# uc3m Universidad Carlos III de Madrid

#### Microeconomics III

Academic Year: (2024 / 2025) Review date: 01-03-2024

Department assigned to the subject: Economics Department Coordinating teacher: HERNANDO VECIANA, ANGEL

Type: Compulsory ECTS Credits: 9.0

Year: 2 Semester: 1

# REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Microeconomics I and Microeconomics II

#### **OBJECTIVES**

- -Build and analyze models with asymmetric or incomplete information.
- -Familiarize with the classic applications of these models to real life economic problems.
- -Grasp the magnitude of the problems in real economies due to asymmetric or incomplete information.
- -Develop the skills to use the analytical tools of the models of asymmetric or incomplete information: adverse selection, moral hazard, screening, signalling, mechanisms, contracts.

## **DESCRIPTION OF CONTENTS: PROGRAMME**

Introduction to topics and tools of modern theory of information.

- 1. Games with Incomplete Information: elements of a game of incomplete and/or asymmetric information, Bayes-Nash equilibrium, perfect equilibrium.
- 2. Adverse selection and moral hazard: unobservable characteristics (screening and signalling); unobservable actions: ex ante, interim and ex post efficiency.
- 3. Introduction to contract theory: menus of contracts, guaranties, bilateral contracts: insurance, credit, labor.
- 4. Introduction to mechanism and liformation design: Bayesian implementation with transferable utility, applications: monopoly, auctions, public goods, bilateral trade. Dominant and ex post implementation with transferable utility.

## LEARNING ACTIVITIES AND METHODOLOGY

In person classes that are streamed online and recorded.

Weekly problem sets solved in group work. These are discussed in the practical sessions.

Combining textbook material with up-to-date discussion of the current research frontier.

### ASSESSMENT SYSTEM

% end-of-term-examination: 60

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

The final grade is computed as a weighted average: 40% the grade in the continuous evaluation and 60% the grade of the final exam. The grade in the continuous evaluation is computed based on the solutions to the problem sets and the midterm.

#### **BASIC BIBLIOGRAPHY**

- Boergers (with a chapter by Kraehmer and Strauss) An Introduction to the Theory of Mechanism Design, Oxford University Press, 2015

- Bolton and Dewatripont Contract Theory, MIT Press, 2005
- Mas Colell, Whinston and Green Microeconomic Theory, Oxford University Press, 1996

# ADDITIONAL BIBLIOGRAPHY

- Myerson Game Theory, Harvard University Press, 1997