Economics 503 Macroeconomic Theory I

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Overview: This is a graduate course in the first year macroeconomics field. I will teach the first half and Esteban Rossi-Hansberg will teach the second half.

Organization: The class meets on Mondays and Wednesdays from 9:00am to 10:30pm in JRR 198. A preliminary syllabus is attached. The material may change throughout the course. There will be weekly precepts at a time to be determined. The preceptor is J**oseph Abadi**. Finally, I will hold weekly office hours.

Grading: Your grade for my part of the course will be based on five problem sets, counting for 30% of the grade, and a midterm exam, counting for 70%. The grading for Esteban's part of the course will most likely use the same split.

Books: the following two books are recommended, i.e. they are good books to own. However, we will not really use them so that you don't need to buy them (Esteban will likely draw on SLP more than LS).

- Stokey, Nancy, Robert E. Lucas Jr. and Edward C. Prescott (1989), "Recursive Methods in Economic Dynamics"
- Ljungqvist, Lars and Thomas J. Sargent (2004), "Recursive Macroeconomic Theory".

Topics: The course will follow the designs of Richard Rogerson and Ben Moll who have taught the course in previous years. Ben's slides for 503 are publicly available on his website. I plan, however, to teach on the board and will certainly deviate from Ben's material frequently, in particular later on in the course.
The course will use the neoclassical growth framework to touch upon various key macro topics such as growth, taxation, and the income distribution, but mostly it will serve as an environment to introduce standard tools and methods used in modern macroeconomics. The following is a coarse and preliminary outline of the course.

1. Some Basics

2. The Growth Model: Theory (most of the course)

- **2.1 The Growth Model in Discrete and Continuous Time**
- **2.2 Transition Dynamics**
- **2.3 Competitive Equilibrium**

3. The Growth Model and the Data

- Acemoglu, Daron (2008), Chapter 3, "The Solow Model and the Data", in "Introduction to Modern Economic Growth"
- King, Robert, and Sergio Rebelo. 1993. "Transitional Dynamics and Economic Growth in the Neoclassical Model." The American Economic Review, 83(4): 908–931
- Chen, Kaiji, Ayse Imrohoroglu, and Selahattin Imrohoroglu. 2006. "The Japanese Saving Rate." American Economic Review, 96(5): 1850–1858

4. Policy Analysis in the Growth Model (Capital Taxation)

- Chamley, Christophe, "Optimal Taxation of Capital Income in General Equilibrium with Infinite Lives," Econometrica, 1986, 54 (3), pp. 607–622.

- Judd, Kenneth L., "Redistributive taxation in a simple perfect foresight model," Journal of Public Economics, 1985, 28 (1), 59 – 83
- *Straub, Ludwig and Ivan Werning (2014), "Positive Long Run Capital Taxation: Chamley-Judd Revisited"

5. Adding Growth to the Growth Model

5.1 Exogenous Technological Progress and Balanced Growth

- Romer, Paul M, 1986. "Increasing Returns and Long-run Growth," Journal of Political Economy, vol. 94(5), 1002-1037

5.2 Endogenous Growth

- Lucas, Robert Jr., 1988. "On the mechanics of economic development", Journal of Monetary Economics, vol. 22(1), 3-42

6. Adding Labor to the Growth Model

7. Sequence of Markets