Fall 2019
DePaul University

ECO 506 – Advanced Macroeconomics

Professor: Dr. Jaejoon Woo
Office: 6140, DePaul Center (Loop)
Email: jwoo1@depaul.edu
Phone: 312/362-5585
Homepage: https://sites.google.com/site/jaejoonwoo
Office Hours: Tuesdays 4:00-5:00 or by appointment

Goal of this course: This course is intended to help you acquire a firm knowledge of modern macroeconomic theory and empirics. We explore key macroeconomic relationships and policy issues such as long-term economic growth, inflation, business cycle fluctuations (boom and recession), budget deficit and government debt, the practice of monetary and fiscal policies, and political economy. The course will provide a survey of important modern macroeconomic theories and empirics, including (i) long-term economic growth models, (ii) money and inflation, (iii) business cycle theory: from New Keynesian perspectives, (iv) monetary policy, (v) fiscal policy, budget deficits and political economy, and (vi) political business cycle.

What Students May Expect
This is a graduate course in macroeconomics. Thus, it is not an appropriate course for students who want some exposure to the modern macroeconomics. It will require sustained immersion in relevant economic theory and empirics.

Prerequisites
ECO 502 or ECO 306. More precisely, undergraduate intermediate macroeconomics (i.e., ECO 306) and some basic calculus should be sufficient. Yet if possible, it is recommended that you take ECO 505 advanced microeconomics before you take this course.

Course Materials
The course does not follow any single textbook. For various topics, selected chapters from textbooks or articles will be basic reading materials. Importantly, lecture notes and handouts will be provided on a regular basis (posted in D2L).

That said, the following textbooks are useful references:

(1) Charles Jones and Dietrich Vollrath, Introduction to Economic Growth, 3rd edition, WW Norton, 2013 (recommended for economic growth section of the course).

(2) David Romer, Advanced Macroeconomics, 4th edition, McGraw-Hill, 2012 (available on-line as pdf file).

(3) Obstfeld and Rogoff, Foundations of International Macroeconomics, MIT Press, 1996.

Course Requirements
It is very important to attend lectures, since the materials covered in lectures form the core of the course.

There are **3 requirements**: **Midterm, Final Exam, and Problem Sets**

(1) Mid-term and Final exams: A **mid-term exam** is *tentatively* scheduled on **Oct 15, 2019**. A comprehensive **final exam** will be given in class on **Nov 26, 2019**. Note these dates are tentative. Details will be provided in class.

(2) Problem sets: There will be 4-5 problem sets. Problem set questions may be harder than the exams.

Note that if a topic in the readings is omitted in class, then it is not exam-relevant. To put it differently, everything covered in class is exam-relevant, even if there is no reading assignment.

Grading: Final grade will be determined by the mid-term (35%), the final (40%), problem sets (20%), and class participation (5%).

Grading Scale: A=94% and above; 88%≤A-<94%; 82%≤B+<88%; 77%≤B<82%; 72%≤B-<77%; 67%≤C+<72%; 63%≤C<67%; 59%≤C-<63%; 56%≤D+<59%; 53%≤D<56%; 50%≤D-<53%; and F<50%.

General policy
You should be aware of and abide by the University's policy on academic integrity (http://academicintegrity.depaul.edu). Also, the instructor reserves the right to change the topics or schedules if necessary.

Makeup Exams
In cases of severe illness or other extreme circumstances, a student may request a makeup exam. You must inform me of and obtain permission for the absence prior to the exam time, and provide appropriate documentation. Anyone who misses an exam without permission automatically receives zero on the exam.

Classroom Courtesy
Students are expected to behave professionally. This includes attending class and not engaging in unrelated and/or disruptive activities during class. I will check attendance, and missing more than 1/3 of classes will lead to a loss of one letter grade on your final score. Missing more than half will result in an automatic F grade. Attendance will be counted towards class participation portion of the letter grade (5% out total 100). Students having a compelling reason for missing class should inform me in advance by e-mail. **Texting, cell phone calls or surfing the internet are not allowed during class. Students doing so will be requested to leave the class, resulting in one automatic absence.**

TENTATIVE SCHEDULE

(The following schedule is only tentative and may have to be modified if necessary.)

Sept 17:   Economic Growth

Sept 24:   Economic Growth (continued). Problem set 1 will be assigned.

Oct 1:   Economic Growth (continued). Problem set 1 is due. Problem set 2 will be assigned.

Oct 8:   Money and Inflation, and Business Cycle Theory. Problem set 2 is due.

