

American University
Department of Economics

**ECON-702 Macroeconomic Theory Syllabus
Spring 2008**

Instructor: Walter G. Park, Roper Hall 213
Email: WGP@American.Edu
Office Hours: Mon. 2 - 5:30 pm & Thurs. 10 am - 2:30 pm.

I. Course Description: This is a doctoral level course in macroeconomics. Macroeconomics is the study of the national economy as a whole. In that regard, we examine the behavior of aggregate variables, such as output (GDP), the price level, money supply, aggregate private and government spending, taxation, debt, and growth rates. We study the interactions among them, and their relationships with other variables. Though the course is primarily concerned with the national economy, in some cases references to the open-economy shall be made where relevant (for example, the influence of or impact on the exchange rate or balance of payments).

II. Objectives of the Course: For the student, the objectives are twofold: (a) to learn the subject material at hand – i.e. the macroeconomic theories, evidence, and policy; and (b) to further develop one's research and economic reasoning skills. Some time will be spent on the 'toolkits' of macroeconomic analysis (e.g. solving systems of equations, comparative statics, dynamic optimization, phase diagrams, and other analytical techniques). These methods are *widely* applicable beyond this course or subject, and so the returns to learning them are very high.

III. Prerequisites: This course presumes that you have had macroeconomics and microeconomics at the upper undergraduate and/or master's degree level. For example, you are expected to be familiar with concepts like IS/LM, AS/AD, Phillips Curve, Fiscal Policy, Monetary Policy, Growth, and Fluctuations – or at least be able to define them, even if you do not fully remember the underlying principles and mechanics, and appreciate *why* they have been the subjects of study. The prerequisite courses – in addition to providing the preparatory training – should have stimulated the appropriate level of intellectual curiosity about macroeconomic issues. Without some sense of the *why*, this course will seem quite abstract and difficult. Nonetheless, a brief review of national income accounting, IS/LM, and AS/AD at the intermediate level will be provided (and not much more). This course also presumes that you have studied basic calculus, linear algebra, and statistics. Again, a brief review will be provided (e.g. Cramer's Rule, Differentiation and Integration, Rules of Matrix Algebra, etc.).

IV. Methodological Approach: Unlike Ph.D. microeconomics (e.g. Econ-703), there is no established way to teach macroeconomics (even at the first doctoral level). In micro, it is pretty standard to cover consumer theory, producer theory, market equilibrium, partial equilibrium, general equilibrium, and market imperfections more or less in this order. However, this is not the case with macroeconomics. Any cursory look at macroeconomic textbooks, or syllabi from different courses or universities, will illustrate that. The materials covered – and the order in

which they are covered – often, if not always, reflect the ideological taste of the academician. This cannot be avoided. Macroeconomics is fraught with controversies and competing ideas from different schools of thought. In some treatments (as in the two textbooks on our reading list), the analysis begins with the economy in the long run and then in the short run. The long run model is often displayed as a benchmark, towards which the economy reverts. This may presuppose several things: (a) the existence of a long run equilibrium; (b) that somehow that point is desired, optimal, or efficient; and (c) that the economy self-corrects (that if it has deviated from that long run point, it shall have a tendency to go there). Some make no long run vs. short run distinction, or ignore/dismiss any notion of some long run equilibrium economy. And others don't seem to have any systematic theme in their textbooks or syllabi, appearing to broach different topics in some random order.

For this course, we will start with the short run, where price adjustment is slow and the stock of capital is largely given. Here, we examine some of the traditional macroeconomic topics and debates (e.g. from Classical Economics, Keynesian Economics, to New Classical Economics). The course then turns to the long run, where aggregate supply factors are all variable, prices are flexible, and agents are forward-looking. We will provide exposure to topics in Growth Theory, Real Business Cycles, Intertemporal Macroeconomics, and the Microfoundations of Macroeconomics. The short run/long run dichotomy is not necessarily used here to portray an economy in transition from one state to another, but to highlight the different perspectives and arguments presented in the literature to common research questions. Note very importantly that not all of the topics mentioned above will be treated equally in depth. We will go through some in great detail and others in minor detail.

V. A Very Simplified Overview of Issues: The following remarks are to help you know *what to look for* when studying the material. Macroeconomic analysis tends to focus on the two key variables in the Aggregate Demand (AD) - Aggregate Supply (AS) framework: aggregate output and the price level. The long run path of these variables comes under the study of ***economic growth***. Deviations or fluctuations of these variables around the long run path come under the study of ***business cycles***. Macroeconomic research has been concerned with the causes and effects of economic growth and fluctuations, and with the role of policy in affecting growth and cycles. Business cycles raise concerns because when the economy deviates from the long run path, the economy experiences ***inflation*** and ***unemployment*** - the twin pathologies in macroeconomics. A key controversy is whether there exists a short run or long run ***Phillips Curve*** (i.e. tradeoff between the rates of inflation and unemployment); yet another controversy is whether business cycles are “bad” or reflect optimizing choices among economic agents.

