# uc3m Universidad Carlos III de Madrid

### Innovation and technological change

Academic Year: (2024 / 2025) Review date: 26-04-2024

Department assigned to the subject: Business Administration Department

Coordinating teacher: PALOMERAS VILCHES, NEUS

Type: Compulsory ECTS Credits: 6.0

Year: 4 Semester: 2

#### **OBJECTIVES**

Understand the ecosystem of technological innovation

Understand the benefits and the challenges of conducting R&D in firms

Identify the relevant variables that determine the appropriability of firms? R&D investment

Identify the key elements of the intellectual property strategy in firms

Identify the relevant organizational variables that influence the firm productivity of R&D

Understand the challenges of the financing of technological innovation, the available alternatives and its suitability in different scenarios

#### **DESCRIPTION OF CONTENTS: PROGRAMME**

- 1. Innovation: Definition and basic concepts.
- 2. Innovation: A global perspective.
- 3. Sources of innovation.
- 4. Technology evolution.
- 5. Technology adoption and diffusion.
- 6. Technological standards.
- 7. Appropriability of innovation: Legal mechanisms.
- 8. Appropriability of innovation: Strategic mechanisms.
- 9. Cooperation modes.
- 10. Organizational implications for the management of innovation.
- 11. Financing of innovation.

#### LEARNING ACTIVITIES AND METHODOLOGY

Every week there is a theory session and a practical session. In the theory sessions, the essential concepts of the course are explained and discussed. Practical sessions are devoted to discuss cases and solve exercises that illustrate these concepts and their practical implications.

#### ASSESSMENT SYSTEM

% end-of-term-examination: 50

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

Evaluation of students will be based on three components: (1) Exams. There will be one partial exam which will take place during the term, and a final exam which will take place at the end of the term; (2) Teamwork on a final project; and (3) Homework. The weight of each component will be as follows:

- Partial exam: 20%

- Final exam: 50%

- Teamwork project: 15%

- Practice sessions: 15%

In order to compute the weighted average, the student must obtain at least 4 points over 10 in the final exam. Otherwise, the student will not pass the subject.

- Schilling, Melissa Strategic Management of Technological Innovation, McGraw Hill, 2010
- Shane, Scott. Technology Strategy for Managers and Entrepreneurs., Pearson., 2009

## ADDITIONAL BIBLIOGRAPHY

- Narayanan, V. K. Managing Technology and Innovation for Competitive Advantage., Prentice Hall. .