Faculty Liberal Arts and Professional Studies
Department of Economics

Course: AP/ECON4020M: Advanced Macroeconomic Theory **Course Webpage**: eClass

Term: Winter Term 2022/23

Prerequisite / Co-requisite: AP/ECON2400 and AP/ECON2450 (AP/ECON3530 highly recommended)

Course Instructor:

Professor Chaoran Chen
Office: 1034 Vari Hall
Telephone: (416) 736 2100 ext.30106
Email: chenecon@yorku.ca
Course website: eClass. Check the web site regularly for course announcements, notes, and exercises.

Course Material Delivery Method:

Please note that this is a course with in-person interactions and activities on campus.

Lectures: Monday 7pm—10pm at VH3009.

Office hour: Tuesday 11am—12 noon at 1034 Vari Hall.

Recommended Textbook: Romer, D., Advanced Macroeconomics, fifth edition, New York: McGraw-Hill. Earlier editions are also fine. I will hand out lecture slides during the class which should be important for your study.

Course Description:

The course is meant to be an introduction to what used to be called modern macro, which roughly means macro with lots of micro in it (so-called micro foundations). Topics-wise, the material here is similar to what you may have seen in other undergraduate macro courses, but (depending on what other courses you have taken) it might be more technical, involve more equations, more of solving utility maximization problems, etc. Modern macro also uses a lot of dynamic models, meaning they have many time periods (more than two, usually infinitely many). This is not a course in everyone's taste; if you do not like math, and find it hard in the beginning already, you should drop it right away (it only gets harder later on). This course is meant to be a preparation for students who want to pursue graduate studies in economics at decently well-ranked schools.

Evaluation:

Let M = your mark from the mid-term exam and F = your mark from the final exam. Your grade will be determined by the following formula: Total mark = Max (0.4 M + 0.6 F, F).

- Midterm date: February 14 in class.
- There will be no make-up mid-term exam. Students absent from the mid-term exam will have the weight transferred to their final exam.
- The final exam will cover all material discussed in this course. The date of exam will be scheduled by the Registrar's Office.
- The deferred exam for the final exam will be granted only for medical reasons. In such cases students should submit a deferred exam application together with the supporting documents (attending physician's statement) to the Department of Economics to my attention. The date and time of the deferred exam will

be set later. Students who may require further extensions or accommodation will have to submit a formal petition to the Faculty.
- Final course grades may be adjusted to conform to Program or Faculty grades distribution profiles.

IMPORTANT COURSE INFORMATION FOR STUDENTS

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Academic Standards, Curriculum & Pedagogy webpage (see Reports, Initiatives, Documents) - http://secretariat-policies.info.yorku.ca/

- Senate Policy on Academic Honesty and the Academic Integrity Website
- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation

Topics (tentative and subject to change):

Topic 1: Facts on Growth and Development; Review of Solow Growth Model. Cross-country income differences, steady state, comparative statistics of the Solow model; empirical problem of Solow model, Solow model with human capital.

- Romer, Chapter 1.
- Mankiw, N. G., D. Romer, and D. N. Weil (1992), "A Contribution to the Empirics of Economic Growth", Quarterly Journal of Economics, vol. 107, no. 2, pp. 407 – 437.

Topic 2: Neoclassical Growth Model. Competitive equilibrium, social planner's problem, calibration, distortions in the neoclassical growth model, barrier to investment.

- Romer, Chapter 2.

Topic 3: Growth and Development Accounting. National account, perpetual inventory method, Mincer regression, return to schooling, HP filter, Solow residual, capital intensity, cross-country income differences.

- Romer, Chapter 4.
- Caselli, F. (2005), "Accounting for Cross-Country Income Differences," *Handbook of Economic Growth*, Chapter 9, pp. 679 – 741.

Topic 4: Endogenous growth theory: spill-over effects of R&D, AK model, Romer model, scale effect, optimal subsidy of R&D.

