M1 Advanced Macroeconomics

Part I: Economic Growth

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Syllabus 2018 Spring

1. Course Description

The first half is taught by myself, and the 2nd half by Stephane Dupraz. I will go over growth models, while Stephane will focus on monetary models. Therefore you can also expect to study shorter-run cycles and nominal effects with Stephane.

In my part, we will learn about real (i.e., has nothing to do with money) economic growth at the aggregate level. Growth typically refers to economic progress post-industrialization, while development refers to the process of industrialization itself, or the process of less-developed countries catching up with advanced countries. In this course students will familiarize themselves with stylized facts in economic growth and development, along with the basic tools to analyze them.

We will begin by summarizing stylized growth facts for industrialized countries and the world as a whole. We then proceed to learn the Solow growth model and its variants, which attempt to explain these facts—the main elements of the model are physical and human capital, population growth, and technological progress. The model-based approach allows us to think about the effects of government policy or exogenous changes from outside the model. It also disciplines how we should account for data across countries and over time.

The latter half of the course will focus on more advanced models. We will learn the workhorse of all growth models—the Ramsey-Cass-Koopmans model, which builds in endogenous saving and investment into the Solow model. We will conclude the course with two variants of endogenous technological progress: the Romer model and a model of creative destruction (the latter only if time permits).

2. Basic Information about the Course

I will maintain a website where all announcements and material used in the course will be posted, including practice problems. I will announce in lecture whenever something important is posted, but I recommend you regularly check the website for any new information.

Course Website:	http://www.syleetim.net/M1Growth/growth.htm
Instructor:	Tim Lee, email: sylee.tim@tse-fr.eu
Time/Location:	Jan 9 - Feb 6 // Tues 8:00-9:30 / MC202, Tues 15:30-17:00 / MC203
	NO CLASS ON TUES, JAN 16, 8:00-9:30
Prerequisites:	Basic Calculus required
	Intermediate Macroeconomics recommended
Grading:	**70% Midterm Exam, WED FEB 7, 18:30-19:00**
	15%×2 Problem sets
Office Hours:	MF516 // Mon 14:30-16:30 or by appointment
	https://doodle.com/poll/uttx24rzgxy9i2ys

Problem sets will be handed out to practice for the exam, and answers will be provided.

3. Textbooks

I will do my best to prepare self-contained lecture slides. Parts of the slides will be based on the following and it may be worthwhile to purchase:

- ***Introduction to Economic Growth***, 2nd ed., Charles I. Jones, Norton, W.W.&Company, Inc., 2001
- ***Economic Growth***, 2nd ed., David N. Weil, Pearson Addison Wesley, 2008.
- ***Introduction to Modern Economic Growth***, Daron Acemoglu, Princeton University press, 2009

4. Outline of the Course

I will try to follow this plan, but sometimes I may run out of time. In those cases, we will pick up the next week from where we ended the previous week. **.1** refers to the morning and **.2** the afternoon session.

1. What is "Growth" and how do countries grow?

Jan 9.1 - Organizational Meeting.

- The problem with GDP and why we use it. Stylized growth and development facts *(CJ Part 1, DW Part I)*.

- Long-run growth vs Business cycles

2. The Solow Growth Model

Jan 9.2 - Basic model with savings and population *(CJ Part 2, DW Parts II.3-4)*

Jan 16 - Continue with population growth.
Primer on growth/development accounting.

3. Extensions of the Solow Model

Jan 23.1 - More on accounting, human capital model(s) and health. *(CJ Part 3, DW Part II.6)*

- Begin Ramsey-Cass-Koopmans Model

Jan 23.2 - Finish RCK model. Compare with Solow model.
FIRST HOMEWORK DUE.

4. Endogenous Growth and Globalization

Jan 30 Technology and Endogeneous Growth *(CJ Parts 4-6), DW Parts III.7-9)*

Feb 6- Creative Destruction Model of Endogenous Growth *(not in exam)*
SECOND HOMEWORK DUE.

——————————**MIDTERM: Feb 7, 18:30-20:00 / MC203** ——————————

updated December 30, 2017