

Macroeconomics II

Academic Year: (2018 / 2019)

Review date: 10-01-2018

Department assigned to the subject: Department of Economics

Coordinating teacher: KREDLER , MATTHIAS

Type: Compulsory ECTS Credits : 6.0

Year : 1 Semester : 2

STUDENTS ARE EXPECTED TO HAVE COMPLETED

Macroeconomics I
Microeconomics I

COMPETENCES AND SKILLS THAT WILL BE ACQUIRED AND LEARNING RESULTS.

Basic skills:

That students possess knowledge that gives them a basis or opportunity to develop and/or apply an idea, also in a scientific context.

That students are able to:

- apply acquired skills and their problem-solving ability to new environments and in wider (e.g. multi-disciplinary) contexts related to their area of expertise.
- integrate new knowledge and face the complex task of coming to conclusions, even under incomplete information, taking into account social and ethical dimensions of decisions.
- communicate knowledge, theoretical frameworks, and their conclusions to specialized as well as general audiences with clarity.

That student acquire learning skills that enable them to seek new knowledge and skills in an autonomous and self-sufficient manner.

General skills:

That students are able to:

- analyze and synthesize a scientific text.
- interpret and create advanced economic writing and presentations.
- apply advanced theories using mathematical and econometric computer software.
- evaluate scientific writing and judge the value of a scientific contribution.

Specific skills:

That students are able to apply dynamic-optimization techniques with and without uncertainty to advanced economic problems.

That students are able to apply and interpret:

- dynamic general-equilibrium models
- the neo-classical growth model
- overlapping generations models
- consumption-savings decision under uncertainty and incomplete markets
- the standard asset-pricing model
- real-business-cycle theory
- simple search-and-matching models

That students are able to critique, compare, and discuss public policies and their macroeconomic consequences.

Learning results:

1. Ability to understand and solve dynamic general-equilibrium models, which are the basis of modern macroeconomic theory.
2. Possession of the basic skills of dynamic optimization.
3. Ability to model dynamic macroeconomic problems.
4. Ability to analyze dynamic macroeconomic models: finite and infinite horizon, under certainty and uncertainty.
5. Knowledge of the fundamental macroeconomic models: neo-classical growth model, consumption-savings problem, labor search.

6. Ability to apply general-equilibrium models to analyze economic growth and aggregate shocks.
7. Skill to formulate empirical models that can be brought to theoretical macroeconomic models.
8. Skill to formulate and compute dynamic stochastic general equilibrium models
9. Estimation and calibration of macroeconomic models
10. Study counterfactuals using quantitative macroeconomic models

DESCRIPTION OF CONTENTS: PROGRAMME

1. Optimization in discrete time
 - (a) Deterministic problems: Lagrangeans, Euler equations
 - (b) Stochastic problems: Markov chains, event-tree form, history dependence
 - (c) The firm's problem under constant returns to scale
 - (d) Preview of dynamic programming
2. Business-cycle measurement
 - (a) The Hodrick-Prescott Filter
 - (b) Measures of volatility, cyclical, and persistence.
3. Overlapping-generations models
 - (a) Physical environment and equilibrium definition
 - (b) Endowment economy: Dynamic inefficiency
 - (c) Money: A benign bubble
 - (d) The Diamond model: Capital, investment, and business cycles
 - (e) Pension systems: Pay-as-you-go versus capital-funded systems
4. The life-cycle model
 - (a) No borrowing constraints: The life-cycle hypothesis
 - (b) Shocks: Hall's random-walk hypothesis
 - (c) Borrowing constraints: a two-period model
 - (d) Market incompleteness: health shocks and the case for government intervention
5. Asset pricing: The Lucas-tree model
 - (a) Complete markets
 - (b) Arrow securities
 - (c) No-arbitrage conditions
 - (d) Pricing dividend streams: The stochastic discount factor
 - (e) The equity-premium puzzle
 - (f) Government debt
6. Unemployment: Search and matching (if time permits)
 - (a) Facts on unemployment
 - (b) Two-period McCall search model
 - (c) One-period search-and-matching model

LEARNING ACTIVITIES AND METHODOLOGY

Learning activities:

Theory class

Practical class

Teamwork

Individual study by student

Office hours

Methodology:

In the theory class, the professor develops the theory for the subject. Bibliography is given to students to complement the learning process.

Reading texts given by the professor.

Solving problems given by the professor (on paper or on the computer), in groups or individually.

ASSESSMENT SYSTEM

Regular Exam:

50%: Final Exam

30%: Midterm Exam

20%: Problem Sets

Retake Exam ("convocatoria extraordinaria"):

Either option a) or b), whichever is more favorable for the student, will be used:

- a) Evaluation scheme used for the regular exam (given above)
- b) 100%: Retake (Final) Exam

% end-of-term-examination: 50

% of continuous assessment (assignments, laboratory, practicals...): 50

BASIC BIBLIOGRAPHY

- David Romer Advanced Macroeconomics, McGraw-Hill, 2012

ADDITIONAL BIBLIOGRAPHY

- Ljungqvist, Lars, and Thomas J. Sargent Recursive Macroeconomics Theory, MIT Press, 2004

BASIC ELECTRONIC RESOURCES

- Matthias Kredler . Course website: <https://aulaglobal.uc3m.es>