LASER PhD Program in Economics, 2011-2012
Advanced Macroeconomics

The Advanced Macroeconomics course will cover the following topics: Module I: Economic growth (prof. Alberto Bucci, Università degli Studi di Milano, 20 hours); Module II: Business Cycle (prof. Guido Ascari, Università degli Studi di Pavia, 30 hours); Module III: Open-economy macroeconomics (prof. Alessandro Missale, Università degli Studi di Milano, 16 hours). The course will be taught in the second term (30th January 2012-20th April 2012). An outline of the course is presented below. Details on the examination format will be given in due course.

The course is intended to introduce students to particular areas of current research in modern macroeconomic theory, as well as to some very useful analytical tools. It covers a selection of topics ranging from Growth and Fluctuations, to Open-Economy Macroeconomics.

Module I: Economic Growth (20 hours)
Prof. Alberto Bucci (Università degli Studi di Milano)
Email: Alberto.Bucci@unimi.it

I: RAMSEY AND OLG MODELS (6 HOURS)
1) GROWTH MODELS WITH CONSUMER OPTIMIZATION (THE "RAMSEY" MODEL)
   Behavior of Households
   First order conditions and the Euler Equation
   The transversality condition
   Behavior of Firms
   Equilibrium
   Steady-state and transitional dynamics.

   BS, Chapter 2, pp. 85-106 + Appendix 2A (Linearization of the Ramsey model) and Appendix 2C (Behavior of the saving rate). ALTERNATIVELY: ACE, Chapter 8, pp. 287-304.

   2) GROWTH WITH OVERLAPPING GENERATIONS (Samuelson, 1958 and Diamond, 1965)
      The Model
      Main Assumptions
      The behavior of the agents at period t
      The inter-temporal equilibrium with perfect foresight
      Capital dynamics at a rational inter-temporal equilibrium
      Optimality of stationary paths
      Optimality of the dynamics: dynamic efficiency.

      DLC-M, Chapter 1, pp. 1-16 and 19-37 + Chapter 2, pp. 72-86. ALTERNATIVELY (MORE COMPACT): ACE, Chapter 9, pp. 327-339.

II: ENDOGENOUS GROWTH (12 HOURS)

3) THE "AK" MODEL (IF AND ONLY IF TIME ALLOWS)
   Theoretical dissatisfaction with neoclassical theory
   Behavior of Households
   Behavior of Firms
   Equilibrium
   Transitional Dynamics
   The Phase Diagram
   Determinants of the growth rate.

   BS, Chapter 1, pp. 61-68, paragraph 1.3 (with the exclusion of paragraph 1.3.4); BS, Chapter 4, pp. 205-211 (Paragraph 4.1). ALTERNATIVELY (MORE COMPACT): ACE, Chapter 11, pp. 387-392.
4) **HUMAN CAPITAL, EDUCATION AND ENDOGENOUS GROWTH**
The One-Sector Model with Physical and Human Capital: The Basic Setup
The One-Sector Model with Physical and Human Capital: The constraint of non-negative gross investment
The One-Sector Model with Physical and Human Capital: the constraint of non-negative gross investment (transitional dynamics)
The Uzawa-Lucas Model (BGP equilibrium).

BS, Chapter 5, pp. 239-247 (Paragraph 5.1); BS, Chapter 5, pp. 251-253 (with the exclusion of the Transitional Dynamics). BS, Chapter 5, pp. 271-274 (Paragraph 5.5, Appendix 5A); BS, Chapter 5, pp. 274-276 (Paragraph 5.6, Appendix 5B).

5) **ENDOGENOUS TECHNOLOGICAL CHANGE IN ECONOMIC GROWTH: EXPANDING VARIETY MODELS**
Different conceptions of technology
Science and Profits
The value of innovation in partial equilibrium
The “Lab-Equipment” model of growth with input varieties
Growth with knowledge spillovers
Growth without Scale Effects.

ACE, Chapter 12, pp. 411-422, ACE, Chapter 13, pp. 433-448. ALTERNATIVELY (MORE COMPACT):
AH, Chapter 3, pp. 69-76.

6) **ENDOGENOUS TECHNOLOGICAL CHANGE IN ECONOMIC GROWTH: THE SCHUMPETERIAN MODEL OF QUALITY LADDERS**
The basics
Production and profits
Innovation
Research arbitrage
Growth
A variant with “Nondrastic innovations”
Comparative statics.

AH, Chapter 4, pp. 85-92.

7) **DIRECTED TECHNICAL CHANGE**
Importance of Biased Technological Change
Basics and definitions
Baseline model of Directed Technological Change.

ACE, Chapter 15, pp. 497-514.

**LEGENDA**


Module II: Business Cycle (30 hours)
Prof. Guido Ascari, Università degli Studi di Pavia
Email: Guido.Ascari@unipv.it

I Real Business Cycle (15 hours)

The Lucas legacy

Competitive Business Cycle Theory

A primer in simulating a RBC Model: the Blanchard-Khan solution method

Introduction to MATLAB and the DYNARE package

RBC and the labour market

Advances in RBC modelling

References


Useful background references:
- George McCandless, (2008), The ABCs of RBCs, Harvard University Press, ch. 6.

Fundamental contributions:

Interesting “Old” Debates

II New-Keynesian models (15 hours)

1) The Keystones

a. monopolistic competition: the Blanchard-Kiyotaki model
b. staggered price setting models

2) The New Neo-Classical Synthesis and the effects of monetary policy
   a. Adding microfoundations: The basic New Keynesian model
   b. Monetary Policy rules and optimal monetary policy
   c. Sticky wages and the divine coincidence
   d. Some codes (Soderlind, 1999 and DYNARE)
   e. The macroeconomics of trend inflation
   f. Medium-scale models
   g. Optimal monetary and fiscal policy in a medium-scale DSGE models
   h. Empirical evaluation

References

- Papers:
Module III OPEN-ECONOMY MACROECONOMICS (16 hours)
Prof. Alessandro Missale (Università degli Studi di Milano)
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Objectives
The course covers the fundamentals of open economy macroeconomics with the objective of developing expert knowledge of the economic models in current use. The topics covered are exchange rate behaviour, current account determination, international financial integration, the role and use of macroeconomic policies with an emphasis on exchange rate regimes, crisis prevention and external adjustment.

Program

I. OPEN ECONOMY MODELS

1. Exchange Rate Determination: Dornbusch Overshooting Model
2. The Intertemporal Approach to the Current Account
3. Financial Integration and Global Imbalances
4. New Keynesian Open Economy Models

II. IMBALANCES and CRISES

5. Speculative Attacks and Exchange Rate Crises
6. Sudden Stops
7. Liquidity and Balance Sheet Crises
8. Valuation Effects and External Adjustment

Reading List


