDP.

3. Clearly articulate and understand the role of the Treasury and the Federal Reserve as it is related to traditional fiscal and monetary policy.

4. Define current and capital accounts (the balance of payments) and explain why the U.S. is a debtor country.

5. Explain the sources of long-term economic growth especially for developing countries and the role of savings and investments in the process.

6. Explain the effect of changes from various economic and policy variables using the output market (aggregate demand and aggregate supply) to explain movements in the price level and real GDP.

7. Using an output market diagram show and explain the policy options that exists to correct either a recession or an inflation.

8. Explain the workings of the Federal Reserve and the banking system in the creation of money.

9. Explain how the Federal Reserve conducts monetary policy by targeting federal funds rate.

10. Explain the effect of inflationary expectations on nominal interest rates through the credit market diagram and distinguish between nominal and real interest rates.


12. Analyze the effect of budget deficit spending on private sector investment and the trade sector and provide historical examples of two different types of “crowding out”.

13. Explain Taylor’s Rule and recent shifts in monetary policy with regard to this rule.

14. Explain the reason and the consequences of why he Chinese usually maintain a fixed exchange rate with the dollar that is considered to be below the true equilibrium value.
A. Calculations (Two points each)
1. Round off to the nearest one-tenth of a dollar or one-tenth of a percent. Nominal GDP is $8,000 in year 1; $8,400 in year 2 and $9,000 in year 3. The average level is 1.21 in year 1; 1.24 in year 2 and 1.29 in year 3. Compute the following
   Real GDP in year 1 = ________________
   Real GDP in year 2 = ________________
   Real GDP in year 3 = ________________
   The inflation rate in year 2 is ______ and in year 3 ______?
   The rate of economic growth in year 2 is ______ and in year 3 ______?

B. Fill in or short answer (One point each)
1. Label each a Stock or Flow
   The National Debt  Tax Revenue  Investment  Capital Account  Wealth

C. Diagram – No Discussion – Use the right market and label correctly – 3 points each
1. A price floor in any microeconomic market. Show and label the disequilibrium.
2. A sudden increase in the level of savings in an economy? Show the output market.
3. An increase in the exchange rate of the home country. Show the output market.
4. Retired individuals return to the labor market. Show the labor market.

D. Essays (Diagram and discussion)
1. When and how is expansionary fiscal policy implemented by the government? What is the Treasury’s role in expansionary fiscal policy? What happens to interest rates, bond prices, the money supply, and aggregate demand in each case? (12 points)
   Use the output market and a credit market diagram to show the effect of expansionary fiscal policy. (Be sure to show the current level of real GDP versus the full employment level of real GDP in the appropriate position). (8 points)

2. Draw the time-series diagram of actual real and potential (2.5% a year) real GDP showing a peak (P) and a trough (T). What are the four paths the economy can take from point T? What happens to the unemployment rate and the growth of real GDP in each case? (10 points)

3. Define the current account and the capital account. Make sure your definition clearly explains the difference between each account. What has been the position of the current and capital account of the United States and the rest of the world over the past two decades? Which country is the debtor nation and which country is the creditor nation? (10 points)

4. Diagram a country’s production possibility frontier where consumption goods are measured on the vertical axis and investment goods are on the horizontal axis for year 1. Contrast the outcome in the future if the country operates at B or C in year 1. What is true about the rate of economic growth next period? (10 points)
ECONOMICS 202
EXAMPLE - TEST 2

I. Problems: One point each.
1. Your mother made $8.85 an hour in her job in 1978 when the CPI (index) was 89.1. You are currently making $13.00 when the CPI is 145.2. Round off to the nearest cent. What was your mother’s real wage rate in 1978? ________ What is your current real wage rate in 2004? ________ What has been the percentage change in the price level between 1978 and 2004? ________

2. Assume that a Dr. Pepper cost five cents in 1954 when the CPI was 19.3. If the cost of the soda rose at the same rate as the inflation rate over the past 50 years, then a Dr. Pepper should cost how much in 2004 when the CPI is 145.2. ________ Round off to the nearest cent.

Round off to the nearest hundredth of a percent. Two points each
3. You buy a 7% bond for $980 with five years remaining to maturity. What is the current yield (rate-of-return) on the bond if you hold it to maturity? ________

4. You buy a 5% ten year bond for $1055. What is your current yield (rate-of-return) on the bond if you hold it to maturity? ________

II. Fill-ins: One point each unless otherwise noted
1. What is the European Central Banks primary method of changing the money supply?
2. What is the Federal Reserves primary method of changing the money supply?
3. How can a Central Bank change the money supply without changing the monetary base?
4. How can the public cause a change in the money supply?
5. In what direction is the CPI biased? Upward or downward Circle one
6. Who is the chair of the Federal Reserve?
7. A bond selling for more than a $1000 is selling at a ____________.
8. A bond selling for more than a $1000, was originally sold when interest rates were higher than they are now? True or False. Circle one.
9. What is the difference between the discount rate and the federal funds rate? (4 points)

III. T-Account
1. Suppose the Fed sells $10,000 of gov't bonds to Bank 1. Trace through the change in the banking system for Banks 1 and 2. (2 points each)

<table>
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<th>Bank 1</th>
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<tr>
<td>Intermediate Position</td>
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The change in reserves is ____________
The total change in demand deposits (money supply) for the whole banking system is _______.

