**Econ 820**
**Advanced Macroeconomics**
**Fall 2016**

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**Course Goals**
Students should reach an understanding of monetary theory, policy and RBC theory substantially deeper than they attained in Econ 720-721.

**Text and Frequently Cited References**
(TSA)  Hamilton, James, *Times Series Analysis*, Princeton University Press, 1994.
(CW)   Walsh, Carl E., *Monetary Theory and Policy, Second Edition*, The MIT Press, Cambridge, MA, 2003, Course text
(TW)   Taylor, John and Michael Woodford, eds., *Handbook of Macroeconomics*, Elsevier Science Publishers, New York, 1999
(MW)   Woodford, Michael, Interest and Prices: Foundations of a Theory of Monetary Policy, Princeton University Press, Princeton, NJ, 2003.
(FG)   Froyen, Richard and Alfred Guender, Monetary Policy in Open and Closed Economies, book draft, 2005

**Dates**
Final Exam       Date set by registrar
Project Due      Students who wish to receive a letter grade by the end of the semester should turn in their project paper at the final exam date.

**Examinations and Grades**
Grades will be based on assignments (67%) and a course project (33%).

**Course Project**
Students who elect the standard course project will select, with the instructors' help, several papers in an area of interest to them, write individual summary of each paper and write a ten page overview.  The overview should explain the question(s) addressed by the readings, the answers they provide, and unanswered questions worthy of further work.  Students may negotiate an alternative project with the instructors.  In the past, some students have chosen to reproduce numerical research described in Walsh.  Others have written term papers on an issue that they want to explore as a potential thesis topic.

# Section 1:
# Econometric Overview

Difference equations and lag operators, TSA chapters 1 and 2

Stationary ARMA processes and Forecasting, TSA chapter 3

Linear Regression Models, TSA Chapter 8

Vector Time Series, TSA Chapter 10

Vector Autoregression
> Atheoretical TSA Chapter 11, sections 11.1 – 11.5
> Structural TSA, Chapter 11, section 11.6

Introduction to nonstationary time series, TSA Chapters 15 and 16

Cointegration, TSA Chapter 19

# Section 2:
# Applications:

**Monetary Policy SVAR and Short-Run Restrictions**

**Does Money Affect Output? A Look at Empirical Evidence**
> CW, Chapter 1
>
> Christiano, Lawrence, Martin Eichenbaum, and Charles L. Evans, "Monetary Policy Shocks: What Have We Learned And To What End?" (TW) Chapter 2.
>
> McCandless, G. T. and W. E. Weber, "Some Monetary Facts," *Federal Reserve Bank of Minneapolis Quarterly Review*, 19 (3), 1995, 2-11.

\*      Sims, C., "Comparison of Interwar and Postwar Business Cycles: Monetarism Reconsidered," American Economic Review, 70 (2), 1980, 250-57.

\*      Sims, C. A., "Interpreting the Macroeconomic Time Series Facts: The Effects of Monetary Policy," *European Economic Review*, 36 (5), 1992, 975-1000.

**Why Does Money Affect Output?**
> Blanchard, Olivier, "Why Does Money Affect Output?" Friedman, Benjamin M. and F.H. Hahn (eds.) Handbook of Monetary Economics, Vol. II. Amsterdam: Elsevier Science Publishers B.V., 1990, Chapter 15.
>
> Lucas, R. E. Jr., "Nobel Lecture: Monetary Neutrality," *Journal of Political Economy*, 104 (4), 1996, 661-82.
>
> Sargent, T. J., "The Observational Equivalence of Natural and Unnatural Rate Theories of Macroeconomics," *Journal of Political Economy*, 84 (3), 1976, 631-40

\*       Campbell, John Y., "Asset Prices, Consumption, and the Business Cycle," TW, Chapter 19.

\*       Samuelson, P. A. , "What Classical and Neo-classical Monetary Theory Really Was," *Canadian Journal of Economics*, 1 (1), 1968, 1-15.

## Monetary Policy with High Frequency Data

Kuttner, Kenneth, "Monetary Policy Surprises and Interest Rates: Evidence from the Fed Funds Futures Market," Journal of Monetary Economics 47, (2001) 523-544

Cochrane, John and Monika Piazzesi, "Asset Prices and Monetary Policy: The Fed and Interest Rates – A High Identification," AER Papers and Proceedings, May 2002

Faust, John, Eric Swanson and Jonathan Wright, "Identifying VARs Based on High Frequency Futures Data," Journal of Monetary Economics 51 (2004) 1107-1131

Poole, William and Robert Rasche, "Perfecting the Market's Knowledge of Monetary Policy," Journal of Financial Services Research 18:2/3 (2000) 255-298

Piazzesi, Monika and Eric Swanson, "Futures Prices and Risk-Adjusted Forecasts of Monetary Policy," *Journal of Monetary Economics* 2008, 55, May issue, pp. 677-691.