Oct 15:   **Mid-term exam** will be given. Business Cycle Theory (continued).

Oct 22:   Business Cycle Theory

Oct 29:   Monetary Policy. Problem set 3 will be assigned.

Nov 5:   Monetary Policy (continued). Problem set 3 is due.

Nov 12:   Fiscal Policy, Budget Deficits and Political Economy (continued). Problem set 4 will be assigned.

Nov 19:   Fiscal Policy, Budget Deficits and Political Economy (and if time permits, Political Business Cycle). Problem set 4 is due.

Nov 26:   **Final exam (to be confirmed)**

Reading List (* indicates important readings)

1. Economic Growth

* Review of Mathematics and Statistics: *Handout.*
* Review of Basic Econometrics: *Handout.*

A. The Solow Growth Model

Handout on the Solow Model and Its Problem.

* Jones text, Chapters 2 and 3.

* Gregory Mankiw, David Romer and David N. Weil (1992), "A Contribution to the Empirics of Economic Growth," Quarterly Journal of Economics, May, 107:407-437. (Try to read pp.407-421.)

Dani Rodrik (2013), "Unconditional Convergence in Manufacturing," Quarterly Journal of Economics, 128 (1): 165-204.

B. New Growth Theory: endogenous growth, R&D and externality.

* Jones text, Chapters 5 and 9.

Robert Barro and Xavier Sala-i-Martin (2004), "Chapter 4. One-Sector Models of Endogenous Growth," In Economic Growth, New York: McGraw-Hill.

* Charles Jones (1999), "Growth: With or Without Scale Effects?" American Economic Review Papers and Proceedings, May, vol. 89.

Royal Swedish Academy of Sciences (2018), "Scientific Background: Economic growth, technological change, and climate change," (2018 Nobel prize was awarded to Paul Romer, and this article summarizes his contribution to Endogenous Growth Theory).

D. Empirical Growth Literature

Lecture note on Empirical Growth Literature.

Robert J. Barro (1991), "Economic Growth in a Cross Section of Countries," Quarterly Journal of Economics, Vol. 106, No. 2. May, pp. 407-443.

Charles Jones (2016), "The Facts of Growth," in the Handbook of Macroeconomics.

- Trade Openness and Growth

Jeffrey Frankel and David Romer (1999), "Does Trade Cause Growth?" American Economic Review, Vol. 89, No. 3, pp. 379-399.

- Government Institutions

Robert Hall and Charles I. Jones (1999) "Why Do Some Countries Produce So Much More Output per Worker than Others?," Quarterly Journal of Economics 114:83-116.

Daron Acemoglu, Simon Johnson, and James A. Robinson (2001), "The Colonial Origins of Comparative Development: An Empirical Investigation." American Economic Review, December, Vol. 91, pp. 1369-1401.

Edward Glaeser, Rafael La Porta, Florencio-Lopez-de-Silanes and Andrei Schleifer (2004), "Do Institutions Cause Growth?" Journal of Economic Growth.

- Social Polarization: Income Inequality and Ethnic Fractionalization

William Easterly and Ross Levine (1997), "Africa's Growth Tragedy: Policies and Ethnic Divisions," Quarterly Journal of Economics, 112, No. 4.

Jaejoon Woo (2005), "Social Polarization, Fiscal Instability, and Growth," European Economic Review, 49(6), August: 1451-1477.

2. Money and Inflation

A. Money supply and Inflation

Lecture note on Money and Inflation.

* Romer text, Sections 11.1 and 11.2.

B. Seigniorage and Hyperinflation

Lecture note on Budget Deficits and Hyperinflation.

* Romer text, Section 11.9.

3. Business Cycle Theory: From New Keynesian Perspectives

A. Aggregate Demand

Lecture note on Aggregate Demand and Monetary Transmission Channel.

*Romer text, Section 6.1.

Òscar Jordà, Moritz Schularick, and Alan M. Taylor (2017), "Monetary Policy Medicine: Large Effects from Small Doses?" FRBSF Economic Letter, Apr 3, 2017.

B. Credit Channel (Time Permitting)

Ben S. Bernanke and Allan Blinder (1988), "Credit, Money and Aggregate Demand," American Economic Review 78, May: 435-439.

C. Aggregate Supply, Expectations, and Microfoundation

Lecture note on Expectation-augmented Phillips Curve

Romer text, Sections 6.2 and 6.4.

- **Lucas Supply Function: Imperfect Information (New Classical Perspective)**

*Romer text, Sections 6.9–6.10.

