SYLLABUS (This Version: January 2, 2018)
Kenneth C. Griffin Department of Economics, The University of Chicago

ECON 20200: THE ELEMENTS OF ECONOMICS ANALYSIS-III, WINTER 2018

Instructor: Kanit (Ken) Kuevibulvanich **Email:** kanit@uchicago.edu
Office Location: SHFE 012 **Tel:** (773)-834-3056
Office Hours: Mondays and Wednesdays, 1:30-3:00pm in SHFE 012, catch me after each lecture, or by appointment (Feel free to drop in if my office door is open and I'm not engaged with something else)

Lecture Time and Venue:
Lecture 1 - Tuesdays and Thursdays, 9:30-10:50am, Stuart 102
Lecture 2 - Tuesdays and Thursdays, 2:00-3:20pm, Stuart 105

Discussion:
Mondays, 4:30-5:20pm, SHFE 021
Wednesdays, 4:30-5:20pm, SHFE 146

Teaching Assistants:
Tung Le **Email:** tungle@uchicago.edu
(**Office Hours:** Wednesdays, 10:00-11:30am, behind SHFE 146)
Paphon Kiatsakuldecha **Email:** paphonk@uchicago.edu
(**Office Hours:** Tuesdays, 3:30-5:00pm, behind SHFE 146)

Course Objective: This is the third and final course of the economics core sequence. The goal is to familiarize students to the methods employed in modern macroeconomic analysis. Topics include macroeconomic data, neoclassical growth models, general equilibrium models, consumption-saving models, real business cycles, asset pricing, overlapping generations models, and the introduction of money. This course serves as a primer to the rigorous macroeconomic analysis of fiscal and monetary policies at the level of ECON 23950 Economic Policy Analysis. Accordingly, students will be exposed to both theoretical and numerical methods.

Prerequisites: ECON 20100/10. Strong foundations in calculus, optimization, ECON 20000/10 and ECON 20100/10 are cruicial for your success. Though not required, introductory macroeconomics at the level of ECON 19900 is also useful.

Textbooks, Reading Materials, and Computer Software:

- Matthias Doepke, Andreas Lehnert, & Andrew W. Sellgren, *Macroeconomics* [DLS, hereafter]
- Peter Bondarenko, *Econ 20200: Elements of Economic Analysis-3 Lecture Notes* [LN]
- Robert J. Barro, *Macroeconomics*, 5th ed., MIT Press, 1997 [RB]
- Julio Garín, Robert Lester, & Eric Sims, *Intermediate Macroeconomics*, manuscript [GLS, obtain the latest version here: https://www3.nd.edu/~esims1/gls_textbook.html]
- Lars Ljungquist, & Thomas J. Sargent, *Recursive Macroeconomic Theory*, 3rd ed. (1st or 2nd ed. is also fine), MIT Press, 2012 [LS]
- David Romer, *Advanced Macroeconomics*, 4th ed. (2nd or 3rd ed. is also fine), McGraw-Hill [DR]
- Michael Wickens, *Macroeconomic Theory: A Dynamic General Equilibrium Approach*, 2nd ed. (1st ed. is also fine), Princeton [MW]
- Stephen D. Williamson, *Macroeconomics*, 6th ed. (5th ed. is also fine), Pearson [SW]

DLS manuscript and LN are posted on Canvas. Additional reading materials and journal articles will also be posted on Canvas. No single textbook is sufficient to cover all the materials that would be covered in this class. You are **not** required to buy any of the textbooks, they are held in Library Reserves. I will refer to the textbook chapters and reading materials corresponding to each topic. You can also access the journal articles referred in class using university network. I will also post the handwritten notes as presented after each lecture on Canvas.

There will be assignments that require you to use MATLAB. Please install MATLAB on your computer – available to students free-of-charge via UChicago ITServices, under the Student MATLAB Request. You will also need to install Dynare module in MATLAB, which is available free-of-charge at http://www.dynare.org. Please refer to the website on how to install and *set the directory path* so that Dynare is working with MATLAB on your computer. It is possible to use Excel (available to you for free via Office 365) for only a few problem set questions at the beginning.

Evaluation:

- **Assignments**
  - **Problem Sets** – Issued weekly on average, **due in class as noted on each problem set** 17.5%
    - There are 6 equally-weighed problem sets throughout the quarter. The lowest score of all problem sets issued, including zero from no-submission, will be dropped from the grade calculation.
    - You are encouraged to work and discuss on problem sets in group. You may submit your work in group of no more than four people. *Warning: free-riding will be punished during the exams.*
    - Answers can be hand-written or typed, but computer-generated output must be printed.
    - Problem sets are due before the start of the lecture. Late problem sets will not be accepted except with valid excuse, e.g. illness, university-sanctioned events.
  - **Dynare Simulation Project** – Due March 1, in class 5%
    - This problem set will ask you to program a Dynare simulation and data calibration from scratch. You may work in group of no more than four people.
    - This project will serve as a foundation to ECON 23950 course.
    - Print and hand in your analysis, printouts and codes. Do not attempt to submit the Dynare code from another group – bugs and patterns are easily recognized.
- **Exams**
  - **Midterm Exam** – Tuesday, February 6, in class (80 minutes, 80 points) 31%
    Midterm review will be given on Friday, February 2. Please save the date.
  - **Final Exam** – Mastery of midterm materials is assumed (120 minutes, 120 points) 46.5%
    Lecture 1 Tuesday, March 13, 10:30am-12:30pm in TBA
    Lecture 2 Thursday, March 15, 1:30pm-3:30pm in TBA
    - Both exams are closed-book and closed-notes. No calculators, communication or smart personal devices are allowed.
    - Due to administrative purposes, you may not discuss the exam contents before the date and time set under the penalty of academic misconduct.
    - Note now the exam dates, time, and venue and do not plan to leave Chicago before such. A conflict exam date may be scheduled as circumstance warrants for students who have an exact time conflict. A makeup exam may only be offered to students participating in university-sanctioned events. Students expecting to graduate during the Winter quarter must make the arrangements as soon as possible.
    - Accommodations for students with verified medical conditions will be made according to the University's Student Disability Services procedures. *For privacy purposes, please contact me by email only.*
    - Please let me know of any religious conflict with the scheduled exam dates as soon as possible.
- **Grading Scheme**
  - There are no extra credit assignments or bonus points. The total score will be calculated by weighing the raw scores as given above. On average, each lecture will have equal representation in both exams.
  - Letter grade curve-criterion will be discussed in class. There is an absolute minimum total score of 50% required to receive a passing letter grade (C-) for this course and proceed as an economics major.