2. Suppose the Fed buys $4000 of gov't bonds from Bank 1. Trace through the change in the banking system for Banks 1 and 2. (2 points each)

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<td>DD  20,000</td>
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<tr>
<td>RR  5000</td>
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<td>ER  0</td>
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<td>GB  10000</td>
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Banks 1 and 2

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The change in reserves is ______________

The total change in demand deposits (money supply) for the whole banking system is _______.

IV. Diagram and Discuss

1. The Federal Reserve conducts contractionary monetary policy through open market operations.
   a) Diagram the Fed's balance sheet (T-account) to show what happens to its assets and liabilities.
   b) Diagram the reserve market and show the change in this market from the policy change.
   c) Diagram the output market with the appropriate starting position and show what effect the contractionary policy would have in the output market? (Three points for each) No feedback effect is necessary.

2. The Federal Reserve conducts expansionary monetary policy through open market operations.
   a) Diagram the Fed's balance sheet (T-account) to show what happens to its assets and liabilities.
   b) Diagram the reserve market and show the change in this market from the policy change.
   c) Diagram the output market with the appropriate starting position and show what effect the policy change would have in the output market? d) Show the feedback effect. (Three points for each part.)

3. Diagram the three interest rate effects on a time series diagram from an overexpansion in the money supply by the Fed. Label each effect. (nine points)

4. Suppose the initial equilibrium interest rate in the credit market is 5% with zero inflationary expectations. a). Provide the appropriate diagram. b) What is the real interest rate? c) Inflationary expectations increase to 3%. Diagram the effect. d) What is the new nominal interest rate? e) The new real interest rate. 2 point each except for part c which is four points.
   4f) The actual inflation rate is 6%. What is the real actual interest rate? Who wins? (4 points)

5. The economy experiences a recession. Diagram the output market. b) What will the Treasury have to do if the Congress and the President enact the right type of fiscal policy? C) What happens to interest rates and the money supply? d) What happens in the labor market due to the recession? Diagram. e) Show the outcome in the labor market if we assume rigid wages. (2 points each)
ECO 202: Course Outline

I. Microeconomic Review
   A. Basic principles
   B. Supply and demand
   C. Shortages and surpluses

II. Macroeconomic Overview
   A. Building blocks of economic growth
   B. Measuring output by real GDP
   C. Trend rate of real GDP - potential real GDP
   D. Fluctuations and output gap
   E. Inflation
   F. Policies: Fiscal, Monetary, Exchange rates

III. Output, Income, and Employment
   A. Aggregate output & income (nominal vs. real)

How do price changes bring about market eq'm
Analyze outcome - gov't price ceiling or floor
Identify inputs, introduce PPF
PPF frontier and potential real GDP
Trend rate through peaks or mid-cycle
NBER and business cycles
Reduces purchasing power of money
Correlated with short-term interest rates
Define nominal vs. real GDP

Dolan Ch, pp
Manuscript Ch, pp
Hafer Ch, section
Cowan Ch, pp

D1
D2
D2

D4, 97-113 M1,1-14
D4, 101-110
D4, 110-114
D5, 119-124

H10-10.2 C5,69-73
H10.4 C511,217-222
H19-19.5 C5

C5,73-74
B. Final goods approach: GDP = C+I+G+NX
C. Income approach
D. Measurement issues
E. Real GDP vs potential real GDP (gap)

F. Unemployment rate and job creation
G. Unemployment rate and real GDP growth
H. Full employment U rate - Natural rate
I. Types of unemployment and government policies
   Cyclical
   Frictional
   Structural
J. Labor Force Participation

IV Global Economy
A. Trade and exchange
B. Balance of payments
C. World Imbalance?
D. Foreign exchange market
E. Determination of exchange rates

IV. Detour 1: Fiscal Policy
A. Tax receipts: Sources and distribution
B. Marginal vs. average tax rates
   Regressive taxes
   Progressive taxes
C. Federal expenditures
D. Transfer payments & interest payments
E. Budget deficit and surplus
F. Deficits vs. debt (stocks vs flows)
G. Country bankruptcy

V General Level of Prices
A. CPI - Consumer Price Index
B. Inflation: Sustained increase in price level
C. Measurement Problems
D. Relative prices
E. Other Price indexes
   GDP deflator
   Producer price index
F. Quantity Theory of Money
G. Inflation in other countries
H. Cost of inflation
I. Real vs nominal interest rate

Role of the Treasury
Define and identify stocks and flows
Sovereign default

M3,15-19
D6, 157-158
D6, 153-158
H11.6
H16.3  C11
H16.4-16.5  C11,222-6
H16.7  C11, 226-32
VI. Economic Growth: The Wealth of Nations  
A. Three basic facts  
B. Factors of production  
C. Incentives and institutions  
D. Sources of Growth  

VII Savings, Investments and Financial Markets  
A. Role of financial and credit markets  
B. Credit market - lenders and borrowers  
C. impact-change in inflationary expectations  

VIII. The Model  
A. Basic output market  
B. Dynamic model  
C. Real shocks  
D. Shifts  

IX Banking System and Money Creation  
A. The Federal Reserve System  
B. What is Money?  
C. The Money Supply  
D. Money creation & the money multiplier  
E. Three instruments  
F. Fixed Exchange rates and monetary policy  

X Monetary Policy  
A. Monetary expansion
B. Three interest rate effects
C. The Inflation of the late 1970s
D. Volcker’s response

XI Fiscal Policy
A. Crowding out I
B. Crowding out 2
C. Effectiveness of fiscal policy

XII Controversies