- Barro, R.J., and X. Sala-i-Martin, *Economic Growth*, New York: McGraw-Hill, 2nd ed., 2004, Chapters. 4, 5.
- Romer, Chapter 3.

Topic 5: Misallocation: heterogenous agent model, efficiency gain, causes of misallocation, empirical measure of misallocation.

- Restuccia, D. and Rogerson, R. (2017), "The Causes and Costs of Misallocation," Journal of Economic Perspectives, vol. 31, no. 3, pp. 151 – 174.

Topic 6: Overlapping Generation Model and Social Security. OLG model, fully-funded system, pay-as-you-go scheme, comparison of different pension plans.

- Diamond, D. (1965), "National Debt in a Neoclassical Growth Model," American Economic Review, vol. 55, no. 5, pp. 1126 – 1150.
- Romer, Chapter 2.

Topic 7: Labor Supply. Long-term changes in labor supply, taxation, home production.

- Prescott, E. (2004), "Why Do Americans Work So Much More Than Europeans?" Federal Reserve Bank of Minneapolis Quarterly Review, 28(1): pp. 2 – 13.

Topic 8: Inequality (time permitting). Gini coefficient, consumption/income/wealth inequality, inequality pattern across the world, the trend of inequality, skill-biased technical change, Kuznets curve, Piketty's hypothesis of $r > g$.

- Piketty, T. (2015), "About Capital in the Twenty-First Century," American Economic Review, vol. 105, no. 5, pp. 48 – 53.

Topic 9: Consumption Theory. Consumption puzzle, permanent income hypothesis, random walk hypothesis, certainty equivalence, precautionary saving, consumption-CAPM, equity premium puzzle.

- Romer, Chapter 8.

Topic 10: Business Cycle Facts. Business cycle facts, seasonal adjustments, HP filter revisited, co-movement over the business cycles, the Great Depression, the Great Recession.

- Cole, H. L. and L. E. Ohanian (1999), "The Great Depression in the United States from a Neoclassical Perspective," *Federal Reserve Bank of Minneapolis Quarterly Review*, Winter 1999.

Topic 11: Introduction to Real Business Cycle Theory. A simple RBC model, propagation mechanism of technology shocks, impulse-response function, adjustment cost, labor-leisure choice in the RBC model, empirical measures of productivity shocks.

- Romer, Chapter 5.
- Plosser, C. I. (1989), "Understanding Real Business Cycles," *Journal of Economic Perspectives*, vol. 3, no. 3, pp. 51 – 77.
- Alexopoulos, M. (2011), "Read All about It!! What Happens Following a Technology Shock?" American Economic Review, vol. 101, no. 4, pp. 1144 – 1179.

Topic 12: Imperfect Information (time permitting). Phillips curve, expectations-augmented Phillips curve, Lucas critique, sticky price, sticky wage, Lucas islands model.

- Romer, Chapter 6
- Lucas, Jr., R. E. (1973), "Some International Evidence on Output-Inflation Tradeoffs," American Economic Review, vol. 63, no. 3, pp. 326 – 334.
- Bils, M. and Klenow, P. J. (2004), "Some Evidence on the Importance of Sticky Prices," Journal of Political Economy, vol. 112, no. 5, pp. 947 – 985.

Topic 13: Unemployment. Frictional unemployment, Poisson process, introduction to value functions, Shapiro-Stiglitz model, no-shirking condition, a simple sequential search model.

- Romer, Chapter 11
- McCall, J. J. (1970), "Economics of Information and Job Search," Quarterly Journal of Economics, vol. 84, no. 1, pp. 113 – 126.

Topic 14: Open Economy Macroeconomics (time permitting). Exchange rate determination, Meese-Rogoff puzzle, impossible trinity, small open economy, speculative attack.

- Meese, R. and Rogoff, K. (1983), "Empirical Exchange Rate Models of the Seventies: Do They Fit out of Sample?" Journal of International Economics, vol. 14, pp. 3 – 24.
- Masson, P. R., "Lectures in International Finance", World Scientific, 2007, Chapter 1, 2, and 3 (time permitting).