ECON 604: MACROECONOMIC ANALYSIS 1
SPRING 2018

Professor: Terrence Iverson
Office: C324 Clark
Hours: 3:00-4:30 Monday (or by appointment)
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DESCRIPTION

Macroeconomics is often divided into long-run questions and short-run questions. Our emphasis in this course will be on long-run questions. Why are some countries rich and other countries poor? What is needed for a country to sustain economic growth over an extended period? In addition, we will spend a considerable amount of time developing the methodological tools needed to solve dynamic optimization problems—both in continuous time and in discrete time. These tools are widely used in modern macro—including short-run studies of the business cycle—and they are also used extensively in other subfields of economics. The course will culminate with a series of rigorous numerical exercises that you will solve in Matlab.

COURSE OBJECTIVES

- To learn the motivating empirical facts behind modern growth theory
- To develop intuition by solving a variety of dynamic macroeconomic models, including The Solow Growth Model and The Neoclassical Growth Model
- To develop the mathematical and numerical tools needed to solve discrete-time dynamic optimization problems using dynamic programming

REQUIRED TEXTBOOK

- *Introduction to Modern Economic Growth*, Daron Acemoglu (Princeton University Press, 2009)

OPTIONAL TEXTBOOK

- *Dynamic Economics*, Adda and Cooper (MIT Press, 2003)

COURSE STRUCTURE AND GRADING POLICY

There are two lectures per week. You are expected to read the assigned material before class.

There will be four or five problem sets during the semester. You are encouraged to discuss the problem sets with your colleagues. However, you will learn the material best if you try to answer the questions first on your own. There will also be a midterm and a final. The midterm and final will each count for 30% of your final grade; homework will count for the remaining 40%.

Finally, out of courtesy to me and your fellow students, please turn cell phones off before class—absolutely no texting, emailing, or web surfing during class.

ACCOMODATION FOR STUDENTS WITH DISABILITIES

If you require special accommodation to complete the requirements of this course, please provide

documentation and verification from the office of Resources for Disabled Students (see http://rds.colostate.edu/).

EXPECTED WEEKLY EFFORT

Activity	Hours Per Week
Attend class	3
Read assigned readings	9
Work on homework; prep exams	6
TOTAL:	18

ACADEMIC INTEGRITY:

This course will adhere to the Academic Integrity Policy of the General Catalog and the Student Conduct Code. As stated in university policy, "Any student found responsible for having engaged in academic dishonesty will be subject to academic penalty and/or University disciplinary action." (General Catalog 2011-2012, 1.6, p.8). Any academic dishonesty in this course may result in a grade of "F" for the course and may be reported to the Office of Conflict Resolution and Student Conduct Services.

Please be aware that the General Catalog specifically identifies the following examples of academic dishonesty: cheating in the classroom, plagiarism, unauthorized possession or disposition of academic materials, falsification, and facilitation of cases of academic dishonesty. Plagiarism is defined as follows:

> "Plagiarism includes the copying of language, structure, ideas, or thoughts of another, and representing them as one's own without proper acknowledgment. Examples include a submission of purchased research papers as one's own work; paraphrasing and/or quoting material without properly documenting the source." (General Catalog 2011-2012, 1.6, p. 8).

While you are not required to sign the honor pledge, I will ask each of you to write and sign the following statement on the chapter quizzes, the sections of your papers and the final version of the paper that you submit:

"I have not given, received, or used any unauthorized assistance."

TENTATIVE COURSE OUTLINE:

	Mon	Wed	Fri	Topics and Readings (Tentative)
Week 1 (1/17 - 1/19)				Motivation and direction
Week 2 (1/22 - 1/26)				Economic growth and economic development: the questions (Acem ch1)
Week 3 (1/29 - 2/2)				The Solow Growth Model (Acem ch2)
Week 4 (2/5 - 2/9)			HW1 Due	The Solow Growth Model (Acem ch2)
Week 5 (2/12 - 2/16)				The Solow Growth Model (Acem ch2)
Week 6 (2/19 - 2/23)				The Green Solow model (Brock and Taylor 2010)
Week 7 (2/26 - 3/2)				The Solow Model and the data (Acem ch3)
Week 8 (3/5 - 3/9)		HW2 Due	Midterm	The Solow Model and the data (Acem ch3)
SPRING BREAK				
Week 9 (3/19–3/23)				Dynamic Programming Theory (A&C ch2)
Week 10 (3/26 –3/30)				Dynamic Programming Theory (A&C ch2)
Week 11 (4/2 - 4/6)				Dynamic Programming Application (A&C ch3)
Week 12 (4/9 - 4/13)			HW3 Due	Neoclassical Growth in Discrete Time (A&C ch5)
Week 13 (4/16–4/20)				Neoclassical Growth in Discrete Time (A&C ch5)
Week 14 (4/23–4/27)				TBD
Week 15 (4/30 - 5/4)			HW4 Due	TBD