MACROECONOMÍA III (2017-18)

DATOS GENERALES

Código 41207

Créditos ECTS 6

Departamentos y áreas

Departamento	Área	Dpt. Resp.	Dpt. Acta
FUNDAMENTOS DEL ANALISIS ECONOMICO	FUNDAMENTOS DEL ANALISIS ECONOMICO	SÍ	SÍ

Estudios en que se imparte

MÁSTER UNIVERSITARIO EN ECONOMÍA CUANTITATIVA

Contexto de la asignatura

This is the third course in a year-long course in macroeconomic theory. The other two courses are Macroeconomics I and Macroeconomics II.

OBJETIVOS

Objetivos específicos aportados por el profesorado (2017-18)

The course covers a selected set of topics on dynamic macroeconomics. First, we extend the notions and the key results of dynamic programming to the case of uncertainty. Second, we review some topics of time series analysis that are particularly useful for applied macroeconomic research. Third, we study numerical methods for solving dynamic models including linearization and perturbation methods, value function iteration and Euler equation methods. Finally, we review several research topics of the recent macroeconomics optimal monetary and fiscal policy choice. The problem sets include both theoretical and computer exercises. The programming languages are MATLAB and DYNARE.

CONTENIDOS

Contenidos teóricos y prácticos (2017-18)

Topic 1. Macroeconomic models: analysis of equilibrium
1) The neoclassical stochastic growth model. The planner's problem.
2) Characterizing optimal choice by means of dynamic programming. Bellman equation and value function.
3) Markov equilibrium. Characterizing the equilibrium by using first order conditions. Euler equation.
4) Steady state and near-steady-state dynamics.
5) .Decentralizing the social optimum. Competitive equilibrium.
6) Two benchmark models of the real business cycle literature:
- the divisible-labor model by Kydland and Prescott (1982);
- the indivisible-labor model by Hansen (1985).
7) Long-run growth and technological progress.

Topic 2. Numerical analysis of macroeconomic models.
1) Time series of actual economies. First and second moments. The stylized facts.
2) Hodrick-Prescott filter.
3) Calibration of macroeconomic models.
4) Global solution methods for computing equilibrium in models with uncertainty :
- Value function iteration;
- Generalized stochastic simulation algorithm.
5) What our benchmark models can and cannot explain.

Topic 3. Local solution methods.
1) General ideas. Taylor series. Implicit function theorem. Regular perturbation.
2) Log-linearization in the non-stochastic optimal growth model.
3) Log-linearization in the stochastic optimal growth model.
4) Perturbation.
5) Dynare automated software.
6) Shortcomings of perturbation methods and how the literature corrects them.

Topic 4. Monetary policy.
1) The Clarida-Gali-Gertler (`basic') new Keynesian model.
- Formulating the model. Deriving the equilibrium conditions.
- Two ways to close the model: Ramsey-optimal and exogenous policy.
- Solving a linearized version of the model with Dynare.
- Solving a nonlinear version of the model with Dynare. Versions of the model with capital, adjustment cost, and sticky wages.
2) Optimal monetary policy.
- Toy example.
- A more general discussion. Rotemberg model.
- The Clarida-Gali-Gertler model.
3) Unconventional monetary policy.
- Forward guidance;
- Quantitative easing.

EVALUACIÓN

Instrumentos y criterios de Evaluación 2017-18

There will be 5-6 problem sets assigned. We require homework submitted individually. You are encouraged to work hard on the homework: some questions on the exams will strongly resemble homework questions.

The final grade will consist of homework grade (20%), midterm-exam grade (30%) and final-exam grade (50%). The final exam will include questions about the theoretical issues, discussed in the course, and problems.

In case of a re-examination, the final grade will be composed of homework grade (20%), midterm-exam grade (30%) and the-re-examination grade (50%).

Tipo	Criterio	Descripción	Ponderación
ACTIVIDADES DE EVALUACIÓN DURANTE EL SEMESTRE	The final will be a three-hour exam given during the exam week.	Final exam	50
ACTIVIDADES DE EVALUACIÓN DURANTE EL SEMESTRE	There will be 4-5 problem sets. We require the homework submitted individually. You are encouraged to work hard on the homework: some questions on the exams will strongly resemble homework questions.	Problem sets	20
ACTIVIDADES DE EVALUACIÓN DURANTE EL SEMESTRE	There will be a midterm in the sixth week that will comprise the first two topics.	Midterm exam	30