



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Global Macroeconomics

2425-1-F5602M004

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#### Learning objectives

The aim of this course is to introduce students to the workhorse models of modern dynamic macroeconomics. The course is divided in two parts. The first is focused on long-run growth while the second on short-run fluctuations. The two parts cannot be taken separately. Lectures will be complemented by seminars during which you will learn how to solve problem sets.

#### Contents

"Growth Theory and Empirics: An International Perspective" teaches you macroeconomic models that help understand the causes of long-run economic growth and cross-country income differences. These include the Solow growth model, the Neoclassical growth model, the overlapping generations model and theories of endogenous growth.

"Business Cycles in The Global Economy: Facts and Theory" teaches you the main characteristics of business cycles and the macroeconomic models that provide insights in understanding economic fluctuations. These include RBC models and New Keynesian DSGE models.

#### Detailed program

Part I - Growth Theory and Empirics: An International Perspective

1. Introduction: Basic facts about economic growth and cross-country income differences
2. The Solow growth model
3. Micro-foundations of macro-models and dynamic optimization

4. The Neoclassical growth model and applications
5. Growth with overlapping generations
6. Endogenous technological change
7. Economic growth in the global economy
8. Explaining cross-country income differences: from proximate to fundamental causes

## Part II - Business Cycles in The Global Economy: Facts and Theory

1. Introduction: Basic facts about business cycles and economic fluctuations
2. The Real Business Cycle (RBC) model
3. Consumption under uncertainty and the consumption Capital Asset Pricing Model (CAPM)
4. Monetary policy in the Real Business Cycle model
5. The New-Keynesian (NK) model
6. Monetary policy in the NK model: rules versus discretion, unconventional monetary policy
7. Elements of international macroeconomics
8. Topics: inequality and heterogeneity in macroeconomics; the financial crisis and the pandemic

## Prerequisites

Economics: Familiarity with an intermediate macroeconomics text such as Robert Barro, *Macroeconomics: A Modern Approach*, 2008, 1st edition, Thomson South-Western; or N. Gregory Mankiw, *Macroeconomics*, Worth Publishers or any other intermediate undergraduate macroeconomic textbook.

Mathematics: Familiarity with calculus at the level of Alpha C. Chiang, *Fundamental Methods of Mathematical Economics*, McGraw Hill and basic differential equations. Dynamic optimization will be introduced during the course. A useful reference for some mathematical concepts is the textbook: Simon, C. & Blume, L. *Mathematics for Economists*.

## Teaching methods

Lectures will be held in person and according to the rules the University will set for the a.y. 2024-25. Lectures will be complemented by seminars during which the student will learn how to solve problem sets and simulate models with Dynare/MATLAB.

## Assessment methods

Written exam and project work (optional).

## Textbooks and Reading Materials

Lecture notes will be made available. The main textbooks are:

Acemoglu, D. *Introduction to Modern Growth*, Princeton University Press, 2009

Galí, J., *Monetary Policy, Inflation and the Business Cycle: An Introduction to the New Keynesian Framework*,

Princeton University Press, 2015

Romer, D. Advanced Macroeconomics, 5th edition, McGraw-Hill, 2019

For some topics, journal articles will be used.

## **Semester**

II semester

## **Teaching language**

English

## **Sustainable Development Goals**

NO POVERTY | DECENT WORK AND ECONOMIC GROWTH | REDUCED INEQUALITIES

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