Macroeconomic policies (e.g. the use of ***fiscal*** and ***monetary*** policies) to stabilize the economy around the long run path (or to dampen business cycles) are referred to as ***stabilization policies***. Policies that target the long run outcomes (such as the level of potential output and the natural rate of unemployment) are referred to as ***structural policies*** (which may fall more under the purview of microeconomics, e.g. competition policy, tax incentives, labor market reforms, patent laws etc.). Much of the debate in macroeconomics, as you will soon see, centers around whether stabilization policy is effective, is neutral, or makes things worse. Much of the intellectual

energy among researchers has been spent not on discussing the design of policies per se (i.e. the “how?”) but on debating whether policy works (i.e. the “should we or shouldn’t we?”). There are also controversies in macroeconomics concerning how people (and firms) behave. Different views or assumptions about micro behavior tend to result in different predictions about macro behavior – that is, of how the variables in the aggregate behave; for example, *aggregate consumption, saving, investment, money demand*, and even *technological progress*. No wonder then that there are many different models and different conclusions. This will be evident in both the short run and long run analyses. Hence recent macroeconomics research contains diverse expert opinions and methodological approaches.

VI. Required Readings:

- i. Romer, David (2006), *Advanced Macroeconomics*, 3rd edition, McGraw-Hill-Irwin. ISBN 0-0728-7730-8.
- ii. Mankiw, N. Gregory (2006), *Macroeconomics*, 6th edition, Worth Publishers. ISBN 0-7167-6135-1 (Includes subscription to *Dismal Scientist*).
- iii. Supplementary Readings, Handouts, and Lecture Notes – See Blackboard.

All of these readings play an important role. Romer (2006) is our main textbook and is rather advanced. Our secondary textbook, Mankiw (2006), provides background concepts and intuition behind the material in Romer (2006). The supplementary readings are drawn from leading (timeless) works and provide first-hand information. The handouts provide details on algebraic derivations and other background information. Also, remember to check **Blackboard** regularly for announcements, assignments, and postings (e.g. past exams and solutions, extra notes, etc.). Here are the supplementary readings in alphabetical order of authors:

- Barro, Robert and Gordon, David (1983), “Rules, Discretion, and Reputation in a Model of Monetary Policy,” *Journal of Monetary Economics*, Vol. 12, pp. 101-121.
- Blanchard, Olivier J. (1985), “Debt, Deficits, and Finite Horizons,” *Journal of Political Economy*, Vol. 93, No. 2, pp. 223-247.
- Blinder Alan S. and Solow, Robert M. (1973), “Does Fiscal Policy Matter?,” *Journal of Public Economics*, Vol. 2, pp. 319-337.
- Campbell, John and Deaton, Angus (1989), “Why is Consumption So Smooth?,” *Review of Economic Studies*, Vol. 56, pp. 357-374.
- Diamond, Peter (1965), “National Debt in a Neoclassical Growth Model,” *American Economic Review*, Vol. 55, pp. 1126 - 1150.

- Grossman, Gene and Helpman, Elhanan (1991), “Quality Ladders in the Theory of Growth,” *Review of Economic Studies*, Vol. 58, pp. 43-61.
- Hall, Robert (1978), “Stochastic Implications of the Life Cycle-Permanent Income Hypothesis,” *Journal of Political Economy*, Vol. 86, No. 6, pp. 971-987.
- Hayashi, Fumio (1982), “Tobin’s Marginal q and Average q : A Neoclassical Interpretation,” *Econometrica*, Vol. 50, No. 1, pp. 213 – 224.
- Hicks, John (1937), “Mr. Keynes and the ‘Classics’; A Suggested Interpretation,” *Econometrica*, Vol. 5, No. 2, pp. 147-159.
- Jones, Charles (1995), “R&D Based Models of Economic Growth,” *Journal of Political Economy*, Vol. 103, No. 4, pp. 759-784.
- Kydland, Finn and Prescott, Edward (1977), “Rules Rather than Discretion: The Inconsistency of Optimal Plans,” *Journal of Political Economy*, Vol. 85, No. 3, pp. 473-491.
- Mankiw, N. Gregory (1990), “A Quick Refresher Course in Macroeconomics,” *Journal of Economic Literature*, Vol. XXVIII, pp. 1645-1660.
- Mankiw, N. Gregory (2006), “The Macroeconomist as Scientist and Engineer,” *Journal of Economic Perspectives*, Vol. 20, No. 4, pp. 29-46.
- Mankiw, N. Gregory, David Romer, and David Weil (1992), “A Contribution to the Empirics of Economic Growth,” *Quarterly Journal of Economics*, Vol. 107, pp. 407-437.”
- McCallum, Bennett (1989), “Real Business Cycle Models,” in Barro, Robert J. (ed.), *Modern Business Cycle Theory*, Harvard University Press, pp. 16-50.
- Mundell, Robert A. (1968), *International Economics*, MacMillan Press, NY (Ch. 8).
- Rebelo, Sergio (2005), “Real Business Cycle Models: Past, Present, and Future,” *Scandinavian Journal of Economics*, Vol. 107, No. 2, pp. 217-238.
- Romer, Paul M. (1990), “Endogenous Technological Change,” *Journal of Political Economy*, Vol. 98, No. 5, Pt. 2.
- Sargent, T. (1987), *Macroeconomic Theory*, 2nd ed., Academic Press, NY (Chs. 1 and 2).
- Solow, Robert M. (1956), “A Contribution to the Theory of Economic Growth,” *Quarterly Journal of Economics*, Vol. 70, No. 1, pp. 65 – 94.

