ECON7750.01 MACROECONOMIC THEORY

Fall 2015

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Course content and objective

The first semester Macroeconomic Theory course provides an overview of growth theory and (in the last section) an introduction to the stochastic models used in EC751. We cover the standard models of exogenous and endogenous growth, mostly in a deterministic setting. Among others, we will study the Solow-Swan model, the Ramsey growth model with infinitely lived optimizing agents, overlapping generation models without and with altruism, Ricardian equivalence, models with human capital, basic AK models of endogenous growth, two sector models of endogenous growth, product variety models and quality ladder Schumpeterian growth models. We will also review some crucial empirical papers on applied growth. In the last part of the course we will study the Ramsey model with a stochastic technology shock and the choice of investment with adjustment costs in a stochastic setting. This will serve as an introduction and link to EC751.

Grading, exams, and tutorials

The evaluation of the students will be based on a Mid-Term Exam (40% of total grade) and a Final Exam (60%).

Midterm Examination (tentative): Thursday, October 22
Final Examination: to be posted later

Students are also strongly encouraged to solve the weekly exercises that will be assigned. Collaboration is fine, provided each student makes a strong individual effort. The exercises will be corrected in a weekly tutorial session lead by the Teaching Assistant (Vito Cormun, cormun@bc.edu). In borderline cases, a record of sustained good performance on problem sets will result in a higher grade.
Reading material

The two main sources of information for the course are:

   Cambridge, MIT Press. (BSM for short).


Another useful supplementary book that does not require dynamic optimization, and may
be helpful as a transition book is

   (DR for short)

It contains, among other things, very useful exercises. Portions of the following book will
also be referred to in the course outline:

4) Blanchard, Olivier J. and Fischer, Stanley, *Lectures on Macroeconomics*.

I will also direct you to the original papers. Core readings (marked with a *) and further
readings are listed under each heading of the course outline. Everyone should carefully
read and think about the core readings. The further readings include classic articles,
more advanced or detailed treatments of the topics, and background material. Students
with a strong interest in macroeconomics in general or in a particular topic should be
familiar with these readings.

Course outline

1) Trends and Cross Country Differences in Income: An Introduction.

   BSM, Chapter 12

   DA, Chapter 1

   Easterly, W. and R. Levine, "What Have we Learned from a Decade of Empirical
   Research on Growth? It Is Not Factor Accumulation: Stylized Facts and Growth
2) **The Solow Growth Model.**

BSM, Chapter 1.

DA, Chapter 2

DR, Chapter 1.1-1.7.


3) **The Solow Model, Extensions and Testing.**

DA, Chapter 3

DR, Chapter 4.1-4.2


4) **More on Cross Country Income Differences**

DA, Chapter 4.3-4.6


5) **The Ramsey Model with Infinitely Lived Agents.**

BSM, Chapter 2

DA, Chapter 5 (skim) and 8

DR, Chapter 2.1-2.7.

6) **The Overlapping Generations Model.**

BSM, Chapter 3, 3.8

DA, Chapter 9

DR, Chapter 2.8-2.12.

Romer, *Advanced Macroeconomics*, Chapter 2, Part B.


7) **Fiscal Policy, Ricardian Equivalence**

DR, Chapter 12.


8) **Basic Endogenous Growth Models**

a) **One Sector Models of Endogenous Growth: the AK Model**

   BSM, Chapter 4, 4.1-4.4 and 4.6  
   DA, Chapter 11  
   DR, Chapter 3  

b) **Two Sectors Models of Growth**

   BSM, Chapter 5, 5.1-5.4  
   DR, Chapter 3, Part A  

9) **Endogeneizing Technological Change**

a) **Technological Change: Models with Expanding Variety of Products**

   BSM, Chapter 6, 6.1-6.4  
   DA, Chapter 13  
b) Technological Change: Models with Improvements in the Quality of Products.

BSM, Chapter 7, 7.1-7.2 and 7.5


Aghion, P. and P. Howitt, The Economics of Growth, the MIT Press, 2009, Chapter 4.

DA, Chapter 14


c) Models of Technology Diffusion

BSM, Chapter 8, 8.1-8.5 and 8.8

DA, Chapter 18


10) **More on the Empirical Implications of Endogenous Growth Models**


11) **Stochastic Neoclassical Growth Model: Log-linearization and Solution**
12) Two Examples of Stochastic Dynamic Programming: Investment with Adjustment Costs and Consumption with Stochastic Returns

BSM, Chapter 3.2, and DR, Chapter 8 (review of investment models with adjustment costs in the deterministic case)


Most importantly: my lecture notes for both investment and consumption.