- **Imperfect Market Competition, Menu cost, and Sticky Prices (New Keynesian Perspective)**

Lecture note on New Keynesian Models of Sticky Prices.

Romer text, Sections 7.1–7.3.

Gregory Mankiw and Ricardo Reis (2002), "Sticky Information Versus Sticky Prices: A Proposal to Replace the New Keynesian Phillips Curve," Quarterly Journal of Economics.

George Akerlof (2002), "Nobel Lecture: Behavioral Macroeconomics and Macroeconomic Behavior," American Economic Review, June.

- **Theory of Unemployment (Time Permitting)**

Lecture note on Sharpiro and Stigliz's Efficiency Wage Model.

Romer text, Section 10.2.

D. Post-Crisis Slowing Growth or Secular Stagnation?

Ben Bernanke (2015), "Why Are Interest Rates So Low?", Brookings Institute, Blog, Mar 30 and 31, Apr 1 and 13, 2015.

John Williams (2017), "The Global Growth Slump: Causes and Consequences", FRBSF Economic Letter, July 3, 2017.

Coen Teulings and Richard Baldwin (2014), "Secular Stagnation: Facts, Causes and Cures", CEPR, Aug 15, 2014.

4. Monetary Policy: Rule versus Discretion

A. Time Inconsistency and Credibility in Monetary Policy

* Obstfeld and Rogoff text, <u>Sections 9.5.1 – 9.5.2</u>, pp.634-644.

B. The Conduct of Monetary Policy and Rules

- Taylor Rule and Inflation Targeting

Romer text, <u>Section 11.6.</u>

John B. Taylor (1993), "<u>Discretion versus Policy Rules in Practice</u>," Carnegie-Rochester Conference Series on Public Policy, 39, North-Holland, 195-214, 1993.

Lars E.O. Svensson (1997), "<u>Inflation Forecast Targeting: Implementing and Monitoring Inflation Targets</u>," European Economic Review, 41(1997), 1111-1146.

- Unconventional Monetary Policy (QE, forward guidance, negative interest rates)

Ben Bernanke (2012), "<u>Lecture 3: The Federal Reserve's Response to the Financial Crisis</u>," March 27, 2012.

Ben Bernanke (2016), "<u>What Tools Does the Fed Have Left?</u>" Brookings Institute, Blog, Mar 18 and 24, Apr 11, 2016.

Marvin Goodfriend (2016), "<u>The Case for Unencumbering Interest Rate Policy at the Zero Bound</u>," Presented at a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 2016.

Ben S. Bernanke (2017), "<u>Monetary Policy in a New Era</u>," Peterson Institute for International Economics, October.

5. Fiscal Policy, Budget Deficits and Political Economy

A. Fiscal Policy Impact on Economic Activity (Traditional Views Before Crisis)

* Martin Feldstein (2002), "<u>Comment: Is There a Role for Discretionary Fiscal Policy?.</u>" Presented at a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 2002.

Francesco Giavazzi, Tullio Jappelli and Marco Pagano (2000), "<u>Searching for Non-Linear Effects of Fiscal Policy: Evidence from Industrial and Developing Countries</u>," European Economic Review.

B. Fiscal Policy Impact on Economic Activity (Post-Crisis Views)

Manmohan Kumar and Jaejoon Woo (2010), "Public Debt and Growth," IMF Working paper, July 2010.

* Giancarlo Corsetti (2012), "Has austerity gone too far?" April 2, 2012.

Alan Auerbach and Yuriy Gorodnichenko (2012), "Measuring the Output Responses to Fiscal Policy", American Economic Journal: Economic Policy 2012, 4(2): 1–27.

Christina Romer and David Romer (2018), "Phillips Lecture – Why Some Times Are Different: Macroeconomic Policy and the Aftermath of Financial Crises," Economica, 85: 1-40.

C. Ricardian Equivalence

* *Lecture note* on Ricardian Equivalence*.*

D. Tax-Smoothing

* Romer text, Section 12.4.

E. Political Economics, Government Spending and Budget Deficits

Jaejoon Woo (2003), "Economic, Institutional and Political Determinants of Public Deficits," Journal of Public Economics, 87 (3), March: 387-426.

Alberto Alesina and Andrea Passalacqua (2015), "Political Economy of the Government Debt, in Handbook of Macroeconomics, Taylor J. and H. Uhlig, eds., NorthHolland, Amsterdam.

6. Political Business Cycle (Time Permitting)

* *Lecture note* on Political business cycle

Obstfeld and Rogoff text, Section 9.5.3, pp.644-647.