VII. Course Evaluation:

i.	Problem Sets	10%
ii.	Midterm	40%
iii.	Final	<u>50%</u>
		100%

The final examination will cover the second half of the course (and therefore will not be cumulative). Note, however, that the comprehensive examination will be cumulative. Regular problem sets will be assigned and answer keys provided.

<i>Grading Scheme:</i>	A	93-100%	C+	65-69%
	A-	85-92%	C	60-64%
	B+	80-84%	C-	55-59%
	B	75-79%	D	50-54%
	B-	70-74%	F	0-49%

VIII. Course Outline:

The following is a *tentative* outline! It cannot be stressed enough that this is merely a rough plan for the semester. We may very well end up going faster or slower, covering more or less, jumping back to previous topics or skipping ahead to others. Also, focus on what is covered in the lectures. The readings supplement the lectures, not the reverse.

PART I: Overview & Review

<u>Lecture</u>	<u>Date</u>	<u>Topic</u>	<u>Readings</u>
1	Jan. 14	State of Macro, Math Review	Mankiw (1990); Mankiw (2006) See Math Handout.

PART II: Traditional (Short-Run) Analyses

<u>Lecture</u>	<u>Date</u>	<u>Topic</u>	<u>Readings</u>
2	Jan. 28	Classical Model	Sargent (1987), Ch. 1; Mankiw textbk Chs. 3-4.
3	Feb. 4	Keynesian Model, IS/LM, Phillips Curve	Sargent (1987), Ch. 2; Hicks (1937); Mankiw textbk Chs. 10-11, 12.1-12.3, and Ch. 13.2; Romer textbk Ch. 5.1-5.4.
4	Feb. 11	Applications	Blinder and Solow (1973); Mundell (1968).
5.	Feb. 18	Dynamic Methods, Rational Expectations	See Math Handout

<u>Lecture</u>	<u>Date</u>	<u>Topic</u>	<u>Readings</u>
6.	Feb. 25	Economics Dynamics cont'd	Kydland and Prescott (1977); Barro & Grossman (1983)

Mid-Term	Mar. 3	<i>Covers Parts I & II</i>
-----------------	---------------	---------------------------------------

PART III: Dynamic Models (Long-Run)

7.	Mar. 17	Neoclassical Growth	Romer textbk Chs 1 and 2A; Mankiw textbk, Chs. 7-8, Solow (1956).
8.	Mar. 24	Endogenous Growth I	Romer textbk Ch. 3A; Paul Romer (1990); Jones (1995).
9.	Mar. 31	Endog. Growth II, Growth Empirics	Grossman & Helpman (1991); Mankiw, Romer, & Weil (1992).
10.	Apr. 7	Long Run Demand	Hall (1978); Campbell & Deaton (1989); Mankiw textbk Chs. 16.3-16.5, and 17.1. Romer textbk Chs. 7-8.
11.	Apr. 14	Long Run Demand cont'd	Hayashi (1982); Mankiw textbk Ch. 15.4; Diamond (1965); Blanchard (1985) Romer textbk Ch. 11.1-11.3.
12.	Apr. 21	Real Business Cycles & Critique	McCallum (1989); Romer textbk Ch. 4; Mankiw textbk Ch. 19.1; Rebelo (2005).

Final Exam	Apr. 28	<i>Covers Part III only</i>
-------------------	----------------	------------------------------------

“Every science and every inquiry . . . is thought to aim at some good.”
- Aristotle, *Nicomachean Ethics*, Book I, Ch. 1.

“Concern for [mankind] . . . must always form the chief interest of all technical endeavors, concern for the great unsolved problems of the organization of labor and the distribution of goods – in order that the creations of our mind shall be a blessing and not a curse to mankind. Never forget this in the midst of your diagrams and equations.”
- Albert Einstein, Address, Cal Tech, 1931.