

York University
Faculty of Liberal Arts & Professional Studies
Department of Economics

GS/ECON 5110: Topics in Macroeconomic Theory – Fall 2023

Pre-requisites: Standing in the Economics PhD program.

Course Instructor: Chaoran Chen. Office: Vari Hall 1034. Email: chenecon@yorku.ca.

Lecture Hours and Location: Tuesday 8:30 – 11:30 a.m. at RS125.

Office hours: by appointment.

Course Description:

The purpose of the first part of the PhD macro sequence is 1) to introduce students to key tools of modern macroeconomics, with special focus on dynamic general equilibrium; and 2) to cover a set of selected topics, including growth, business cycle, consumption, and macro labor, on which students may choose to work for their thesis.

Required Textbook: There is no required textbook for this course.

Evaluation:

There will be a midterm and a final exam. The exact date of the midterm will be announced later, and it will be during the regular class time. The final exam will cover all material discussed in class. The date of the final exam will be determined by the Registrar's Office. The midterm will be worth 40% of your final grade, and the final exam has a weight of 50%. In addition, you will be required to hand in a coding assignment which will be worth 10% of your final grade.

Rules on Grading:

There will be no make-up exam for the midterm exam. If you miss the midterm test for any reason, your final exam will have a weight of 90% of your grade.

Problem Sets:

I will hand out problem sets during the semester. They will not be graded, but I will discuss on the solutions to the problems during lectures. I highly recommend you work on them.

Course Schedule:

Lecture 1: Solow Growth Model; Neoclassical Growth Model (Sequential Setup).

- (*) N. Gregory Mankiw, David Romer, and David N. Weil (1992), "A Contribution to the Empirics of Economic Growth," *Quarterly Journal of Economics*, 107(2), 407—437.
- Diego Restuccia and Carlos Urrutia (2001), "Relative Prices and Investment Rates," *Journal of Monetary Economics*, Vol 47, 93—121.

Lecture 2: Introduction to Dynamic Programming; Neoclassical Growth Model (Recursive Setup).

- Nancy L. Stokey, Robert E. Lucas, Jr., with Edward C. Prescott, “Recursive Methods in Economic Dynamics,” Chapter 2.

Lecture 3: Calibration; Growth Accounting; Kaldor Facts; Balanced Growth Path, Investment-Specific Technology.

- (*) Francesco Caselli (2005), “Accounting for Cross-Country Income Differences,” *Handbook of Economic Growth*, Volume 1, Part A, 2005, Pages 679—741.
- (*) Jeremy Greenwood, Zvi Hercowitz, and Per Krusell (1997), “Long-Run Implications of Investment-Specific Technological Change,” *American Economic Review*, 87(3): 342—362.

Lecture 4: Overlapping Generation Model; Inefficiency; National Debt; Social Security System.

- Peter A. Diamond (1965), “National Debt in a Neoclassical Growth Model,” *American Economic Review*, 55(5), 1126—1150.
- David Romer, “Advanced Macroeconomics,” Chapter 2 Part B.

Lecture 5: Labor Supply.

- (*) Edward Prescott (2004), “Why Do Americans Work So Much More Than Europeans?” *Federal Reserve Bank of Minneapolis Quarterly Review*, 28(1): 2—13.
- Richard Rogerson (2008), “Structural Transformation and the Deterioration of European Labor Market Outcomes,” *Journal of Political Economy*, 116(2): 235—259.
- Richard Rogerson (2009), “Market Work, Home Work, and Taxes: A Cross-Country Analysis,” *Review of International Economics*, 2009(3): 558—601.

Lecture 6: Introduction to Business Cycle Theories; Business Cycle Accounting; Log-Linearization.

- Plosser, C. I. (1989), “Understanding Real Business Cycles,” *Journal of Economic Perspectives*, 3(3), pp. 51—77.
- (*) V. V. Chari, Patrick J. Kehoe, and Ellen R. McGrattan (2002), “Accounting for the Great Depression,” *American Economic Review: Papers and Proceedings*, 92(2), 22—27.
- V. V. Chari, Patrick J. Kehoe, and Ellen R. McGrattan (2007), “Business Cycle Accounting,” *Econometrica*, 75(3), 781—836.

Lecture 7: Introduction to Computation in Macroeconomics; Value Function Iteration; Tauchen Method; Stochastic Growth Model.

In this lecture, you are required to bring your laptop to the classroom, and we will go over the computation methods step by step. In the later lectures, I will only talk about the algorithm, and you will be required to write your own Matlab codes to solve the models in your assignment.

Lecture 8: Consumption CAPM; Risk-Premium Puzzle; Asset Pricing with Heterogeneous Agents; Incomplete Market Models.

- (*) Mark Huggett (1993), “The Risk-Free Rate in Heterogeneous-Agent Incomplete-Insurance Economies,” *Journal of Economic Dynamics and Control*, 17, 953—969.
- (*) S. Rao Aiyagari (1994), “Uninsured Idiosyncratic Risk and Aggregate Saving,” *Quarterly Journal of Economics*, 109(3), 659—684.

Lecture 9: Money and Banking; Bank Runs; Balance Sheet Recession.

- (*) Douglas Diamond and Philip H. Dybvig (1983), “Bank Runs, Deposit Insurance, and Liquidity,” *Journal of Political Economy*, 91(2), 401—419.
- Ben Bernanke and Mark Gertler (1989), “Agency Costs, Net Worth, and Business Fluctuations,” *American Economic Review*, 79(1), 14—31.

Lecture 10: Poisson Process; Continuous-Time Stochastic Dynamic Programming; Shapiro-Stiglitz Model; Sequential Search Model.

- (*) Carl Shapiro and Joseph E. Stiglitz (1984), “Equilibrium Unemployment as a Worker Discipline Device,” *American Economic Review*, 74(3), 433—444.
- John J. McCall (1970), “Economics of Information and Job Search,” *Quarterly Journal of Economics*, 84(1), 113—126.
- Andreas Hornstein, Per Krusell, and Giovanni L. Violante (2011), “Frictional Wage Dispersion in Search Models: A Quantitative Assessment,” *American Economic Review*, 101: 2873—2898.

Lecture 11: Search and Matching: Theory and Data.

- (*) Christopher A. Pissarides, “Equilibrium Unemployment Theory,” second edition, Chapters 1 & 2.
- Dale T. Mortensen and Christopher A. Pissarides (1994), “Job Creation and Job Destruction in the Theory of Unemployment,” *Review of Economic Studies*, 61(3), 397—415.
- Robert Shimer (2005), “The Cyclical Behavior of Equilibrium Unemployment and Vacancies,” *American Economic Review*, 95(1): 25—49.