Economics 200E: Introduction to Dynamic Macroeconomic Analysis

Course Description: This course is designed as an introduction to dynamic macroeconomic analysis, particularly recursive methods. As such, the course will consist of a fairly thorough presentation of the ideas and techniques contained in the articles listed below. There will be two exams, a midterm and final, each contributing 35% and 45%, respectively, to the course grade. The remaining 20% will come from homework assignments. Yi Chen will be the TA for the course and will hold regular discussion sections; time and location for these to be determined. My official office hours are Monday, 3:30-5:30; however, feel free to stop by anytime. You can also reach me via email: kdsalyer@ucdavis.edu.

Course material will be drawn from several sources with most available on the class web site (see below). Suggested texts are L. Ljungqvist and T. Sargent, Recursive Macroeconomic Theory, Lucas & Stokey (with Prescott), Recursive Methods in Economic Dynamics. For growth theory and a more intuitive discussion of some of the topics, David Romer’s text, Advanced Macroeconomics will be useful. Roger Farmer’s text, The Macroeconomics of Self-Fulfilling Prophecies may prove useful when we discuss sunspot models.

Articles denoted with (*) are available from the class web site.

Overview: Some classic articles by Robert Lucas:

1. (*) Methods and Problems in Business Cycle Theory
2. (*) Understanding Business Cycles
3. (*) Models of Business Cycles

I. GROWTH THEORY: SOLOW, CASS-KOOPMANS, DIAMOND

Romer, Chapters 1 and 2.

II. INTRODUCTION TO DYNAMIC PROGRAMMING
4. Lucas, Stokey, and Prescott, Recursive Methods in Economic Dynamics, Chapter 2
5. (*) Sargent, Dynamic Macroeconomic Theory, Chapter 1.
6. (*) Handout on dynamic programming.
7. (*) Salyer, Handout on Markov Processes.
8. (*) Salyer, Savings under Uncertainty.

II. APPLICATIONS OF DYNAMIC PROGRAMMING -- EXCHANGE SETTINGS

A. The consumption based capital asset pricing model
9. (*) Lucas, R.E., Jr., Asset Prices in an Exchange Economy

Stock prices and volatility
10. (*) LeRoy and LaCivita, Risk Aversion and the Dispersion of Asset Prices
11. (*) Salyer, Risk Aversion and Stock Price Volatility when Dividends are Difference Stationary

The equity premium puzzle -- testing models through calibration
12. (*) Cochrane, Where is the Market Going?
13. (*) Summers, The Scientific Illusion in Empirical Macroeconomics
14. (*) Mehra and Prescott, The Equity Premium: A Puzzle
15. (*) Rietz, The Equity Premium: A Solution
16. (*) Bansal Long Run Risks and Financial Markets

B. Consumption and saving theory -- the permanent income hypothesis
17. Sargent, Dynamic Macroeconomic Theory, Chapter 3.
18. (*) Hall, Stochastic Implications of the Life Cycle-Permanent Income Hypothesis.

MIDTERM WILL COVER TO THIS POINT
III.  **REAL BUSINESS CYCLE THEORY**

A. The data
   19. (*) Cooley, *Frontiers of Business Cycle Research, Chapter 1.*
   20. (*) O. Jorda, *Notes on Detrending.*
   21. (*) Kydland & Prescott, *Real Facts and a Monetary Myth*
   22. (*) J. Stock & M. Watson, *Business Cycle Fluctuations*

C. Real Business Cycle Models, Sunspots and Asset Pricing in Production Economies
   23. (*) Collard, Notes.
   24. (*) Cooley, *Calibrated Models*
   27. (*) Salyer, *Calibration and the Volatility of Labor*
   30. (*) Frances and Ramey, *Is the Technology-Driven Real Business Cycle Hypothesis Dead?*
   31. (*) Cogley & Nason, *Output Dynamics in Real Business Cycle Models*
   32. (*) Jermann, *Asset Pricing in Production Economies*
   33. (*) Greenwood, Hercowitz, and Krusell, *The Role of Investment-Specific Technological Change in the Business Cycle*
   34. (*) Andolfatto, *Business Cycles and Labor Market Search*
   35. (*) Benhabib & Farmer, *Indeterminacy and Sunspots in Macroeconomics*

E. Extensions to monetary economies
   38. (*) Sidrauski, *Rational Choice and Patterns of Growth in a Monetary Economy.*
   40. (*) Cooley and Hansen, *The Inflation Tax in a Real Business Cycle Model.*
   41. (*) Salyer, *Interpreting a Stochastic Monetary Growth Model as a Modified Social Planner Problem*