Woodford, Michael, "Monetary Policy in the Information Economy," NBER Working Paper 8674

Hamilton, James, "Daily Changes in the Fed Funds Futures Prices," *Journal of Money, Credit, and Banking* June 2009, vol. 41, no. 4, pp. 567-582

## Policy Analysis in New Keynesian Models

CW, Chapter 11

MW, Chapters 1 and 4-6

\*       _____, Firm-Specific Capital, Nominal Rigidities, and the Business Cycle, NBER Working Paper 11034, January 2005.

Christiano, Eichenbaum, and Evans, "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy," *Journal of Political Economy*, 113 (1), 2005, 1-45.

Eichenbaum, Martin and Jonas Fisher, "Evaluating Calvo-Style Sticky Price Models," Working Paper, March, 2005

\*       Fuhrer, Jeffrey C., "Inflation/output variance trade-offs and optimal monetary policy," *Journal of Money Credit and Banking* 29, 1997, 214-234.

\*       Fuhrer, Jeffrey C. and George R. Moore, "Monetary policy trade-offs and the correlation between nominal interest rates and real output," *American Economic Review* 85, 1995, 219-239.

\*       McCallum, Bennett T. and Edward Nelson, "An optimizing IS-LM Specification for Monetary Policy and Business Cycle Analysis," *JMCB*, 31 (3, Part 1), 1999, 277-431

\*      Rotemberg, Julio J. and Michael Woodford, "An optimization-based econometric framework for the evaluation of monetary policy," in Bernanke, Ben S. and Julio J. Rotemberg, eds., *NBER Macroeconomics Annual 1997*, MIT Press, Cambridge, MA, 1997, 297-346.

Salemi, Michael K., "Monetary Policy Evaluation and Inverse Control," July 2005, forthcoming in the *JMCB*

**Technology Shock SVAR and Long-Run Restrictions**

Gali, Jordi, "Technology, Employment, and the Business Cycle: Do Technology Schocks Explain Aggregate Fluctuations?" *American Economic Review*, 249-271, March 1999

Shapiro, Matthew D. and Watson, Mark W. "Sources of Business Cycle Fluctuations," in Stanley Fischer, ed., NBER Macroeconomics Annual 1988, Volume 3. Cambridge, MA: MIT Press, 1988, pp. 111-48

Neville Francis and Valerie Ramey, "Measures of Hours Per Capita and their Implications for the Technology-Hours Debate". *Journal of Money Credit and Banking*, September 2009, Volume 41, Issue 6, pp 1071-1097

Neville Francis and Valerie Ramey, "Is the Technology-Driven Real Business Cycle Hypothesis Dead? Shocks and Aggregate Fluctuations Revisited", *Journal of Monetary Economics,* November 2005, volume 52, issue 8, pages 1379-1399.

Neville Francis, Michael Owyang and Athena Theodorou, "The Use of Long-Run Restrictions for the Identifying of Technology Shocks", Federal Reserve Bank of St. Louis *Review*, November/December 2003, *85*(6), pp. 53-66.

Neville Francis, Michael Owyang, Jennifer Roush and Ricardo DiCecio, "A Flexible Finite-Horizon Alternative Identification of Technology Shocks*", Review of Economics and Statistics,* October 2014, 96(4): 638–647

# Section 3:
# Solving Models: Dynare and Uhlig Codes

**Strategies for Solving Linear Rational Expectations Models**

Blanchard, Olivier J. and Charles M. Kahn, "The solution of linear difference models under rational expectations," *Econometrica*, 48 (5), 1980, 1305-12

Klein, Paul, "Using the generalized Schur form to solve a multivariate linear rational expectations model," *Journal of Economic Dynamics and Control*, 24, 2000, 1405-23

\*      Anderson, Evan, Lars P. Hansen, Ellen R. McGrattan, and Thomas J. Sargent, "Mechanics of forming and estimating dynamic linear economies," in, Amman, Hans M., David A. Kendrick, and John Rust, eds., *Handbook of Computational Economics* 1, Handbooks in Economics 13, Elsevier Science, North-Holland, Amsterdam, 1996, 171-252.

\*      Soderlind, Paul, "Lecture notes: Solving linear expectational difference equations," Stockholm School of Economics, 1999.

\*      Uhlig, Harald, "A toolkit for analyzing nonlinear dynamic stochastic models easily," Discussion Paper 101, Federal Reserve Bank of Minneapolis, June, 1995.