uc3m Universidad Carlos III de Madrid

Innovation and technological change

Academic Year: (2023 / 2024) Review date: 26-04-2023

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 will be a theory session (in a large group) and a practical session (in a small group). Theory sessions will provide the students with the essential concepts of the course. Practical sessions will be devoted to dicuss exercises and cases where the students will apply the concepts previously seen in the theoretical class.

ASSESSMENT SYSTEM

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.

% end-of-term-examination: 50 % of continuous assessment (assignments, laboratory, practicals...): 50

BASIC BIBLIOGRAPHY

- 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. .