  - The instructor reserves the right to assign a discretionary letter grade to anyone who scores below 36 out of 120 points in the final exam or fails to submit the Dynare simulation project.

Housekeeping:

- Attendance
  - You may attend any of my two lectures if you have schedule conflict on irregular basis. No permission is required, but students who are enrolled in their section have seating priority.
  - Please stop me and ask questions at any time if you cannot catch up with the material presented.
  - Recording, photography and videography devices are allowed in my lectures, strictly for personal use as review material only. For discussion sections, please ask for permission from the TAs.
  - Please be considerate to your classmates by silencing your electronic devices and refraining from using cell phones, texting, reading newspaper or listening to music.
- Problem set and exam regrading policy
  - You have one-week window after the score has been posted to Canvas to request any regrading.
  - You must thoroughly read the solution key posted, and then fill the regrade request form explaining any discrepancies you find.
  - The instructor, TAs, and graders reserve the rights to regrade the entire exam or problem set. Regrading may decrease your grade.
- Academic integrity and honesty
  - As a University of Chicago student, you have agreed to abide by the University's academic honesty policy. All academic work must meet the standards described in Academic Integrity and Student Conduct found at: http://college.uchicago.edu/policies-regulations/academic-integrity-student-conduct. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.
  - In summary, I have "zero-tolerance" policy regarding academic integrity and dishonesty. Any academic misconduct will be reported and punished to the severest extent.

Topics and Course Outline (Subject to Change due to Time Constraints and Class Progress)

Week	Lecture	Date ***(Due)***	Topics Introduced *(Referenced Materials)*
1	1	Thu 1/4	Introduction, Macroeconomic Measurement, Stock-Flow Variables Microeconomics Foundation *(LN #1-2; Notes)*
2	2	Mon 1/8 or Wed 1/10	A Crash Course in Difference Equations and MATLAB/Dynare *(50 Minutes, in lieu of Recitation; Notes)*
	3	Tue 1/9	Crusoe's Island Consumption-Labor Model *(DLS Ch. 2; RB Ch. 2; LN #2-3)*
	4	Thu 1/11	Economic Growth: Kaldor's Stylized Facts, Solow Growth Model, Dynamic Inefficiency, Model Calibration and Data Matching Growth Accounting, Augmented Solow Growth Model, Human Capital and Endogenous Growth Model *(DLS Ch. 11; RB Ch. 11; MW Ch. 3; DR Ch. 1, 3; Notes)*
3	5	Tue 1/16	
	6	Thu 1/18 ***(PS 1)***	
4	7	Tue 1/23	Consumption-Saving Problem: Two-period Model, Substitution and Wealth Effects, Credit Market Imperfection *(SW Ch. 9-10; LN# 4-5)*
	8	Thu 1/25 ***(PS 2)***	Infinite-Horizon Models: General Equilibrium, First Welfare Theorem, Centralized vs. Decentralized Solution, Equilibrium Definition, Market Clearing Condition, The Lagrangian Method, State and Control Variables, Phase Diagram, Dynamic Analysis, Elastic Labor Supply *(MW Ch. 2, 4; DLS Ch. 3, 5-6; LN# 6-7; DR Ch. 2A)*
5	9	Tue 1/30	
	10	Thu 2/1 ***(PS 3)***	
	-	Fri 2/2	Midterm Exam Review *(Time/Location: TBA)*
6	-	Tue 2/6	**Midterm Exam** *(80 Minutes, in Class)*
	11	Thu 2/8	Continuation of the Infinite-Horizon Models Applications: Total Factor Productivity, Uncertainty, Shocks, Real Business Cycles, Lucas Tree and Asset Pricing Models *(MW Ch. 2, 4, 11, 16; LS Ch. 8, 13)*
7	12	Tue 2/13	
	13	Thu 2/15	
8	14	Tue 2/20 ***(PS 4)***	Overlapping Generations Models with Exogenous Income and Production *(DR Ch. 2B; MW Ch. 6.3; LS Ch. 9)*
	15	Thu 2/22	
9	16	Tue 2/27 ***(PS 5)***	
	17	Thu 3/1 ***(PRJ)***	Introduction to Money: Baumol-Tobin Model, Cash-in-Advance Model, Friedman Rule *(DLS Ch. 4, 8; RB Ch. 4; SW Ch. 11; MW Ch. 8; LN# 8, 14-15)*
10	18	Tue 3/6 ***(PS 6)***	
	19	Thu 3/8	Final Exam Review *(In Class)*
-	-	Tue 3/13 or Thu 3/15	**Final Exam** *(120 Minutes, by Section – per the Registrar Schedule)*